September 9, 2008



Public Utility Commission of Ohio Docketing Division 180 East Broad Street Columbus, OH 43215-3793

Via: **E-Filing**

Re: Draft Rules for Alternative Energy Portfolio Standard Docket: 08-888-EL-ORD

Global Energy, Inc. thanks the PUCO for the opportunity to contribute to this important rule making. The State of Ohio has taken a bold step toward modernizing its energy portfolio to the benefit of its citizens and the environment. Twenty-Five percent of all generation from Advanced and Renewable Energy by 2025 sets a high bar for the rest of the nation.

Global Energy is a developer, owner, and operator of advanced energy facilities with specific focus on gasification of solid feedstock materials such as Ohio Coal and Biomass based Renewables. The application of gasification to Integrated Gasification Combined Cycle (IGCC) power generation is one aspect of advanced energy. Another, is the application of gasification to the production of pipeline quality Synthetic Natural Gas (SNG) which can be used to fuel combined cycle power generation plants, thereby providing a basis for these generators to meet advanced energy and renewable energy portfolio standards. Importantly, Global Energy intends to provide carbon dioxide sequestration solutions in all of its projects, and its Lima Energy Project in Allen County.

We herein offer comment on each division chapter as follows:

OAC 4901:1-39

- 1. Various sections of this Section refer to Revised Code Sections and Divisions that have not yet been incorporated into the relevant State of Ohio web site, making it difficult to ensure complete and accurate comment on these rules.
 - a. Specifically, Section 4928.01 (A)(35)
 - b. Specifically, Sections 4928.64 & 4928.65, and their divisions.

OAC 4901:1-40

Our primary interest in commenting on the draft rules promulgated by the subject docket, is to advocate for a stronger incentive for an electric generating facility to migrate to true clean coal technologies. To this end, we believe the definition (F) for "Clean Coal Technology, in OAC 4901:1-40 [Alternative Energy Portfolio Standard] should be modified.

OAC 4901:1-40-01 (F) Definition of "Clean Coal Technology"

- 1. Remove mention of criteria pollutants, as they are already covered by existing regulations under the authority of Ohio EPA.
- 2. The phrase "design capability to remove" does <u>not</u> impart obligation or motivation upon an electric generating facility to actually do anything toward <u>actually</u> capturing and sequestering carbon dioxide.
- 3. Recommend amending the definition to allow alternative fuels and processes, which would thereby enable use of biomass (a renewable) as a fuel or feedstock, in an alternative process such as gasification. The definition already considers coal as a feedstock, but the opportunity to process biomass and other renewable materials would enhance the program.
- 4. Recommend expanding or clarifying the definition to make clear that coal derived energy products, such as Synthetic Gas combustion turbine fuel from a gasification process, or Synthetic Natural Gas (SNG) also from a gasification process – are also acceptable. Enabling gasification as well as gas turbine derived power generation would add more options and alternatives for clean coal generation. An example of this is gasification coupled with the water gas shift reaction can convert coal to a high hydrogen low carbon fuel, at least comparable to natural gas.
- 5. The State of Ohio, as well as adjacent states, is underlain by a deep saline aquifer known as the Mt. Simon Sandstone which Ohio Geologic Survey has written about in specific context of carbon sequestration. The State of Ohio also knows of other suitable geologic sequestration structures related to its FutureGen proposal to U.S. Department of Energy. The Ohio Power Siting Board is currently an advocate of carbon sequestration and pipelines to implement it.
 - a. Considering that the State's own authorities have this knowledge, the definition of Clean Coal Technologies applicable to this Section MUST make sequestration obligatory!
 - b. While it may reasonable to include the costs of appropriate seismic surveys, pipelines, and injection systems in a plan for an energy resource, doing so must be required.
 - c. It is NOT reasonable for a "person" to argue that it is not yet feasible or proven. Our Lima Energy Project already has such a plan, and the fact that there are already injection sites into the Mt. Simon "proves" that it is feasible.

An alternative definition for Clean Coal Technology is suggested as follows:

OAC 4901:1-40-01 (F) Clean Coal Technology means any technology that uses any carbon based material, including biomass, as a fuel or feedstock in an electric generating facility and which removes and sequesters carbon dioxide either prior or after combustion of the fuel. Such technology includes processes which may alter the form of fuel (e.g. from solid to gas, for example) to enable a cleaner burning fuel, which shall be at least comparable to natural gas in its carbon content. Technologies meeting this definition shall also be consistent with paragraph (C) of rule 4901:1-41-02 of the Administrative Code.

OAC 4901:1-41

- 1. We support this concept in this Section that a regular review of the national scientific and engineering "state of the art" of carbon management and sequestration is very appropriate.
- 2. However, the requirement in Section 1-40, as currently drafted, to be consistent with OAC 4901:1-41-02 (C), which anticipates a forward looking "plan", similarly omits any sense of urgency for modernizing the existing coal based generating fleet.
- 3. IF the definition of Clean Coal in Section 1-40 is finalized as we suggest, then "planning" the future, as envisioned by this section, would be acceptable.

Thank you again for the opportunity to comment on these draft regulations. I would be pleased to discuss them with you should that be helpful. I can be reached at the contact information on the first page, or by email {dnlockwood@globalenergyinc.com}.

Respectfully submitted.

Dwight N. Lockwood, PE, QEP Group Vice President

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Summary: Comments Comments on Draft Rules electronically filed by Mr. Dwight N Lockwood on behalf of Global Energy, Inc.