**Herrick, Will**
**Campton, KY**
**Page 67 of 108**

Kentucky Resources Council, Inc.
Post Office Box 1070
Frankfort, Kentucky 40602
(502) 875-2428 phone (502) 875-2845 fax
e-mail FitzKRC@aol.com

BEFORE THE DEPARTMENT OF ENERGY
NATIONAL ENERGY TECHNOLOGY LABORATORY
COMMENTS CONCERNING DEIS FOR PROPOSED
KENTUCKY PIONEER ENERGY INTEGRATED GASIFICATION
COMBINED CYCLE DEMONSTRATION PROJECT

Dear Mr. Spears:

These preliminary comments are submitted regarding the proposed Kentucky Pioneer Energy IGCC Project Draft Environmental Impact Statement, and will be supplemented with extensive written comments concerning the project prior to the close of the comment period. As a preliminary matter, however, the Council was asked to address the relationship of the proposed project and the utilization of a shredded, milled and pelletized municipal solid waste fuel, to Kentucky's solid waste disposal statute and the requirement of maintaining consistency with local solid waste plans.

After a review of the position paper submitted by Global Energy to the state Division for Waste Management, and after review of the applicable statute and case law, I believe that the facility is subject to the solid waste regulations and is required to obtain a determination of consistency from the solid waste management governing body of Clark County before importing and disposing of the solid waste fuel.

By letter dated October 9, 2000, Global Energy Inc., Suite 2000, 312 Walnut Street, Cincinnati, OH 45202, through its manager of Regulatory Affairs Dwight Lockwood, requested a determination from the Kentucky Division of Waste Management as to the applicability of KRS 224.40 to the proposed "integrated gasification combined cycle (IGCC) power plant project in Clark County."

The request letter from Global Energy (Hereafter Global) asserted that the proposed project was "exempt from waste regulations." The 2-paged letter contained an attached "Analysis of the Non-Applicability of KRS 224.40 to the Kentucky Pioneer Energy IGCC Project."

The determination of applicability of the waste regulations rests in the first instance with the Natural Resources and Environmental Protection Cabinet, subject to review by the courts. KRS Chapter 224 is a statute that is remedial in nature and its protections are to be broadly construed consistent with the

**Herrick, Will**
**Campton, KY**
**Page 68 of 108**

public and environmental protection goals of the statute. Exemptions from its reach are to be narrowly construed.

The question of whether the proposed coal and waste-fueled facility is subject to the requirements of KRS Chapter 224 as a waste management and waste disposal facility is of significance to the residents of Trapp and of Clark County, since if exempted from the ambit of the term "municipal solid waste facility," the planned importation of processed municipal solid waste from northeastern states representing the equivalent of "roughly half of the residential waste generated in the entire Commonwealth of Kentucky" will not be subject to scrutiny and a determination by the local governing body of Clark County of the consistency with that county's approved solid waste plan.

When enacted in 1991, Senate Bill 2 substantially revised state and local solid waste management, requiring of local communities that they plan for the proper management of solid waste generated within their borders and promising, in return, that the local "governing body" responsible for solid waste planning would have the ability to control the manner and extent to which waste generated outside of the boundary of that planning unit would be managed and disposed of within the planning area.

The proposal to thermally treat and to combust the volatile fraction of one million tons or more per year of treated municipal solid waste falls squarely within the type of facility intended by the General Assembly to be scrutinized under the solid waste planning process.

KRS 224.40-315 mandates that:

> No permit to construct or expand a municipal solid waste disposal facility shall be accepted for processing by the Cabinet unless the application contains a determination from the governing body for the solid waste management area in which the facility is or will be located concerning the consistency of the application with the area solid waste Management plan [.]

The scope of this statute and the requirement for a determination of consistency with the approved solid waste plan is defined by the term "municipal solid waste disposal facility", which is defined in KRS 224.01-010(15) to include:

> Any type of waste site or facility where the final deposition of any amount of municipal solid waste occurs, whether or not mixed with or including other waste allowed under subtitle D of the Federal Resource Conservation and Recovery Act of 1976, as amended, <u>and includes, but is not limited to, incinerators and waste-to-energy facilities that burn municipal solid waste,</u> . . .

