

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF :

PROPOSED NEW 35 ILL. ADM. CODE, SUBPART W,  
THE NOx TRADING PROGRAM FOR  
ELECTRICAL GENERATING UNITS, AND  
AMENDMENTS TO 35 ILL. ADM. CODE 211 AND 217

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RO1-9  
(Rulemaking-Air)

*P.C. #3*

NOTICE


TO: Dorothy Gunn, Clerk  
Illinois Pollution Control Board  
James R. Thompson Center  
100 West Randolph, Suite 11-500  
Chicago, IL 60601

Catherine Glenn, Hearing Officer  
Illinois Pollution Control Board  
James R. Thompson Center  
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SEE ATTACHED SERVICE LIST

PLEASE TAKE NOTICE that I have today filed with the Office of the Pollution Control Board the COMMENTS OF THE ILLINOIS EPA by the Illinois Environmental Protection Agency, a copy of which is herewith served upon you.

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

By:   
Laurel Kroack  
Assistant Counsel  
Division of Legal Counsel  
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DATED: October 12, 2000

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THIS FILING IS SUBMITTED ON  
RECYCLED PAPER

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF: )

PROPOSED NEW 35 III. ADM. CODE 217, SUBPART W, )  
THE NO<sub>x</sub> TRADING PROGRAM FOR ELECTRICAL )  
GENERATING UNITS, AND AMENDMENTS TO )  
35 ILL. ADM. CODE 211 AND 217 )

R01-9

(Rulemaking-  
Air)

**COMMENTS OF THE ILLINOIS EPA**

The Proponent, the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (Illinois EPA or Agency), by its attorney, Laurel L. Kroack, hereby submits the following comments on the above-titled proposal following completion of hearings in this matter. The Illinois EPA requests that the Illinois Pollution Control Board (Board) adopt the proposal as submitted and as proposed to be amended by the Illinois EPA in its Errata Sheet filed on August 31, 2000, and its Motion to Amend, filed on September 26, 2000, and as set forth on Exhibit A attached hereto. The Illinois EPA further requests that the Board make no further substantive revisions to the rule for the reasons set forth below.

**PURPOSE OF PROPOSAL**

On July 11, 2000, the Illinois EPA proposed amendments to Part 217 and Part 211 of the Board's air pollution control regulations to control the emissions of nitrogen oxides (NO<sub>x</sub>) from fossil fuel-fired electrical generating

units (EGUs) during the control period specified by the so-called NOx SIP Call promulgated on October 27, 1998. See 63 Fed. Reg. 57,356 (October 27, 1998). The proposed amendments are intended to meet several obligations of the State of Illinois under the CAA, including as follows: to submit control strategies necessary to demonstrate attainment of the 1-hour ozone National Ambient Air Quality Standard (NAAQS) for the Metro-East/St. Louis moderate ozone nonattainment area (NAA); to submit control strategies necessary to demonstrate attainment of the 1-hour ozone NAAQS for the Lake Michigan severe ozone NAA; to satisfy a portion of Illinois' obligation to submit a State Implementation Plan (SIP) to address the requirements of the so-called NOx SIP Call, by implementing the NOx Trading Program, 40 CFR part 96, and determining NOx allowance allocations for EGUs, as part of that program; and to meet the applicable requirements of Section 9.9 of the Illinois Environmental Protection Act (Act). Included in the proposal were new Subpart W, the NOx Trading Program for Electrical Generating Units, 35 Ill. Adm. Code 217, and conforming amendments to Parts 217 and 211.

As the Board is aware, on August 30, 2000, the U.S. Court of Appeals for the D.C. Circuit (D.C. Circuit) issued an order extending the deadline for full implementation of the NOx SIP Call from May 1, 2003, to May 31, 2004 (Order). See *Michigan v. EPA*, No. 98-1497 (D.C. Cir. 2000). As a result of this Order, the Illinois EPA proposed additional revisions to the proposal in its Motion to Amend, and will be submitting an additional rulemaking which will require EGUs to meet a NOx emission rate

of no more than 0.25 lbs/mmBtu beginning on May 1, 2003, in order to meet Illinois' attainment demonstration obligations for the Metro-East nonattainment area. Since USEPA has not announced formally or informally how it intends to respond to the Order, Illinois EPA is not proposing any further revisions to the proposals at this time, although the Agency notes that it may be required to propose revisions in the future as necessary to address any action by USEPA regarding the Order.

As the Board is also aware, a number of representatives of the affected sources submitted pre-filed testimony and offered both oral and written comments at the second hearing on the proposal held on September 26, 2000. The divergence of interests among the affected sources, or EGUs, is apparent in the pre-filed testimony. Since it is not possible to accommodate all of these divergent interests, the Illinois EPA suggests that the Board make no substantive revisions to the proposal not addressed in the Errata Sheet, the Motion to Amend or herein.

The Illinois EPA believes it is appropriate to comment on assertions contained in the pre-filed testimony which do not comport with information available to or known by the Agency. Also, the Illinois EPA discovered several misstatements in testimony it provided to the Board, or testimony that should be clarified, given at the first set of hearings on August 28<sup>th</sup> and 29<sup>th</sup>, 2000. As a result, the Illinois EPA offers the following comments. These comments are organized into subject matter area (comments on the trading budget and allocation of allowances, air quality analyses, control

technology costs, and miscellaneous issues), rather than addressing these issues through comments on each party's pre-filed testimony. There is also a section correcting Agency misstatements.

## COMMENTS

### ALLOCATION OF ALLOWANCES

A number of comments raised concerns with the trading budget and its allocation, including the size of the trading budget; the methodology for allocating the trading budget among competing interests; the size, distribution and costs of allowances from the new source set aside; and the size, use and distribution of the Compliance Supplement Pool. Each of these sub-areas will be separately addressed.

#### Size of the Trading Budget for EGUs

A number of comments raised concerns that the size of the Trading Budget for EGUs, at 30,701 tons per season, is insufficient. In their pre-filed testimony, commentaries have asserted that the growth factor applied to Illinois, at 8%, is insufficient. The Illinois EPA notes that it argued for a larger growth factor at each point in the federal rulemaking process, but was unsuccessful.

In the NO<sub>x</sub> SIP Call, USEPA established a NO<sub>x</sub> Budget for May through September 30 of each year (the control period) for each jurisdiction subject to the NO<sub>x</sub> SIP Call. The SIP Call budgets were based on the total amount of NO<sub>x</sub> emissions that sources in each covered jurisdiction would emit in

2007, in light of expected growth and taking into account measures required under the CAA (e.g., Acid Rain Program applicable to EGUs under CAA Title IV). This calculation is referred to as the 2007 base year emission inventory. The total NOx emissions budget is comprised of NOx emissions from all sources within a covered jurisdiction, including mobile (on-road and off-road vehicles), area sources and point sources (both large and small). USEPA then projected the total amount of NOx emissions that each of the covered States would emit in 2007 if each State applied what USEPA determined were highly cost-effective control measures to the four major or "large" source categories: large electrical generating units (serving a generator greater than 25 megawatts); large fossil fuel-fired stationary boilers and combustion turbines not used primarily to produce electricity (units with a maximum design heat input greater than 250 mmbtu/hr) or non-EGUs; cement kilns; and large stationary internal combustion engines. This calculation is referred to as the 2007 controlled inventory. The difference between the 2007 base year emission inventory and the 2007 controlled inventory is the "significant amount" that each State's SIP must control to satisfy CAA Section 110(a)(2)(D). 63 Fed. Reg. 57,356, 405 (Oct. 27, 1998).

