



State Clean Energy-Environment Technical Forum Roundtable on State NO_x Allowance EE/RE Set-Aside Programs June 6, 2006¹ Call Summary

On June 6, 2006, the EPA State Clean Energy-Environment Partnership Program hosted a special State Energy Efficiency/Renewable Energy (EE/RE) Set Aside Roundtable session of the State Clean Energy-Environment Technical Forum. In response to a number of questions from its state partners about establishing and implementing EE/RE set-aside provisions, EPA sponsored the call as an opportunity for states to share information and perspectives.

Background: As a control strategy under the NO_x State Implementation (SIP) Call of 1998, EPA and the eastern states designed an interstate emissions trading program – the NO_x Budget Trading Program – to reduce ozone season² emissions of electric generating and industrial combustion units. Under the NO_x Budget Trading Program, 22 states and DC allocate allowances³ to these units. In addition, states may choose to reserve (i.e., “set-aside”) allowances to provide incentives for new sources and/or for certain activities; under an Energy Efficiency/Renewable Energy (EE/RE) Set Aside, a state awards NO_x allowances to eligible EE/RE projects. Awardees can either sell these allowances to help finance their projects; or retire the allowances and thereby account for the emissions reductions associated with the project. Under the Clean Air Interstate Rule (CAIR), which builds upon the NO_x budget program and covers 28 states and DC, states may choose to establish EE/RE Set Asides as part of the emissions trading program for ozone season and/or annual NO_x emissions. For more information, see: <http://www.epa.gov/airmarkets/fednox/index.html> (NO_x Budget Program), <http://www.epa.gov/cair/index.html> (CAIR) <http://www.epa.gov/cleanenergy/stateandlocal/guidance.htm> (Set Aside Guidance documents).

Participants: The call included approximately 25 representatives from energy and environmental offices in twelve states, including: Georgia, Indiana, Massachusetts, Minnesota, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, and Texas. Some of these states (Indiana, Massachusetts, Missouri, New Jersey, New York, and Ohio) already have experience with designing and implementing set-aside programs under the NO_x SIP Call, NO_x Budget Program. These efforts have been documented in the EPA draft report: State Set-Aside Programs for Energy Efficiency and Renewable Energy Projects Under the NO_x Budget Trading Program: A Review of Programs in Indiana, Maryland, Massachusetts, Missouri, New Jersey, New York, and Ohio (http://www.epa.gov/cleanenergy/pdf/eere_rpt.pdf). Other participants included states that are in the process of developing or considering developing EE/RE set-asides under the Clean Air Interstate Rule (CAIR).

¹ Information current as of June 6 2006, with specific updates as noted.

² Generally May through September

³ Each allowance equals one ton of NO_x.

A. Roundtable Presentations – Status, Successes and Challenges

Following an opening statement by Julie Rosenberg (U.S. EPA), brief roundtable presentations on key program successes and/or challenges were made by participants.⁴ These state presentations were followed by a discussion session, directed in part by several questions posed by state participants and the call's facilitator, Catherine Morris, of the Keystone Center.

- **States with Existing Set-Aside Programs**

Indiana

History: Indiana's NO_x Budget Trading Program includes an EE/RE set-aside for 2% of allowances.

Current Status: The Indiana Office of Energy and Defense Development (IOEDD) and Indiana Department of Environmental Management (IDEM) have developed equations for allocating allowances to EE/RE projects. The IOEDD plans to sell set-aside allowances and dedicate the funds for use in small business EE/RE projects. Indiana explored using output-based allocation (beyond new sources as currently provide) to encourage combined heat and power (CHP), but settled on an input basis.

Successes: In the past year, Indiana has started to get more industry applications for EE/RE than previously. The set-aside program also has contributed to a good working relationship between IDEM and IOEDD.

Challenge: Resistance for use of allowances as an incentive to EE/RE. Also, funding needed to encourage small industrial and family owned businesses to adopt CHP.

Massachusetts

History: Massachusetts has a 5% set-aside in its NO_x Budget Rule.

