## BEFORE THE ILLINOIS POLLUTION CONTROL BOARDECEIVED

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CLERK'S OFFICE

IN THE MATTER OF:

PROPOSED NEW CAIR SO<sub>2</sub>, CAIR NO<sub>x</sub> ANNUAL AND CAIR NO<sub>x</sub> OZONE SEASON TRADING PROGRAMS, 35 II. ADM. CODE 225, CONTROL OF EMISSIONS FROM LARGE COMBUSTION SOURCES, SUBPARTS A, C, D AND E NOV 0 9 2006

STATE OF ILLINOIS Pollution Control Board

R06-026 (Rulemaking – Air)

### **NOTICE OF FILING**

TO: Those Individuals as Listed on Attached Certificate of Service

Please take notice that on November 9, 2006, the undersigned filed with the Clerk of the

Illinois Pollution Control Board the Appearance of James H. Russell on behalf of Christian

County Generation, LLC, and the pre-filed written testimony of Dr. Gregory Kunkel, copies of

which are herewith served upon you.

By:

James H. Russell Attorney for Christian County Generation, LLC

Winston & Strawn LLP 35 W. Wacker Drive 40<sup>th</sup> Floor Chicago, IL 60601 Telephone: 312-558-6084 jrussell@winston.com

# BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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STATE OF ILLINOIS Pollution Control Board

R06-026 (Rulemaking – Air)

## APPEARANCE

The undersigned hereby enters his Appearance in this proceeding on behalf of Christian

County Generation, LLC.

By:

H Mmsl Jarhes H. Russell

Winston & Strawn LLP 35 W. Wacker Drive 40<sup>th</sup> Floor Chicago, IL 60601 Telephone: 312-558-6084 jrussell@winston.com

#### **BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF:

RECEIVED CLERK'S OFFICE

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) R06-26 ) (Rulemaking-Air)

STATE OF ILLINOIS Pollution Control Board

NOV 0 9 2006

#### Testimony of Dr. Gregory Kunkel, Director of Environmental Affairs at Tenaska, Inc., On Behalf of Taylorville Energy Center

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My name is Greg Kunkel. I represent Christian County Generation, LLC (CCG). CCG is the developer of a proposed Integrated Gasification Combined Cycle (IGCC) electric generation facility, named the Taylorville Energy Center. I am employed by Tenaska, Inc. where I am the Director of Environmental Affairs. A Tenaska affiliate has an ownership interest in CCG.

My academic credentials include B.A. and M.A. degrees from the University of Colorado at Boulder, and a Ph.D. from the University of California at Davis. I have been employed by Tenaska for 12 years.

Tenaska develops, owns, and operates electric generation facilities. A Tenaska affiliate, Tenaska Power Fund, LP, already owns one electric generation facility in Illinois. It recently announced an agreement for the acquisition of two additional electric generation facilities in Illinois.

My testimony today will address the Agency's proposed Illinois CAIR provisions, particularly as they may affect the viability of future IGCC projects in Illinois, such as the Taylorville Energy Center.

IGCC technology will improve the environmental performance of the electric generation industry. It removes sulfur and mercury from coal-derived gaseous fuel, and thereby reduces emissions from the use of that relatively-clean fuel in highly efficient combined cycle generation facilities. We understand that Illinois has a special interest in IGCC technology, because it will use high-sulfur Illinois coal while still achieving superior environmental performance.

As a regulatory system that places a more stringent limit on utility emissions of sulfur dioxide and oxides of nitrogen, and allows market-based trading of allowances for those pollutants, CAIR can help IGCC technology developers not only to achieve the benefits of reduced emissions and enhanced fuel efficiency, but to monetize them as well. This in turn promotes investment and the financing of IGCC facilities. IGCC technology is

expected to have greater capital costs than conventional pulverized coal generation. However, it will use fewer allowances because of lower emissions. CAIR properly translates these lower emissions into an economic benefit for sources that are willing to employ stateof-the-art, clean-coal IGCC technology. The Illinois CAIR rulemaking also includes important incentives in the form of allowance allocation rules. These rules encourage the use of new, efficient, clean-coal technologies.

With respect to sulfur dioxide, the federal CAIR allows no opportunity for Illinois to allocate or reallocate allowances. A new IGCC project in Illinois would receive no allowances for sulfur dioxide emissions. It would be required to obtain sulfur dioxide allowances in an unpredictable, volatile marketplace. In this respect, any new electric generation project with sulfur dioxide emissions is at a competitive disadvantage to baseline sources in the Acid Rain Program. The baseline sources receive such allowances without cost. In contrast, there are significant opportunities for creating incentives in Illinois CAIR's allocation of annual and seasonal NOx allowances. These incentives will materially assist IGCC project development in Illinois. They are the focus of my testimony.

#### CCG Supports Illinois CAIR

CCG generally supports Illinois EPA's judgment in the CAIR framework to allocate NOx allowances in a way that benefits the people of Illinois.

In particular, we support the following specific aspects of Illinois CAIR. They will assist development of IGCC technology in Illinois:

- Allowances based on output, rather than fuel (heat) input, in order to emphasize a source's efficiency, rather than its energy usage;
- Frequent updating of the baseline production records upon which allowance allocations will be based;
- A reduced lag time (compared to the federal Model Rule) between allocating allowances and using them, so that new sources will become part of the overall allowance pool more quickly;
- Establishment of a new source set-aside;
- Definition of new units as those which commence operation after January 1, 2006;
- · Creation of a Clean Air Set-Aside (CASA) category for highly efficient generation;
- Creation of a CASA category for clean-coal technology including IGCC;
- Creation of an Early Adopter incentive within the CASA; and
- Allowing project participation in multiple CASA categories.