Illinois' growth for EGUs was set by USEPA by multiplying actual 1996 heat input with a 1996 - 2007 growth factor of 1.08, as predicted by USEPA's Integrated Planning Model ("IPM"), and thus establishing the Base 2007 heat input values. The budget for EGUs was then calculated by

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multiplying the Base 2007 heat input by the NOx emission rate of 0.15 lbs/mmbtu, a NOx emission rate achievable by controls determined by USEPA to be highly cost effective, and dividing by 2,000 lbs/ton.

Although the state-wide NOx budgets were based on the levels of reduction achievable through highly cost-effective control measures, the NOx SIP Call allows each State to determine what measures to adopt to meet its state-wide budget. It does not specifically require reductions from these sectors or the level of reductions USEPA determined could be achieved with application of the highly cost effective control measures. The NOx SIP Call merely requires States to submit SIPs, which, when implemented, will require controls that meet the NOx state-wide budget. The NOx SIP Call "encourages" States to adopt a cap and trade program for large EGUs and large non-EGUs as a cost-effective strategy to meet the budgets and provides an interstate NOx trading program that USEPA will administer for the States as a means of achieving compliance through highly cost effective measures. However, if States do choose to participate in the national trading program, they must submit SIPs that conform to the trading program proposed as 40 CFR part 96. 63 Fed. Reg. 57,356, 458 (Oct. 27, 1998).

The Agency has determined that, as a practical matter, Illinois cannot meet its NOx budget unless it controls these four source categories, i.e., there are not enough total NOx emissions from other sources that can be controlled to meet the budget, nor would such controls be economically reasonable or, in some cases, technically feasible. Further, the General

Assembly found in Section 9.9 of the Act that emissions trading is a cost-effective means of compliance and authorized the Agency to propose and the Board to adopt rules implementing the federal NOx Trading Program in Illinois.

#### Growth in Other States

Members of the Board asked the agency to provide information on the growth rate assumed for other states subject to the SIP Call. Illinois EPA notes as an initial matter that the growth rate for the utility industry in states other than Illinois was determined by the USEPA exactly as was the Illinois growth rate, i.e. by the Integrated Planning Model (IPM). This model employs many variables that differ from state to state, hence the growth rates for the other states differs from the growth rate determined for Illinois. As in Illinois, the USEPA used the growth rate determined by the IPM, in preference to growth rates given in other estimates by each of the affected states, to calculate the final EGU portion of the baseline NOx emissions for those states. Growth factors for EGU electrical demand vary from 0.47 for Rhode Island to 1.59 for Massachusetts. As noted earlier, Illinois' growth rate was set at 1.08.

#### Allowance Allocation Methodology

As the Board is aware, much of the pre-filed testimony raised one or more objections to the proposed allowance allocation methodology. For the most part, however, the testimony could be divided among the existing, largely coal-fired baseload EGUs that generally favored the approach, with



some minor revisions, and many of the newer or not-yet-constructed mostly natural gas peaking units (new EGUs) that strongly disfavored the approach and raised a number of objections about the fairness of the methodology.

A number of representatives of new EGUs presented testimony that the allowance allocation methodology is unfair, anti-competitive and overly complicated. These sources would have the allocation methodology mirror the model approach in 40 CFR part 96, where the NSSA is 5% and the allocations are fully updating. American Lung Association, among others, would have an output based methodology -- allocations would be based on megawatts of generation produced per heat input.

Following extensive negotiations with affected sources, the Agency developed initial allocations and an allocation methodology for distribution of available allowances to affected sources that involves a "fixed/flex" approach, and is a combination of a fixed allocation methodology and an updating flex allocation methodology. The Agency believes that this represents a balanced approach that addresses the competing interests of the affected sources and is within the flexibility provided by the NOx SIP Call.

Initial allocations to EGUs that commenced operation prior to January 1, 1995, are listed in Appendix F of the proposed rule. The Agency will instruct USEPA to allocate the number of allowances provided in Column 7 to each EGU as listed for 2004, 2005, and 2006, and will withhold 5% of the total number of allowances available for allocation for the NSSA for

distribution to "new units." i.e. those that commenced operation on and after January 1, 1995.

In 2007 and 2008 each EGU identified in Appendix F will receive approximately 80% of the number of allowances it was allocated in 2004-2006 (Column 8). This constitutes the "fixed" portion of the total allocation. Again, note that 2% of the entire number of allowances available for distribution has been withheld for new units as part of the NSSA. The "flex" portion of the total allocation comes from the remaining 20%. In the "flex" portion, the Agency would first allocate allowances to those EGUs that commenced operation as of May 1, 2002, based upon the formula at proposed Section 217.762.

The procedure described above is repeated for 2009 and 2010, except that the "fixed" and "flex" portions of the allocations are each 50% of the budget, less the new source set aside of 2%.

For 2011 and thereafter, allowances will be allocated to all "existing" EGUs (both those listed on Appendix F and those that have rolled into the flex portion of the budget) on the basis of average control period heat input, i.e., 100% "flex."

While this methodology is not initially straightforward, the Agency believes that the "fixed/flex" approach best serves the interests of all of the regulated sources in that it provides certainty to the Appendix F EGUs as they transition into this regulatory scheme, and ensures new EGUs first

priority at the allowances to be allocated from the "flex" portion of the budget in 2007 through 2010.

American Lung Association presented testimony asking the Board to provide an output based allocation methodology based on megawatt of generation produced per heat input. Illinois EPA does not support an output based allocation methodology at this time. USEPA has not fully developed such an approach, and it is unclear how allowances would be distributed under this scheme.

#### New Source Set Aside (NSSA)

All of the new EGUs have expressed disagreement with the NSSA elements of the proposal, including the size of the NSSA, calculation of allowances and charging a fee for allowances distributed from the NSSA for those EGUs that commenced operation after January 1, 2003. Illinois EPA understands these objections, but believes the proposal is a rational approach to the divergent interests of the existing baseload units and the new peaking units.

#### Size of the New Source Set-Aside

Representatives of new EGUs generally believe that limiting the new source set-aside to 5% in 2004 through 2006 and to 2% in 2007 and thereafter is insufficient. Considering the number of new sources that have applied for permits in Illinois, it appears that they may be correct. However, Section 9.9 of the Act limits the new source set-aside to not more than 5%

of the EGU budget. New EGUs may also purchase allowances from the market to address remaining needs.

The new EGUs have commented that the NSSA should continue to be 5% of the total EGU trading budget in all years of the program. However, the Agency believes that the majority of new EGUs will be included in this first group and that activity in this sector will decline in future years, thus the 2% set-aside beginning in 2007 is probably sufficient.

#### Methodology for Determining NSSA Allocations

The proposal limits new EGUs to allowances based on the more stringent rate of 0.15 lbs NOx/mmbtu or the rate included in the new EGU's permit, but never more stringent than a rate of 0.055 lbs NOx/mmbtu, applied to the unit's control period heat input. The NOx SIP Call, on the other hand, applies a rate of 0.15 lbs NOx/mmbtu to all EGUs regardless of their new or existing status.