Current Status: Initially, the program generated relatively little interest; however applications from energy efficiency projects have increased and the program is currently oversubscribed. Allowances are allocated to eligible projects on a prorated basis. Aggregated project applications have been made on behalf of hundreds of small projects. Renewable energy applications have declined perhaps because the allowances are not enough of a financial incentive or they are being pursued under the state's renewable portfolio requirements. (See "Relationship to Other Incentive Programs," below). The state is considering a 5% set aside under CAIR.

⁴ While Illinois did not participate in the call, their plans for an EE/RE set-aside under CAIR were mentioned by other states. Illinois' draft CAIR Annual and Ozone Season programs would reserve 25% of the state's NO_x allowances for "Clean Air Set-Asides." The eligible project types would be broader than other state set-aside programs, and include certain control upgrades and clean coal technologies such as IGCC and fluidized bed coal combustion. <http://www.epa.state.il.us/air/cair/> (see proposed rule, May 25, 2006, sections 225.460 and 225.560)

Missouri

History: Missouri used a stakeholder process to create their set-aside programs for both the NO_x SIP Call and CAIR that they found useful for informing their decisions. The Eastern half of the state will be subject to the NO_x SIP Call. The initial allocation to the EE/RE set-aside pool will be 1%, or 134 allowances, and will last until the CAIR trading program goes into effect (see below).

Current Status: Under CAIR, the allowance pool will be 0.5%, or 300 allowances for a statewide annual program.

Challenge: The state expects over-subscription due to anticipated applications from landfill gas and wind projects. Many wind projects are utility-sponsored. If over-subscribed, allocations from energy efficiency projects will be given first priority, in-state renewable energy projects will be second, followed by renewable energy from out-of-state.

Challenge: The state anticipates potential difficulty in finding aggregators for energy efficiency projects. For example, an ESCO for smaller scale energy efficiency projects may not be able to aggregate sufficient energy saved to reach one full ton of NO_x (the size of one allowance).

Challenge: The state recognizes a need to coordinate with neighboring state Illinois' set-aside program (under development) to avoid the potential for projects to claim allowances for the same project in both states.

New Jersey

History: The New Jersey NO_x SIP Call EE/RE set-aside is 5%.

Current Status: The same size set-aside is planned for the CAIR trading program. While not yet over-subscribed, the program, which has been in effect since 2003, is now nearly fully subscribed.

Challenge: Resistance from some stakeholders to allowances being dedicated to clean energy purposes.

New York

History: New York has a 3% set-aside for EE/RE projects under the NO_x Budget Trading Program. Allowances are available on a priority basis, first to wind and other renewable energy and energy efficiency projects, then to more efficient electricity generation. The determination of whether or not a project's generation efficiency is above average will be based on benchmark state average generation efficiency.

Current Statue: New York has not yet finalized its EE/RE set-aside program guidance under the Nox budget program. Correspondingly, New York has not yet settled on how to address an EE/RE set-aside under CAIR.

Challenge: The average efficiency of fossil fuel plants has not yet been determined.

Challenge: No allowances from the set-aside have been given out so far. Some allowances may be given out retroactively once New York has finalized its NO_x Budget Trading Program EE/RE set-aside guidance.

Ohio

History: The Ohio NO_x SIP Call set-aside program made available 1% (454 allowances) for qualifying EE/RE projects, including CHP. An additional 1% (454 allowances) is set-aside for innovative technology projects (new, as yet unproven, technologies intended to reduce NO_x emissions, including fuel cells and certain mobile source technologies like fuel additives). In 2006, the first year that set-aside allowances became available, the EE/RE program received 76 allowance applications.

Current Status: With the implementation of CAIR, Ohio has proposed to keep the same regulatory language, with a 1% set-aside for ozone season NO_x allowances.

Challenge: Resistance to set-asides; addressing call for more public input on who gets allowances; whether/how to return allowances to affected sources if the set-aside is under-subscribed.

Challenge: Ohio's program would benefit from additional marketing. The state hopes to reach out to CHP and aggregated energy efficiency projects and recognizes a need to improve guidance to clarify eligibility. More applications were expected from landfill gas projects.

- States Considering/Pursuing New Set-Aside Programs (under CAIR)

Georgia

History: Georgia was not a participant in the NO_x Budget Trading Program (not covered under the rule).