For the Taylorville Energy Center and similar IGCC projects, all these CAIR provisions promote clean, modern technologies in ways that are superior to the regulatory alternatives.

Output-based allocations are one good example. Heat input is easily defined for a conventional, pulverized-coal boiler, but it is not clear what that might mean for an IGCC facility. With IGCC, there are a number of varying solid and gaseous fuel heat inputs to the gasifiers and combustion turbine units. Using output, rather than heat input, resolves this question in a modern, professional way-not only for IGCC, but for the variety of renewable-energy and energy-efficiency projects that are also anticipated by the CASA.

Frequent updating of the baseline data used to allocate allowances, and shorter lag time between allocating an allowance and using it, are two more excellent examples. In the federal Model Rule, retiring units receive a windfall of surplus allowances because of obsolete baseline data and the time it takes for a new allowance to be actually used. Under Illinois CAIR, the pool of allowances available to both operating generators and new efficiency projects will be greater. Generators will also have to produce something of value for society, in order to earn valuable allowances. This is sound public policy, in CCG's view.

Certainly it is true, just for the record, that the new Taylorville Energy Center may receive NOx allowances under the proposed new source set-aside, highly-efficient generation, clean-coal, and early-adopter provisions of Illinois CAIR. We believe that this is also as it should be. Collectively, these represent significant financial incentives that will help to offset some of the added cost of new, clean-coal technology such as IGCC.

#### Effect of Illinois CAIR on Use of Illinois Coal

Illinois CAIR will promote, not discourage, the use of Illinois coal, and do it in an environmentally-beneficial way. Illinois CAIR provisions encourage investment not only in IGCC technology, but in emission controls for existing coal-fired generation facilities in Illinois. These investments make the use of Illinois' high-sulfur coal feasible--even though the sulfur dioxide limits of CAIR are more stringent. Please also consider this: if the regulation is stringent enough to force the installation of scrubbers, then it further expands the market for Illinois coal, not just in Illinois but in other states as well.

#### Recommendations for Improvement

There may be details of Illinois CAIR that could be improved to provide a more effective incentive for new, clean-coal technologies. We respectfully offer the following suggestions:

1. Reduce the time in which new sources are in the new-source category by making

allocations one or two years in advance, rather than three. The new-source set-aside will almost certainly be over-subscribed. This will limit its benefit, and make its benefit almost impossible to quantify in advance. If the benefit cannot be quantified, it will limit the positive impact on investment decisions and the financing of clean coal technology--one of the very goals of Illinois CAIR.

2. For Early Adopters, eliminate pro-rata reduction of CASA allocations for the life of the project, or for at least ten years. Like the above suggestion, this will increase effectiveness of the incentive by making the quantity of the allocation predictable, reducing risk, and promoting investment financing.

That concludes my testimony. I am pleased to answer your questions.

CHI:1807054.4

#### **CERTIFICATE OF SERVICE**

I, James H. Russell, attorney for Christian County Generation, LLC, hereby certify that I served a copy of my Appearance on behalf of Christian County Generation, LLC and the prefiled written testimony of Dr. Gregory Kunkel, upon those listed below on November 9, 2006 via

First Class Mail, postage paid.

John J. Kim Rachel L. Doctors Illinois Environmental Protection Agency Division of Legal Counsel 1021 North Grand Avenue East Post Office Box 19276 Springfield, IL 62794-9276

Sasha M. Reyes Steven J. Murawski Baker & McKenzie One Prudential Plaza, Suite 3500 130 East Randolph Drive Chicago, IL 60601

Sheldon A. Zabel Kathleen C. Bassi Steven Bonebrake Schiff Hardin, LLP 233 South Wacker Drive, 6600 Sears Tower Chicago, IL 60606

Matthew J. Dunn, Division Chief Office of the Attorney General Environmental Bureau 188 West Randolph, 20<sup>th</sup> Floor Chicago, IL 60601

Virginia Yang, Deputy Legal Counsel Illinois Department of Natural Resources One Natural Resources Way Springfield, IL 62702-1271 Ms. Dorothy Gunn, Clerk Illinois Pollution Control Board James R. Thompson Center 100 West Randolph Street Suite 11-500 Chicago, IL 60601

William A. Murray City of Springfield Office of Public Utilities 800 East Monroe, 4<sup>th</sup> Floor Municipal Building East Springfield, IL 62757

Faith E. Bugel Environmental Law and Policy Center 35 East Wacker Drive, Suite 1300 Chicago, IL 60601

Keith I. Harley Chicago Legal Clinic, Inc. 205 West Monroe Street, 4<sup>th</sup> Floor Chicago, IL 60606

Daniel McDevitt Midwest Generation 440 South LaSalle Street, Suite 3500 Chicago, IL 60605 S. David Farris, Manager Environmental, Health and Safety City of Springfield, Office of Public Utilities 201 East Lake Shore Drive Springfield, IL 62757

David Rieser James T. Harrington Jeremy R. Hojnicki McGuire Woods LLP 77 W. Wacker Drive Suite 4100 Chicago, IL 60601 John Knittle, Hearing Officer Illinois Pollution Control Board James R. Thompson Center 100 West Randolph, Suite 11-500 Chicago, IL 60601-3218

Bruce Niles Sierra Club 122 W. Washington Ave. Suite 830 Madison, WI 53703

By:

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James H. Russell Attorney for Christian County Generation LLC

Winston & Strawn LLP 35 W. Wacker Drive 40<sup>th</sup> Floor Chicago, IL 60601 Telephone: 312-558-6084 jrussell@winston.com