The emission rates for new, natural gas-fired EGUs, which are most of the new EGUs in Illinois to date, are very low. The lowest emission rate potentially applicable to the new EGUs who have applied for permits in Illinois is 0.013 lbs NOx/mmbtu. This is a source subject to LAER or lowest achievable emission rate under 35 Ill. Adm. Code 203, by virtue of its major source status and for locating in the Metro-East/St. Louis NAA. There are also several other sources that are subject to best available control technology (BACT) because they are major sources under the federal Prevention of Significant Deterioration (PSD) program, 40 CFR 52.21.

In the process of developing this proposal, it appeared more equitable to the Agency to base allowance allocations on rates that are no greater than what is required by sources' permits rather than to provide the additional allowances that would accrue to these units by virtue of the less stringent emission rate of 0.15 lbs./mmbtu. The Agency recognizes that this approach ensures that relatively more of the allowances will go to the existing coal-fired baseload units in Illinois as long as they operate.

However, the Agency also recognized that those units applying BACT and, especially, LAER, are near or at the limits of technology. Therefore, the Agency believes that the floor of 0.055 lb/mmbtu is appropriate.

#### Payment for Allowances Received from the New Source Set-Aside

Section 9.9 of the Act provides that the Agency may charge those EGUs that commence operation after January 1, 2003, for the allowances it issues to them from the new source set-aside. Section 9.9 also provides that collected funds, except for the Agency's administrative costs, are to be returned to the EGUs that were not allocated allowances from the NSSA.

Most of the new EGUs object to the inclusion of this requirement in the proposal, questioning why they should have to pay for allowances and why they should subsidize the continued operation of coal-fired power plants.

The Appendix F EGUs argue that they are being required to expend significant amounts of money to retrofit their plants to comply with this proposal and that retrofitting is more expensive than new construction.

They argue that the EGU budget for Illinois is based upon their operation and, therefore, the budget is intended for their continued operation at reduced emission rates. For this reason, there should be some compensation mechanism for the loss of allowances allocated to new EGUs.

Illinois EPA understands the objections of the new EGUs, but believes that charging for allowances from the NSSA serves a purpose exclusive of offsetting the Agency's administrative costs and compensating the existing EGUs. The market based fee should act as a deterrent to a source to obtain more allowances than is necessary and help to limit the oversubscription to the NSSA. The Agency believes that the proposal is a rational approach to the divergent interests of the existing baseload units and the new peaking units.

Notably, at the first hearing, Mr. Goodwin raised a number of concerns about the NSSA, including the provisions of the proposal concerning payment for allowances at the market rate by EGUs that commenced operation after January 1, 2003. Mr. Goodwin asserted that the Illinois EPA should not charge for these allowances at all, or at least not charge any amount in excess of its administrative costs in managing the new source set aside, and requested that the Board revise the proposal accordingly. The Illinois EPA pointed out that Section 9.9 of the Act allows the Agency to charge for any allowances issued from the NSSA to cover its administrative costs connected with the federal NOx Trading Program and to also distribute any excess funds to the EGUs not allocated allowances from the NSSA. Mr.

Goodwin asserted that since the proposal had addressed this issue, the issue was now before the Board and the Board could take action on his concerns. The Illinois EPA respectfully disagrees with this assertion. While the Agency acknowledges that the Board may revise the language in proposed Section 217.768 to a certain extent, the Illinois legislature has clearly given to the Agency the authority to determine, consistent with the provisions of Section 9.9 of the Act, whether and how much to charge for allowances from the NSSA. The Agency included the specific language in the proposed rules for informational purposes only. If the Board objects to the inclusion of these provisions, it is the position of the Illinois EPA that the Board should revise the rule only as set forth in Exhibit A hereto, but not to revise the proposal in any way to limit the Agency's statutory authority.

#### Compliance Supplement Pool (CSP)

The pre-filed testimony indicates that there is general agreement with the proposal to distribute the CSP based on earned early reduction credits (ERCs). The NOx SIP Call provides that ERCs may only be earned in the 2001 and 2003 control periods, and may not be distributed until the State has an approved SIP. Because of this requirement the Agency has suggested that the proposal be modified to allow ERCs to be earned in 2003 as well, to the extent they are not earned in 2001, and to the extent USEPA provides for this option. Currently, the NOx SIP Call provides that ERCs may only be used in the 2003 and 2004 control periods. Due to the delay in the

NOx SIP Call compliance date, the Agency has suggested revisions to allow ERCs to be used in any later years authorized by USEPA.

Several sources have commented that the proposal should be revised to make two-thirds of the CSP apportioned to EGUs available for reductions in 2001 and one-third for reductions in 2002 to encourage true "early" reductions, as reductions made in 2002 or later years are more likely to be due to outages for installation or replacement of control equipment in preparation for compliance with the rule, and to allow sources to "plan." The Agency does not object to any such change, but believes that an even split of reductions (50% in 2001 and 50% in 2002) is just as appropriate.

Finally, Dominion Generation suggests that Illinois EPA can somehow "enlarge" the CSP, and gave a vague reference to "other" states taking this approach as support for this request. Illinois EPA understands sources' frustration at the limits of the CSP and the fact that some will not receive allowances on a one-for-one basis for early reductions. However, the State has no authority to increase the size of the NSSA. As stated earlier and throughout the Statement of Reasons, the trading program is a federal program, administered by USEPA. Illinois EPA cannot distribute allowances USEPA does not make available to it, and any such attempt would not be recognized.

#### **AIR QUALITY ISSUES**

Several of the commenters asserted in their pre-filed testimony that the Illinois EPA should have proposed a rule that would require affected



sources to comply only with a rate based rule for NO<sub>x</sub> emissions of no more than 0.25 lbs/mmbtu (0.25 rule), not a cap and trade rule based on NO<sub>x</sub> emissions of no more than 0.15 lbs/mmbtu (0.15 rule), because the air quality benefits for the purposes of attainment and transport were either the same or the differences between the approaches were not significant. These assertions are incorrect.

The NO<sub>x</sub> SIP Call is a regional strategy intended to reduce levels of NO<sub>x</sub> across the 23-jurisdiction domain included in the SIP call. Consistent with OTAG's findings, the goal of the SIP call is to generally reduce emissions in that entire region. The reductions in a single state would have little effect on the entire region; however, the cumulative effect of reductions in all of the jurisdictions subject to the SIP call does have an effect on NO<sub>x</sub>, and thereby, ozone levels in the nation east of the Mississippi River. To suggest that the same benefits with regard to ozone reduction will result from a cap based upon application of a rate of 0.25 rather than 0.15 is logically flawed. Further, OTAG's modeling indicated a significant regional difference in ozone levels between reductions at a rate of 0.25 and 0.15. To summarize, there are two concepts that the Board must keep in mind: (1) that it is the cumulative effect of NO<sub>x</sub> reductions in the entire region subject to the SIP call that results in significant reductions in ozone levels and (2) that, regionally, there is a significant difference in the ozone reductions associated with application of rates of 0.25 and 0.15.

Ameren Corporation (Ameren) stated that "the record in this proceeding does not support the adoption of this regulation to meet the attainment demonstrations for either the Metro-East/St. Louis or Lake Michigan non-attainment areas in absence of the SIP Call." The Illinois EPA strongly disagrees with this assertion. While early modeling conducted by LADCO indicated that a 0.25 rate based rule would *likely* attain the 1-hour ozone standard in the Lake Michigan area, the Agency is aware that LADCO's modeling does not address all of the issues relevant to Illinois. The Illinois EPA is examining issues such as peakers and transportation conformity in supplemental attainment demonstration modeling beyond that performed by LADCO for the member states. These results will be the subject of an Agency hearing in Chicago on November 8, 2000.