Current Status: Georgia is exploring the potential for establishing an EE/RE set-aside under CAIR for approximately 5% of the allowances. The current consideration is that the set-aside allowances would be auctioned off to create a fund for energy management, including new EE/RE projects that might not otherwise be implemented.

Update: Georgia has since decided not to pursue a set-aside under CAIR.

Minnesota

History: Minnesota was not a participant in the NO_x Budget Trading Program (not covered under the rule).

Current Status: Minnesota expects to complete an informal draft rule for their CAIR EE/RE set-aside soon. The draft will include a 5% or larger pool for renewable energy, depending on further stakeholder input. Initially, the set-aside would have applied to only wind, hydro, and solar power; the state is now considering an expanded definition.

Update: The June 13, 2006, draft rule proposed 15% for their renewable energy set-aside.

Success: The program will benefit community-based projects by giving them double allowances as an incentive.

Challenge: Current contract relationships between wind energy producers and utilities give all green attributes and related incentives to the utility. This diminishes or eliminates the value of the allowances as an incentive for renewable energy. Because of the presumption that allocation on an output basis would result in giving all allowances to utilities, allowance allocations will be based on the capacity (MW) of the turbines with the assumption that they will be generating electricity at 30% of capacity.

Pennsylvania

Current Status: Pennsylvania is considering creating an EE/RE set-aside under CAIR.

Texas

Current Status: Texas has statutory responsibility to calculate emissions reductions from EE/RE within the state for inclusion in their SIP, and the Texas Commission on Environmental Quality is considering a set-aside for Houston.

B. Key Points from Questions and Discussion

The main topics of concern from the states' discussion of set-asides⁵ (described below) include:

- Measurement and verification
- Marketing
- Aggregation
- Relationship to other incentive programs
- Application issues
- Allowance pool size and eligibility
- Discounting
- Under subscription

⁵ For earlier discussions by Forum participants, see the State Technical Forum on EE/RE, NO_x Budget Allowance Set-Aside for EE/RE, November 18, 2004 and State Clean Energy-Environment Technical Forum, Output-based Regulations & Allocation Methods, March 9, 2006. See <http://www.keystone.org/html/documents.html>.

Measurement and Verification

- **Massachusetts** -- Calculates allowances at 1.5 lb NO_x/MWh saved or generated, and requires use of the International Performance Measurement and Verification Protocol (IPMVP). However, applications for fewer than 5 allowances are allowed to propose "other reliable and replicable methods of quantification acceptable to the Department." Applications have required careful review for appropriate assumptions, completeness, double counting, math, normalization for weather, and use of energy output rather than input.⁶
- **Minnesota** – Is concerned about being able to easily measure and verify new renewable energy generation and thus plans to allocate allowances on the basis of generating capacity.
- **Missouri** -- Tons of emissions avoided are rounded to the nearest ton (≥ 0.5 ton counts as a ton).

Note: To help state air and energy officials understand and address M&V issues associated with EE/RE investments, EPA is developing two new guidance documents describing options and best-practices for documenting energy savings from EE and RE, and translating these data into resulting emissions reductions. Both documents will be available in late 2006 or early 2007. For more information, contact Niko Dietsch at 202-343-9299 or dietsch.nikolaas@epa.gov.

Marketing

The number of applications for EE/RE set-aside allowances has varied considerably among state programs. Massachusetts' program is over-subscribed, mostly from aggregated energy efficiency projects. New Jersey has been close to fully subscribed and programs in Ohio, Indiana, and New York have been undersubscribed.

A common observation was that:

Stakeholder engagement in program design may be the most effective process for making EE/RE project sponsors aware of the program and for ensuring that the incentive is structured in a way that makes it as valuable as possible to potential recipients.

- **Massachusetts** -- Massachusetts has not seen the need for an active marketing process because the set-aside pool is already over subscribed from aggregated energy efficiency programs. They used stakeholder involvement in developing the set-aside program as a way to reach potential energy efficiency and renewable energy applicants. The 450 MW Cape Wind project was a major player in set-aside stakeholder process, but the project is currently stalled. Industrial sources that need allowances for compliance, and/or have a demonstrated interest in energy efficiency, are being considered for targeted outreach. General Electric applied for two allowances based on energy efficiency measures.