Page 67

**Herrick, Will**
**Campton, KY**
**Page 69 of 108**

The term is broadly inclusive of all types of waste sites or facilities where the final deposition of any amount of municipal solid waste occurs. There can be no serious argument that the feed material to be combined with the coal is a solid waste, which is to say, that the material is "garbage, refuse, sludge and other discarded material." The waste is to be processed, according to the applicant, at a facility in a state other than Kentucky, where it will be manufactured from municipal solid waste by removing "large objects and white goods" as well as "glass and metal [.]" The remaining material, including chlorinated plastics, will be milled and shredded.

These "pellets" are municipal solid waste processed as an intermediate step in the thermal treatment of the waste to produce a gas for combustion. The proposed facility is utilizing a fuel stream comprised of partially separated, shredded and shaped municipal solid waste used as a fuel source, disposing of the waste through thermal treatment at high temperature to drive off the volatile fraction for combustion. As such, it is engaged in disposal of a municipal solid waste stream and falls within the ambit of a "municipal solid waste disposal facility" the siting and operation of which should be reviewed for consistency with local solid waste plans.

The applicant claims exemption for the waste fuel from the waste program as a "recovered material," yet the clearly better reading of the statute, and the intent to carefully regulate the disposal of solid waste by thermal treatment as well as other means, militates against the exemption of the material from regulation as a solid waste. The material is not a "refuse-derived fuel" notwithstanding the claim by the applicant to the contrary, since the applicant has indicated that it intends to retain the recoverable plastics in the waste (likely for the Btu value), and thus is outside of the ambit of "recovered material," since that definition specifically <u>excludes</u> "materials diverted or removed for purposes of energy recovery <u>or</u> combustion []" from being considered recovered material.

Assuming, for the sake of argument, that the waste <u>were</u> further processed over what is proposed, in order to meet the state definition of "refuse derived fuel" by removing all recoverable plastics and other recoverable material, such as mixed paper, corrugated paper and newsprint, the definition of "recovered material" still would not apply to exempt the entire waste stream from regulation since only 15% of the material processed by the facility creating the pellets could be credited as "RDF."

While the acceptance by the applicant of regulation under EPA's Municipal Solid Waste Combustor standards makes it difficult to accept at face value the assertion of non-applicability of state "waste" designation, commenter concurs that the state law itself determines how this facility is to be characterized for purposes of state regulation.

Because the material is not a "refuse derived fuel" under KRS 224.01-010(23) in that it has not been subject to "extensive separation of municipal solid waste" including "the extraction of recoverable materials for recycling" the processing of the municipal solid waste stream to create the palletized "fuel" does not make the material a "recovered material" under KRS 224.01-010(20). The proposed gasification step in the process and the cleaning of the

**Herrick, Will**
**Campton, KY**
**Page 70 of 108**

volatile fraction of the waste for combustion does not make the facility a "recovered material processing facility" so as to exempt it from the definition of a municipal solid waste disposal facility or to avoid the obligation to be consistent with the local solid waste plan.

Beyond the specific failure of the application to meet the criteria for an exempt "recovered material processing facility" because the waste feed will retain recoverable materials, including all plastics and paper, the *context* in which municipal solid waste disposal facilities are regulated under KRS Chapter 224 makes clear that the attempt to shoehorn this substantial waste-fueled energy facility into the category of a "recovered materials processing facility" is an ill-fit from a public policy standpoint. KRS 224.01-010, which contains many of the definitions for the chapter, is prefaced with the caveat "[a] s used in this chapter unless the context clearly indicates otherwise [.]" The statutory provision requiring a determination of local consistency for disposal facilities was plainly intended to cover thermal treatment of municipal solid wastes with and without energy recovery, and to segment the facility into the component processes in order to exclude from the application of KRS 224.40-315 a facility which uses a sequential process of thermal treatment followed by combustion of volatile gases, and which presents many similar concerns in management of air, water and solid waste byproducts from a heterogeneous fuel source such as municipal solid waste (even if homogenous in shape), is contrary to the intent of the statute and the public policy behind it.

In sum, the palletized mixed municipal solid waste does not fall within the ambit of the state statutory definition of "refuse derived fuel" and is thus not a "recovered material." By definition, the facility is a "municipal solid waste disposal facility" under KRS 224.40-315(1), KRS 224.40-310 and KRS 224.01-010(15).