Ameren also suggested that the preliminary modeling would have demonstrated attainment for the Lake Michigan area if the CAMx model was used for the attainment modeling, instead of the UAM-V model. Currently, UAM-IV, an earlier version of the Urban Airshed Model, is the only USEPA model recommended for use in attainment demonstrations by USEPA's "Guideline on Air Quality Models."

Due to unique characteristics regarding the lake-land interaction, the Lake Michigan States contracted to have UAM-V created, and this version has been approved by USEPA for use in the Lake Michigan ozone attainment demonstration modeling. The UAM-V was accepted by USEPA only after

extensive performance evaluation using special field measurements. USEPA has since approved UAM-V in other areas of the country.

Illinois EPA is aware that USEPA has proposed a change to the "Guideline on Air Quality Models" that would allow use of other models (such as CAM-x) in demonstrating attainment, but these guidelines are not in effect yet. Further, Illinois EPA is unaware of any State using CAM-X for attainment demonstration purposes at this time. As a result, the LADCO states must rely on modeled results from UAM-V, not CAM-X.

Ameren also asserted that the 0.25 rate based rule would have "achieved the same air quality benefits of this proposed rule at much less cost," and that the 0.25 rate based rule would "also address the interstate transport issue which the NOx SIP Call is intended to address." This is incorrect. Notably, Ameren provided no justification that a 0.25 rate based rule will address transport. Ameren suggests that control at 0.15 would provide insignificant ozone decreases in the Lake Michigan area relative to a 0.25 rule. However, the SIP Call does not define "significance" as the difference between a 0.25 to 0.15 approach, but rather as an entire state's downwind impact using the 1996 base year inventory.

USEPA examined not only the local differential between a 0.25 and 0.15 approach, but also looked at the impact on the entire region by each approach. Further, OTAG found that when reductions were applied regionally, the difference in the effectiveness between controls is compounded. This demonstrates that the cumulative effect of NOx

reductions in the entire region that is subject to the SIP Call will have a much larger impact than consideration of controls in individual states.

Moreover, the LADCO modeling relied upon by Ameren and others did not attempt to address ozone transport from the Midwest to the Northeast. The Grid M modeling domain utilized by LADCO did not extend far enough East to allow for evaluation of transport to the Northeast.

American Lung Association stated in its pre-filed testimony that there had been errors in Illinois' inventory because of excess reductions assumed from the initial Rate of Progress (ROP) plan. American Lung implied that these errors could impact Illinois' air quality modeling. Illinois EPA notes that errors in the ROP inventory would have no direct bearing on the modeling, and the modeling inventory has been updated exclusive of the emission reductions described in the ROP plan.

With regard to model uncertainty creating doubt as to the ability of the NOx SIP Call to attain the 1-hour ozone standard for the Lake Michigan area, rigorous model performance evaluation and USEPA's attainment tests ensure that model uncertainty is accounted for in evaluating the adequacy of the attainment plan. Illinois EPA believes that the modeling is being applied in a manner that limits the impact of uncertainty.

## **COST EFFECTIVENESS**

### **Agency Costs Estimates**

The Agency relied on the cost analysis performed by USEPA to support this rulemaking. USEPA analyzed the cost effectiveness of various

alternatives and chose the uniform 0.15 lbs NOx/mmbtu level control for capping the emissions from EGUs affected by the SIP Call. USEPA determined that, along with trading, this level of control is "highly cost effective."

USEPA also used the IPM to analyze the regulatory impacts of the NOx SIP Call. IPM works by finding the least-cost method for producing electric power for the industry as a whole, assuming the entire industry in the area of the NOx SIP Call is subject to an overall cap on ozone season NOx emissions. The model places pollution controls or makes dispatch changes to electricity generating units that lead to the achievement of emission reductions at the lowest cost. As a result, some power plants are projected to be tightly controlled, at a significant cost, while other plants have no controls beyond those assumed in the baseline.

#### Method for Determining Cost Effectiveness

In general, the affected sources in their pre-filed testimony stated that costs of controls for their units are much higher than the USEPA's estimates and tried to prove this assertion by providing testimony that the *incremental* cost between a 0.15 rule and a 0.25 rule is very high.

The Agency agrees that the costs of controls vary from unit to unit depending upon the type, size, layout, age, utilization of the unit and also the type of NOx control technologies applicable. However, the methods used by the affected sources to question the costs of this rulemaking are not appropriate -- the methods are inconsistent with the standard method for

determining cost effectiveness of controls used by USEPA and this Agency in rulemakings since 1990.

Essentially, the affected sources are arguing the incremental costs of control between a 0.25 rule and a 0.15 rule. An analysis of the differential costs between two alternatives must be based upon reductions from baseline emissions. USEPA determined that a 0.25 rule, with trading, will achieve 563,000 tons of NOx reductions per control period from the 2007 base case at an annual cost of \$643 million. This equates to a cost effectiveness of \$1,143 per ton of NOx reduced. Emissions reductions at a 0.15 rule (with trading) would achieve 938,000 tons of NOx reductions per control period from the 2007 base case at an annual cost of \$1,378 million. This equates to a cost effectiveness of \$1,468 per ton of NOx reduced. Therefore, the differential cost between 0.25 and a 0.15 alternative is \$325 per ton of NOx reduced.

#### Life of Equipment

Several commenters also argued costs using a five or ten year useful life for the control equipment. Again, this is not an accepted amortization schedule. USEPA assumed that all equipment life is 20 years for the SIP Call analysis and capital discount rate was assumed to be 6%.

#### Use of 1990 v. 1999 Dollars

Members of the Board have asked the Agency to supply information of the costs of the NOx SIP Call in 1999 dollars. Illinois EPA points out that the basis of the NOx SIP Call was the OTAG process, which was based on

the 1990 emissions inventory. The proposed SIP Call had cost information in 1990 dollars, and therefore, to be consistent, USEPA converted all cost to 1990 dollars. Agency staff have adjusted the cost effectiveness from 1990 dollars to 1999 dollars by using the producer price index. The cost effectiveness of the NOx SIP Call controls of \$1,468 in 1990 dollars is adjusted to \$1,584 in 1999 dollars per ton of NOx reduced.

#### Cost Effectiveness of VOC Controls

Members of the Board have asked the Agency to supply information of the costs of VOC controls adopted pursuant to the Clean Air Act. Attached hereto as Exhibit B hereto is a chart of the cost effectiveness of a number of VOC controls. This chart supports the statement that the cost effectiveness of the NOx SIP Call is similar to the cost effectiveness of various VOC controls measures--more in some instances, and less in others.

#### MISCELLANEOUS

##### Alleged NOx SIP Call "Uncertainties"

In his pre-filed comments, Mr. Aric Diericx, on behalf of Dynegy Midwest Generation (Dynegy), asserts that there are a number of uncertainties surrounding the NOx SIP Call, although Dynegy supports the notion that if the Board intends to adopt this proposal, the rules as written are acceptable. However, Dynegy implies that these "uncertainties" could affect the final form of the rule. The implications of the majority of the "uncertainties" suggested by Dynegy will be addressed separately.