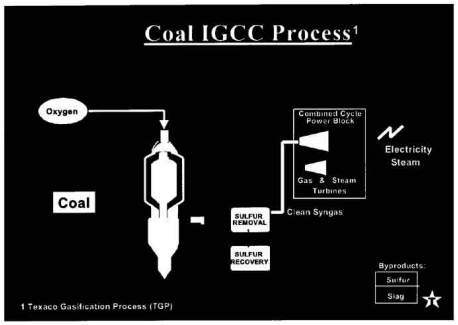
Commenter suggests that DOE undertake these actions in order to assure full compliance with applicable state laws prior to engaging in funding support for this project:

1. request and await final determination by the Natural Resources and Environmental Protection Cabinet as to the applicability of the waste statutes to the proposed facility;
2. assuming the applicability of the statutes, defer the funding decision until the applicant demonstrates the viability of the project by obtaining a determination of consistency from the governing body of the solid waste management area covering Clark County of the proposed importation and utilization of the solid waste material for the facility; and
3. extending to the Governing Body of that solid waste management area the opportunity to participate in the EIS review process as a cooperating agency.

Page 69

**Herrick, Will**
**Campton, KY**
**Page 71 of 108**

**Increasing Electricity Availability From Coal-Fired Generation in the Near-Term**
**May 2001**




**THE NATIONAL COAL COUNCIL**

**Herrick, Will**
**Campton, KY**
**Page 72 of 108**

**Increasing Electricity Availability From Coal-Fired Generation in the Near-Term**

**Chair:** Mr. Steven F. Leer

**Vice Chair:** Mr. Wes M. Taylor

**Study Work Group Chair:** Ms. Georgia Nelson

**The National Coal Council**
**May 2001**

ii

**Herrick, Will**
**Campton, KY**
**Page 73 of 108**

**THE NATIONAL COAL COUNCIL**

**Steven F. Leer, Chairman**

**Robert A. Beck, Executive Director**

**U.S. DEPARTMENT OF ENERGY**

**Spencer Abraham, Secretary of Energy**

**The National Coal Council is a Federal Advisory Committee to the Secretary of Energy. The sole purpose of the National Coal Council is to advise, inform, and make recommendations to the Secretary of Energy on any matter requested by the Secretary relating to coal or to the coal industry.**

iii

**Herrick, Will**
**Campton, KY**
**Page 74 of 108**

## Cover Letter to Secretary Abraham

**NATIONAL COAL COUNCIL, INC.**
1730 M Street, NW • Suite 907
Washington, DC 20036
PHONE: 202-223-1191
FAX: 202-223-9031

*Website Address: nationalcoalcouncil.org*

May 3, 2001

The Honorable Spencer Abraham
Secretary of Energy
United States Department of Energy
Room 7A-219
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Mr. Secretary:

On behalf of The National Coal Council I am pleased to submit the enclosed report entitled "Increasing Electricity Availability from Coal-Fired Generation in the Near-Term." This report was authorized by your predecessor then-Secretary Bill Richardson, on November 13, 2000 prepared, deliberated and recommended by the Coal Policy Committee at its meeting on April 3, 2001, and formally approved by The National Coal Council on May 3, 2001.

In his letter, Secretary Richardson requested that The National Coal Council conduct a study on measures, which the government or government in partnership with industry, could undertake to improve the availability of electricity from coal-fired power plants. His letter requested that the Council address improving coal-fired generation availability in two specific areas:

- Improving technologies at coal-fired electric generating plants to produce more electricity, and
- Reducing regulatory barriers to using these technologies.

The Council accepted Secretary Richardson's request and formed a study group of experts to conduct the work. The study group conducted its work at the direction of the Coal Policy Committee of the Council, which is chaired by Malcolm Thomas, Vice President of Kennecott Energy and a member of the Council. The study group itself was chaired by Georgia Nelson, President of Midwest Generation Company and a member of the Council.

The study was divided into two major sections: technologies and regulatory reform. The focus of the technologies section is on achieving more electricity from existing and new coal-fired power plants using technologies that improve efficiency, availability and environmental performance in the near term defined as the next 36 months.