Mr. Diericx first raises the litigation surrounding the new 8-hour ozone and the fine particulate matter standards, entitled American Trucking Association v. EPA, 175 F.3d 1027 (D.C. Cir. 1999). Mr. Diericx notes that "the 8-hour ozone standard sits idle along with that portion of the NOx SIP Call Rule that was designed to address the 8-hour standard." The NOx SIP Call did initially require reductions from affected jurisdictions to address downwind impacts that interfere with a state's ability to attain both the 1-hour and 8-hour ozone standards. However, when petitioners were successful in challenging the 8-hour standard, USEPA appropriately withdrew it as a basis for the NOx SIP Call. None of the elements of the NOx SIP Call were impacted, including the affected jurisdictions, the statewide or sector budgets, the analysis of highly cost effective controls, or the compliance or SIP submittal dates.

The next "uncertainty" raised is the decision of the Court of Appeals for the District of Columbia Circuit (DC Circuit) in the challenge to the NOx SIP Call entitled Michigan v. EPA, 213 F.3d 663 (D.C. Cir. 2000). As discussed in the Statement of Reasons filed in support of the rulemaking proposal, the DC Circuit generally upheld the NOx SIP Call.<sup>1</sup> On August 30,

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<sup>1</sup> See Michigan v. EPA No. 98-147, 2000 WL 180650 (D.C. Cir. 2000). That court subsequently stayed the effective date of the NOx SIP Call rule. Michigan v. EPA, No. 98-1947, (D.C. Cir. May 25, 1999) (order granting stay). On March 3, 2000, the Court upheld most of the NOx SIP Call rule, but reversed and remanded for further consideration the inclusion of portions of Missouri and Georgia in the rule, and reversed the inclusion of Wisconsin in the rule because USEPA had not made a showing that sources in Wisconsin significantly contributed to nonattainment or interfered with maintenance of the NAAQS in any other State. 2000 WL 180650 at \*31.



2000, the DC Circuit extended the date for compliance with the NOx SIP Call from May 1, 2003 until May 31, 2004. Dynegy is correct in noting that the full impact of this decision is not known at this time. USEPA has not stated whether it will appeal this ruling, or if not, how it will address both the delay of the program and the reduction of the 2004 control period by 30 days.

The reduction of the 2004 control period by 30 days could affect the size of the trading budget in the 2004 control period. USEPA has not indicated whether it will pro-rate the budget or leave the budget at its current level. The Agency agrees with the affected sources that if USEPA elects to address the shortened control period by reducing the budget for 2004, it should do so on the basis of heat input for those 30 days and not by a simple reduction based on the number of days in the 2004 control period. The Agency notes that while it agrees with affected sources and will advance these arguments with USEPA, USEPA establishes the parameters of the NOx SIP Call and the federal Trading Program, and not the Agency. Again, as long as Illinois can demonstrate that its SIP to address the NOx SIP Call will meet the state-wide NOx budget, it is free to establish its own plan for reducing NOx. However, if Illinois wishes to participate in the federal NOx Trading Program, the parameters of which are set by USEPA and not the Agency, Illinois' SIP must conform with those parameters. Illinois EPA agrees that because of the DC Circuit ruling uncertainties have been created, but the proposal before the Board has attempted to account for any

uncertainty in the final NO<sub>x</sub> budget for EGUs through the language in proposed Section 217.760(c).

In addition, the delay of the program could affect when early reduction credits (ERCs) may be earned. Currently, the SIP Call provides that ERCs may be earned in 2001 and 2002, and limits their use to the 2003 and 2004 control periods. USEPA could respond to the delay of the SIP Call by allowing reductions to be earned in 2001, 2002 and 2003, or by allowing them to be earned in 2002 and 2003. USEPA could also continue to insist that ERCs be limited to use in the 2004 control period, or allow them to be used in the 2005 control period as well. Further, it is not inconceivable that USEPA would "pro-rate" ERCs for use in the 2004 control period given its shortened length because the ERCs, in effect, would have more value than in a longer control period.

Illinois EPA has suggested to USEPA that it allow ERCs to be earned in each of 2001, 2002 and 2003, that their use be allowed in 2004 and 2005, and that USEPA not pro-rate the number of allowances that may be used in 2004. The Agency intends to follow up these remarks with a more formal request to USEPA. The proposal before the Board has attempted to account for any uncertainty regarding the ERCs through the language in proposed Section 217.770(c).

Dynegy has also argued that the control period contemplated by the NO<sub>x</sub> SIP Call and the Board's rulemaking begins annually on May 1, and therefore, the rule will not be effective until May 1, 2005. This has been

addressed by the Motion to Amend: the Agency has proposed to modify the definition of control period (proposed Section 211.1515) and proposed Section 217.750 (Purpose) to account for the 2004 reduced control period.

Dynegy then notes that litigation is ongoing over the state NOx budgets in the case entitled Appalachian Power Company v. EPA, Case No. 99-1268 (D.C. Cir.). In this case, petitioners, including a group of which several of the Illinois EGUs are members, challenged USEPA's technical amendment to the NOx SIP Call altering the trading budgets for a number of states. While it is not impossible that this case could result in a decreased trading budget for Illinois, it is much more likely that if there is any result at all, it will be an increase in the trading budget for Illinois. Affected sources should not be unduly impacted in their NOx SIP Call compliance planning. Again, the Agency was made aware of the EGUs' concerns that the budgets might be adjusted and the proposal attempts to address any uncertainty through proposed Section 217.760(c).

Dynegy also alleges that the ongoing litigation over the Clean Air Act Section 126 petitions filed by a number of the Northeast States subsequent to the issuance of the NOx SIP Call "could have some bearing on the language that triggers implementation in Illinois based on the development of these rules in other states." It is unclear how Dynegy has drawn this conclusion. The Agency points out that the rulemakings on the Section 126 petitions, while addressing similar jurisdictions and affected sources, have no impact on the legality, validity or effectiveness of the NOx SIP Call. The

Section 126 petitions are separate proceedings under separate provisions of the Clean Air Act. In fact, obligations imposed on upwind jurisdictions based on findings under these Section 126 petitions are currently stayed pending compliance with the NOx SIP Call. In other words, any potential outcomes over the Section 126 petition litigation will not impact the SIP Call obligations, but the delay of the SIP Call could conceivably remove the compliance stay afforded by USEPA to the affected jurisdictions in the Section 126 findings.

Finally, Dynegy raises the compliance date of the proposed FIPs, May 1, 2003, as potentially impacting the NOx SIP Call obligations because "U.S. EPA will need to re-propose Part 96, in effect beginning the rulemaking process anew." The Agency notes that the FIP is proposed, not adopted or final, and USEPA could certainly in its final rulemaking alter the compliance date for the FIP without going through any more procedural steps beyond publishing the final rulemaking. Further, the provisions of the FIP are found at proposed 40 CFR part 97, not 40 CFR part 96. Part 96 is the federal NOx Trading Program that States may elect to adopt.

In sum, none of these "uncertainties" affects the legality or validity of the NOx SIP Call, nor do they or would they allow Illinois to avoid compliance with the NOx SIP Call. As discussed in the Statement of Reasons submitted with the rulemaking, Illinois is subject to sanctions, including imposition of a FIP, if it fails to comply with the NOx SIP Call.

### Incentives for Energy Efficiency / Renewable Energy Measures

American Lung suggested that the proposal be revised to allow individuals and others to receive allowances for NOx reductions from "energy efficiency" measures. An energy efficiency program would be very difficult to administer, and it is difficult to accurately determine if such measures will impact electrical energy consumption.

American Lung also suggested that the proposal be revised to allow individuals and others to receive allowances for NOx reductions from "renewable energy" measures. While the Illinois EPA does not object to a renewable energy incentive, again, the incentive program would be difficult to administer, and it is difficult to accurately determine if such measures will impact electrical energy consumption.

### Cost of NOx Allowances in the Ozone Transport Region (OTR)

Contrary to testimony at the second hearing, the cost of NOx allowances traded in the OTR are relatively inexpensive --1999 vintage allowances were trading on average at \$350/ton and 2002 futures were trading at an average of \$485/ton. See Attached Natsource Emissions Brokerage Desk Air Trends Report, Vol. 3, issue 9, published September 27, 2000.<sup>2</sup>

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<sup>2</sup> At the second hearing, Mary Schoen of Enron Corporation incorrectly estimated the cost of NOx allowances traded in the OTR as approximately \$3,500.

## CORRECTIONS / CLARIFICATIONS OF AGENCY TESTIMONY

At the first hearing, Mr. Lawler slightly misstated what the NO<sub>x</sub> SIP call requires. . See August 28, 2000 Transcript p. 29, lines 10-11 and 19-24. Rather than mandating compliance with specific emission rates, *e.g.*, that EGUs must comply with a rate of 0.15 lb/mmBtu, the SIP call establishes statewide budgets for NO<sub>x</sub> emissions that were based, in part, upon application of a rate of 0.15 lb/mmBtu to the level of emissions projected for 2007 from EGUs serving generators greater than 25 MWe, a 60% reduction of the projected 2007 level of NO<sub>x</sub> emissions from non-EGU boilers and turbines greater than 250 mmBtu, a 30% reduction of 2007 projected NO<sub>x</sub> emissions from cement kilns that emitted 1 ton per day in 1995, and a 90% reduction of projected 2007 NO<sub>x</sub> emissions from stationary internal combustion engines that emitted 1 ton per day in 1995.

Further, the SIP call requires that States that choose to require controls by large EGUs and large non-EGU boilers and turbines must cap the NO<sub>x</sub> emissions from those sources at the levels established in the SIP Call. Despite the specificity with which U.S. EPA determined the statewide NO<sub>x</sub> budgets in those states subject to the SIP call, states could choose whatever menu of control measures most appropriate for that state so long as they would achieve the statewide budget.

Also at the first hearing, Ms. Bassi misspoke about flow control. The transcript at page 78, line 23 should be corrected as follows:

"flow control will not start until 2005, the ~~second~~ third year of the program."

The Agency would like to add a point of clarification regarding the triggering of flow control. The only allowances which are considered banked are those of a historical vintage. Allowances are allocated three years in advance; however, they are not considered banked until the year following the year for which they were allocated. For example, the Agency will allocate allowances for 2007 in 2004. During the period between 2004 and 2007, those allowances are not considered banked and will not trigger flow control. However, allowances issued for 2007 that are not used in 2007 will be considered banked in 2008, 2009, and so on until they are used. During those years following 2007 until they are used, they are considered banked allowances. See August 28, 2000 Transcript pages 76-77.

Another point of clarification regarding opt-in units: Mr. Rieser's questions at the first set of hearing were about the opting in to the trading program by existing small EGUs. We want to clarify that new small EGUs could also opt in to the trading program if they chose to do so. Opting in is not limited to sources that were in existence in 1995. See August 29, 2000 Transcript page 123.

## CONCLUSION

As stated in the Statement of Reasons filed with the proposal, the U.S. Court of Appeals for the D.C. Circuit has given States until October 28, 2000, to submit their SIPs to satisfy the NO<sub>x</sub> SIP Call. This proposal, upon adoption, will satisfy a portion of the NO<sub>x</sub> SIP Call requirements, as well as the State's requirement to submit rules to complete the attainment demonstrations.

Continued delay in this matter could result in sanctions provided by the CAA, including the withholding of highway funds pursuant to Section 179(b)(1) (42 U.S.C. § 7509(b)(1)) or the imposition of at least a 2:1 offset requirement on new and modified sources or emission units for which a permit is required under Part D of the CAA (42 U.S.C. § 7509(b)(2))(New Source Review). However, should the Administrator find the State lacking in good faith in working towards compliance, both sanctions shall apply until such time as the State achieves compliance. 42 U.S.C. § 7509(a).

USEPA has already published in the Federal Register proposed Federal Implementation Plans (FIPs) for all States subject to the NO<sub>x</sub> SIP Call to ensure that States timely meet the requirements of that rulemaking. 63 Fed. Reg. 56,393 (October 21, 1998) (to be codified at 40 CFR parts 52 and 97). USEPA has also stated that it intends to take final rulemaking action on the FIP promptly after the submittal deadline should a State fail to adopt and submit an approvable SIP revision in response to the NO<sub>x</sub> SIP Call. *Id.* at 56,396.

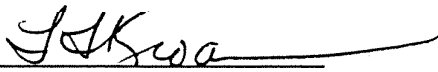
As the Board is aware, there is considerable divergence of interests among the affected sources, and it is not possible to accommodate all of these divergent interests. For these reasons and the reasons stated above,



the Illinois EPA requests that the Board make no substantive revisions to the proposal not addressed in the Errata Sheet, the Motion to Amend or addressed herein, and adopt the proposal as so modified.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

By:   
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Dated: October 12, 2000

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**THIS FILING IS SUBMITTED ON RECYCLED PAPER**

## EXHIBIT A

### Section 217.768 New Source Set-Asides for "New" Budget EGUs

- k) Fees for new source set-aside allowances:
- 1) "New" budget EGUs that commence commercial operation on or after January 1, 2003, that obtain allowances allocated from the new source set-aside shall pay for such allocations pursuant to Section 9.9 of the Act.
  - 2) The price of allowances from the new source set-aside shall be established by Agency rulemaking.
    - A) ~~The average price at which NOx allowances are traded in the interstate NOx Trading Program for the preceding control period; and~~
    - B) ~~For 2003 only, the price shall be the average price at which NOx allowances were traded in 2002 in the Ozone Transport Region.~~
  - 3) ~~The fees collected by the Agency from the sale of allowances will be distributed pro rata to budget EGUs receiving allowances pursuant to Section 217.764 of this Subpart on the basis of allocated allowances subject to Agency administrative costs assessed pursuant to Section 9.9 of the Act.~~

## EXHIBIT B

### COST EFFECTIVENESS OF RULEMAKINGS FOR VOC CONTROL

DESCRIPTION OF SUBMITTAL	RULEMAKING	IPCB DATE ADOPTED	COST EFFECTIVENESS (\$/Ton)
Municipal Waste Landfills	R98-28	6/17/1998	\$1,040
Cold Cleaning Degreasing	R97-024	6/5/1997	\$238 - \$779
Batch Operations	R94-33	5/4/1995	\$1,800 - \$4,500
Motor Vehicle Refinishing	R94-32	4/20/1995	\$242 - \$1,927 <sup>1</sup>
Lithographic Printing	R94-31	4/20/1995	\$1,800 - \$3,125 <sup>2</sup>
Tighten Coating Standards	R94-21	4/20/1995	\$310 - \$1560 <sup>3</sup> \$3,450 - \$14,070 <sup>4</sup>
Plastic Parts Coating	R94-21	4/20/1995	\$470 - \$668
SOCMI Air Oxidation	R94-16	10/20/1994	\$2,300
VOL Storage	R94-16	10/20/1994	\$200 - \$1300 <sup>5</sup>
Marine Vessel Loading	R94-15	10/24/1994	\$4,800 - \$5,200
RVP	R94-12	9/15/1994	\$905 - \$1811
Pressure Relief Valves	R94-12	9/15/1994	\$139

**NOTES:**

1. Overall average \$300/ton, cost savings in using HVLP application guns
2. Add-on control costs
3. Control via material substitution
4. Add-on control costs
5. Cost per tank retrofitted.