However, unless there is a significant change in regulatory interpretation and enforcement regarding the installation of new technologies at existing power plants, it is not likely that any of this additional low-cost, low-cost emission electricity will be produced. The recent change in enforcement procedures by EPA, reinterpreting as violations of the Clean Air Act what had heretofore been considered routine maintenance at power plants, has had a direct and chilling effect on all maintenance and efficiency improvements, and clean coal technology installations at existing power plants. A return to the pre-1998

*A Federal Advisory Committee to the U.S. Secretary of Energy*

iv

**Herrick, Will**
**Campton, KY**
**Page 75 of 108**

The Honorable Spencer Abraham
Page Two
May 3, 2001

interpretation of this one regulation would allow plant operators the opportunity to install technologies discussed in the report.

Several other existing regulations seem to be in conflict with the country's attempt to maximize the use of domestic energy sources, as well. Environmental regulation should be harmonized with the energy and national security goals of the country.

The National Coal Council strongly recommends that the country, with the Department of Energy in the lead, develop a clear comprehensive energy policy that supports the maximum use of domestic fuel sources, continues to protect the environment by implementing strong but balanced environmental regulations, and harmonizes conflicting regulations affecting energy development and use. Government and the private sector should work in partnership to achieve the desired goals and remove those regulatory barriers that create obstacles to achieving those goals, while preserving environmental performance. The specific recommendations of the Council can be found in the Executive Summary of the report.

The Council appreciates being asked to provide this report and we stand ready to answer any questions you may have about it.

Sincerely,

Steven F. Leer

Steven F. Leer
Chairman

Enclosure

v

**Herrick, Will**
**Campton, KY**
**Page 76 of 108**

## Abbreviations

| | |
|---|---|
| AQRVs | Air quality related values |
| B&W | Babcock & Wilcox |
| BACT | Best available control technology |
| BGL | British Gas/Lurgi |
| Btu | British thermal units |
| Btu/kWh | British thermal units per kilowatt-hour |
| CAA | Clean Air Act |
| CFB | Circulating fluidized bed |
| $CO_2$ | Carbon dioxide |
| COS | Carbonyl sulfide |
| DOE | Department of Energy |
| EIA | Energy Information Administration |
| EPA | Environmental Protection Agency |
| EPRI | Electric Power Research Institute |
| FGD | Flue gas desulfurization |
| FLMS | Federal land managers |
| GADS | Generation Availability Data System |
| GW | Gigawatts ($10^9$ watts) |
| HHV | Higher heating value |
| HRSG | Heat recovery steam generator |
| IGCC | Integrated gasification combined cycle |
| kW | Kilowatt |
| lb/MBtu | Pounds of emissions per million Btu of heat input |
| LAER | Lowest achievable emission rates |
| LHV | Lower heating value |
| LNB | Low $NO_x$ burners |
| MACT | Maximum achievable control technology |
| Mbtu | Million Btu |
| MDGC | Maximum demonstrated generating capacity |
| MW | Megawatts ($10^6$ watts) |
| MWH | Megawatt-hour |
| NAAQS | National Ambient Air Quality Standards |
| NCC | National Coal Council |
| NERC | North American Electric Reliability Council |
| NGCC | Natural gas combined cycle |
| NOVs | Notices of violation |
| $NO_x$ | Nitrogen oxides |
| NSPS | New Source Performance Standards |
| NSR | New Source Review |
| O&M | Operating and Maintenance |
| OEM | Original Equipment Manufacturer |
| PPM | Parts Per Million |
| PSD | Prevention of significant deterioration |
| SCR | Selective catalytic reduction |
| $SO_2$ | Sulfur dioxide |
| $SO_x$ | Sulfur oxides |
| tpy | tons per year |
| UDI | Utility Data Institute |
| WEPCo | Wisconsin Electric Power Company |

**Herrick, Will**
**Campton, KY**
**Page 77 of 108**

## Table of Contents

| | |
|---|---|
| Preface | 1 |
| Executive Summary | 2 |
| Achieving Higher Availability/Reliability From Existing Coal-Fired Power Plants | 5 |
| Reducing Regulatory Barriers | 27 |
| Appendix A: Description of The National Coal Council | 33 |
| Appendix B: The National Coal Council Membership Roster | 34 |
| Appendix C: The National Coal Council Coal Policy Committee Roster | 41 |
| Appendix D: The National Coal Council Electricity Availability Study Work Group | 43 |
| Appendix E: Correspondence Between U.S. Department of Energy and the National Coal Council | 46 |
| Appendix F: Correspondence From Industry Experts | 48 |
| Appendix G: Selected Comments on the Report | 69 |
| Appendix H: Acknowledgements | 83 |