**NATSOURCE**  
EMISSIONS BROKERAGE DESK

# Airtrends

SEPTEMBER 27, 2000  
VOLUME 3, ISSUE 9  
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## Rocky Road to COP6

Reports from this month's meetings of the Subsidiary Bodies for Scientific and Technological Advice and Implementation in Lyon, France are peppered liberally with words such as "inconclusive" and "unresolved", contributing to a sense of pessimism among observers of ongoing international climate treaty negotiations. While some argue that the purpose of the recent meetings was not to reach consensus, many players were looking to these meetings as a barometer of negotiators' moods prior to the big show, the 6th Conference of the Parties to the UN Framework Convention on Climate Change, to be held in the Hague this November.

In Lyon, participants haggled over a number of technical and political issues such as details of the flexible mechanisms (i.e., International Emissions Trading (IET), Joint Implementation (JI), and the Clean Development Mechanism (CDM), compliance, land use, and policies and measures. The lack of progress in the working group on the flexible mechanisms was representative of the meetings as a whole. In the mechanisms working group, the European Union (EU) and G-77/China remain at odds with the Umbrella Group (i.e., the United States, Australia, New Zealand, Canada, Norway, Russia, and Japan) over the basic issue of complementarity, or the extent to which parties to the Protocol would be allowed to use the mechanisms to achieve compliance. Although participants discussed at length the eligibility of sinks in the CDM, positions remain static and no meaningful conclusions were reached. Similarly, negotiators clashed on basic issues concerning the admissibility of land use projects for compliance. On a brighter note, despite persistent unresolved issues, the compliance working group made steady progress in condensing

their draft text that will serve as the basis for further negotiations in the Hague.

The lack of progress in Lyon puts even more pressure on parties to achieve agreement at COP-6. Negotiators will make a final attempt at lightening November's load in a series of informal consultations scheduled throughout October.

## Emissions Data Spurs NOx Market Plummet

After an extremely slow period lasting most of August, the NOx allowance market finally saw an increase in trading activity late in the month and through early September, as a predominance of bearish sentiment drove prices substantially lower. Fueled largely by interpretations of preliminary NOx emissions data published by the EPA at the very end of August, aggressive selling pushed prices as low as \$320/ton for 1999 vintage and \$400/ton for 2000 vintage allowances, down from previous levels of \$480 and \$640, respectively. With a few stops along the way, market participants adjusted to the drop, and moderate trading has persisted at these lower levels. Most recently, 1999 vintage allowances traded for \$370, and 2000's traded several times between \$400 and \$415. Later year vintages did not react as dramatically to the sell off. In fact, as the

(Continued on page 3)

... you at the fall conference of the Emissions Marketing Association in ... conference, which is the first to be held outside the U.S., is indicative of ... of emissions markets. In order to provide the diverse skills and services ... address the challenges of both existing and proposed emissions mar- ... and its global presence.

... please join us for a reception on Sunday night, October 1st, from 6:00 PM ... For those unable to attend, we hope to see you in the spring.

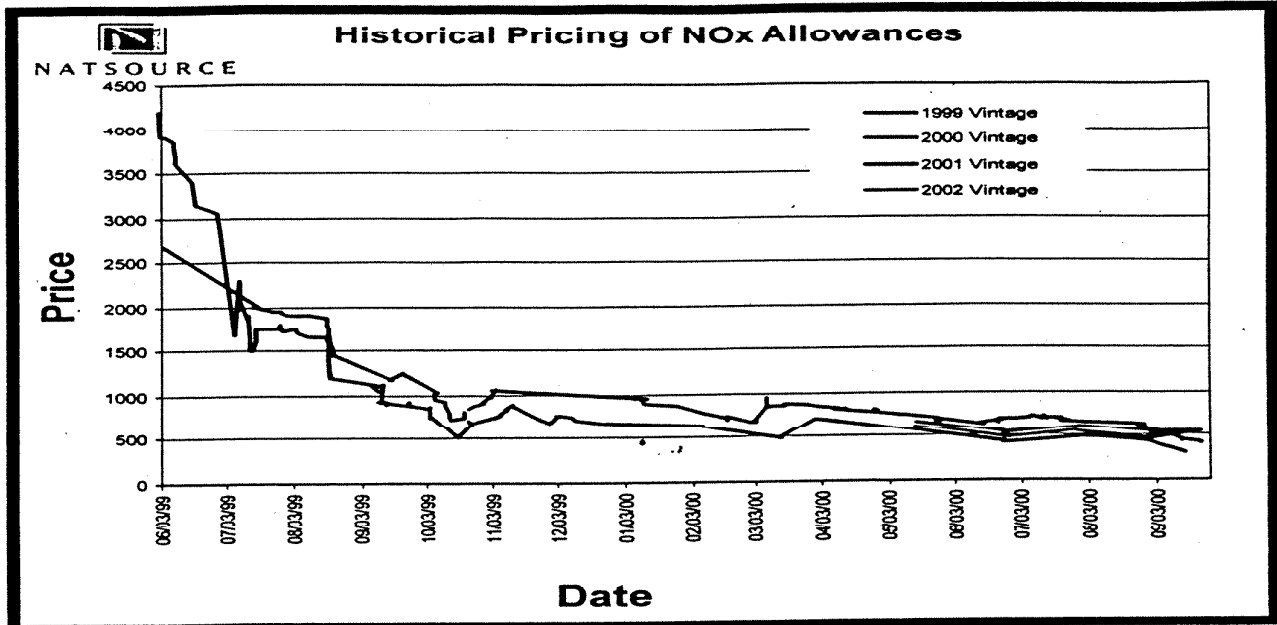
Best regards,  
Michael Intrator

**IN THIS ISSUE:**





As of August 24, 2000



## Emissions Data Spurs NO<sub>x</sub> Market Plummet

(Continued from page 1)

price of 2000 vintages fell this month, 2001 and 2002 vintage allowances appreciated in relative value. 2001 vintage allowances traded independently once since the sell-off at \$525. While there were no trades in 2002 allowances alone this month, a stream of 2001 and 2002 allowances traded recently for an average price of \$500.

The release of preliminary NO<sub>x</sub> emissions data for the first two months of the five-month ozone season confirmed predictions that a cool summer in the northeastern US would result in low NO<sub>x</sub> emissions. According to the data, NO<sub>x</sub> emissions from affected sources for May and June of 2000 amounted to approximately 78,000 tons, a level at which many 2000 vintage allowances will likely go unused. Adding excess 2000 vintage allowances to the current bank of approximately 44,000 banked 1999 allowances will again trigger progressive flow control restrictions, reducing the effective yield of 1999 and 2000 vintage allowances used for compliance in 2001, relative to the 75% compliance yield for 1999s used in 2000. For a more detailed explanation of progressive flow control scenarios and their potential market implications please call Jake Dickman on the NO<sub>x</sub> desk at (212) 232-5305.

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Gozone Transport Commission	
NO <sub>x</sub> Budget Market	
1999 Vintage	\$350/ton
2000 Vintage	\$400/ton
2001 Vintage	\$515/ton
2002 Vintage	\$485/ton

All prices are expressed in present value. 2001-2002 prices are calculated based on best available information.

This month also saw significant regulatory developments with respect to the NO<sub>x</sub> SIP Call. On August 30th, a Federal Court of Appeals for the District of Columbia Circuit ruled in favor of industry and labor groups who requested a delay of the implementation deadline for the NO<sub>x</sub> SIP Call. The ruling pushes the implementation deadline back by over a year to May 21st, 2004. This action re-establishes a 1,309-day window between the SIP submittal deadline (which is now October 30th, 2000) and implementation. The window had been truncated temporarily when the delay on submittal was not accompanied by one on implementation. While this delay may seem at first to push back the emergence of a SIP Call NO<sub>x</sub> allowance market, several states have indicated their intention to maintain a May 1, 2003 start date for the program. Furthermore, EPA's Section 126 ruling, which mandates SIP Call-equivalent NO<sub>x</sub> reductions from major sources in 13 mid-western and eastern states, still contains a May 1, 2003 deadline.

# NO<sub>x</sub> MARKETS



As of August 24, 2000

## PERMANENT EMISSION REDUCTION CREDIT MARKETS

(New Source / Offsets)

State		Moderate	Serious	Severe
Connecticut	NO <sub>x</sub>	_____	\$6,500/tpy	\$6,500/tpy
	VOC	_____	\$3,200/tpy	\$3,300/tpy
Massachusetts	NO <sub>x</sub>	_____	\$7,000/tpy	_____
	VOC	_____	\$2,400/tpy	_____
Maine	NO <sub>x</sub>	\$6,000/tpy	_____	_____
	VOC	\$2,400/tpy	_____	_____
New Jersey	NO <sub>x</sub>	_____	_____	\$475/tpy
	VOC	_____	_____	\$300/tpy
New York- Pennsylvania (linked)	NO <sub>x</sub>	\$1,800/tpy	_____	\$4,900/tpy
	VOC	\$1,600/tpy	_____	\$2,400/tpy
Texas	NO <sub>x</sub>	_____	\$3,000/tpy	\$3,300/tpy
	VOC	_____	N/A	\$6,000/tpy
Rhode Island	NO <sub>x</sub>	_____	_____	\$6,200/tpy
	VOC	_____	_____	_____

## ERC Market Report

ERC markets resumed to their usual torpor during September with only one small trade reported. That solitary trade raises the price for permanent NO<sub>x</sub> ERCs in Massachusetts to \$7,000/ton. Other northeast markets were unchanged.

Interest is stirring in Texas, particularly in the Houston non-attainment area. There, new regulations slated for the end of the year will devalue many area ERCs in excess of 75%, with some expiring entirely. Parties with a need for credits are considering purchases in advance of

the devaluation date, as the credits may be hard to acquire beginning next year. This buy interest has drawn out more than an equivalent number of sellers, with most lowering their asking price below the historical price of \$3,000/ton in light of the pending devaluation.

In discrete markets, possible trades are pending in the northeast and Texas, but none have materialized yet.

COMPLIANCE MARKETS		
DERs/VERs		
State	Ozone Season	Non-Ozone Season
Connecticut	\$1,000/ton	\$750/ton
Massachusetts	\$750/ton	\$500/ton
New Jersey	\$1,300/ton	\$1,150/ton
New Hampshire	\$600/ton	\$300/ton
Texas	\$1,000/ton	N/A

# Greenhouse Gas



## BP Offsets Emissions in Australia

**B**P announced that it would be the first company to use the Australian Greenhouse Office's (AGO) "Greenhouse Friendly/Greenhouse Free" endorsement on one of its products, "BP Ultimate" gasoline. The AGO will grant the Greenhouse Friendly endorsement to products whose emissions are at least 50% offset by emissions abatement projects financed by the company concerned. The Greenhouse Free endorsement will be given to products where emission from both the use of the product and greenhouse gases emitted during its production are offset. The involvement of the AGO is intended to add value through their provision of an official certification logo, which will be given only after the abatement projects have been put through a rigorous assessment process.

## Trees, Politics and Kyoto Commitments in Australia

**T**he (Liberal/National Party Coalition) federal government has announced it will not intervene to limit the continuing land clearing in Queensland. The government claims that it would prefer to monitor the impact of the recently proclaimed state tree-clearing laws before imposing any federal controls on the Queensland government. They also claim that the lack of cooperation by the (Labor) Queensland government has forced them to take this stance. This decision has disgusted green groups who believe that the destruction of endangered bushlands will continue and that an important tool for meeting Australia's Kyoto commitment is being destroyed. However, given that the landowners most affected by any controls on land clearing are within electoral jurisdictions represented by National Party members, this situation is expected to remain unchanged until after the next national election.

## European Industry Responds to Commission's Trading Plans

**T**he European Commission's proposal to launch a pan-European industrial greenhouse gas emissions trading scheme from 2005, summarized in a recent Green Paper, has received a guarded welcome from the industrial sectors' associations most likely to be affected. Industry associations including UNICE, representing multiple industries, CEFIC (chemicals), EUROFER, (iron and steel), and CEMBUREAU (cement) welcomed the Commission's approach in general but expressed concern over certain aspects of the scheme's design.

**O**f particular interest was the question of how emissions targets should be denominated, whether as absolute emissions caps, or as performance standards based on GHG intensity or energy efficiency. The industry associations favored the standards-based approach, arguing that it offers greater flexibility and poses less of a threat to competitiveness. For the same reason, the associations advocated government recognition for reductions of all six GHGs affected by the Kyoto Protocol, rather than limiting the scheme to CO<sub>2</sub>. The associations also indicated strong opposition to auctioning of permits, favoring instead a grandfathering allocation methodology that would presumably impose lower up-front costs. Finally, the associations called for unfettered international permit trading, arguing that trading restrictions would unnecessarily raise compliance costs.

## Go-ahead for Danish Renewables Support Plan

**H**aving concluded that Denmark's planned system of tradable green certificates will not violate European Union rules concerning state aid, the European Commission has approved the plan for entry into force by 2002. The system's aim is to almost double growth in supply of renewable electricity, reaching 20% of overall supply in 2003. It would effectively replace the current system of direct subsidies to renewables. Green certificate prices will initially be set by the state between 0.01 and 0.04 €. During the first year, these price controls will be phased out, subjecting permit pricing to full market competition. In its press release, the European Commission stressed that the "benefit" of green certificates as opposed to so-called "feed in" support systems of fixed prices and direct state subsidies is that they give renewable electricity generators an incentive to reduce production costs.

## Austrian Climate Protection Program

**T**he Austrian cabinet agreed to a national climate protection program aimed at reducing CO<sub>2</sub> emissions from the domestic and transport sectors through more renewable energy and through greater cooperation at a European level. Under the EU's burden sharing agreement, which distributes the aggregate EU target amongst its member states, Austria is committed to reduce its GHG emissions by 13% from 1990 levels during 2008-2012. This equates to a reduction of 10m tons per year, down to a total of 67m tons of CO<sub>2</sub> equivalent. The largest reduction, up to 5 tons per year, is intended to come from improved insulation for space heating. A boost for renewable energy and increased use of combined heat and power for industry will contribute up to 1.25m tons. Transport measures are expected to contribute up to 3.7m tons per year, and an additional 2.5m tons reduction is to be delivered by the electricity generating industry through increased use of renewables and other energy saving programs. International mechanisms such as a common EU transport policy, common energy efficiency standards for industry, as well as an EU-wide emissions trading system will complement domestic efforts.





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