⁶ Sharon Weber, Massachusetts' EE/RE Set-Aside Program: Incorporating Renewables Under CAIR, PowerPoint Presentation, MA DEP, January 12, 2006

- **Missouri** -- Expects new landfill gas and wind projects to apply for allowances. Missouri asked if there were particular groups to target for outreach, noting that utilities were the dominant stakeholder.
- **New York** -- Above average generation efficiency makes a project potentially eligible for EE/RE allowances, potentially attracting utility participation. However, the NY program is in the process of defining a benchmark for average power generation efficiency, and has not yet allocated allowances on this basis.

Aggregation

An Energy Service Company (ESCO), state government agency, or other entity can offer aggregation to small EE/RE projects.

- **Massachusetts** -- ESCOs applied with aggregated energy efficiency projects for 40 allowances, and the state's Division of Energy Resources applied for 200 allowances on behalf of aggregated energy efficiency projects. The state expects more applications from large corporations, such as Staples and Home Depot, which already have energy efficiency projects in place that could be aggregated.
- **Missouri** -- Officials are not yet sure where aggregators for energy efficiency will come from, but ESCOs in the state may be a possibility.

Relationship to other Incentive Programs

As states move to adopt a range of incentive programs to encourage EE/RE, they are concerned about how to coordinate those programs with an allowance set-aside program. Some points on this topic include:

- **Massachusetts** -- Projects that receive green power credit from the state's renewable portfolio standard (RPS) could potentially violate consumer protection laws if they also claim EE/RE set-aside allowances and sell them into the market. (A consumer buying green power that is claimed under the RPS would do so under the assumption that the purchase would prevent or offset pollution. But if that same power is used to obtain an allowance that is later sold to a utility, that utility has the right to generate one ton of NO_x.) However, the RPS does not prevent applications for allowances. Potentially, a project could receive allowances and retire them, avoiding the pollution that could be generated by a buyer if the allowances were sold into the market. Massachusetts officials have not yet traced the cause of scarce renewable energy project applications, but the RPS credit versus allowance tradeoff is one possible reason. One related and outstanding question is whether the set aside incentive drives new investment and to what extent it is factored into investment decisions.
- **Minnesota** -- The state has a renewable energy objective of 10% by 2020, but no renewable energy standard is in place yet. Some utilities have specific EE/RE mandates. As part of developing incentives to expand renewable energy, Minnesota is interested in obtaining any empirical evidence that links set-asides to project finance and an increase in EE/RE project development.

- **Minnesota** -- Renewable energy developers have faced contract language that requires them to bundle green power incentives with the energy they sell to utilities. State agency representatives have questioned whether allowances associated with renewable generation would offer an effective incentive. Minnesota's current renewable energy programs are intended to benefit wind farm owners rather than being transferred to utilities as part of a package deal. If the value of green power incentives is not reflected in the price received by the renewable energy developer, then allowances, certificates, or other incentives do not encourage renewable generation.

Application Issues

- **Missouri** – The state sees a potential for interstate double counting of avoided emissions. When renewable energy is generated in one state and sold in one or more additional states, the entity that produced the energy could potentially apply for allowances in both states. Potential double counting will be avoided by coordinating the EE/RE NO_x allowance set-aside program with the proposed Illinois set-aside program. Another issue is the potential for a single state to receive multiple applications for the same project. In Missouri's program, only one sponsor is allowed for a given project and stakeholders are expected to work among themselves to resolve the question of which group will request/receive allowances.
- **Massachusetts** -- All applications are rejected if more than one entity applies for allowances based on a particular project. In cases of public-private venture, applicants are told to work out who will apply for allowances in the contract terms. Massachusetts also requires a certification that the applicant has the authority to apply.

Allowance Pool Size and Eligibility⁷

- **Minnesota** – For their CAIR implementation, Minnesota is considering a larger than 5% pool (as of June 13, a 15% has been proposed) with small community projects receiving double allowances. Limits the state set-aside program to renewable energy.
- **New Jersey** -- A three-tiered allowance pool makes 20% of allowances available for energy efficiency projects, one half for in-state renewable energy, and the remainder available to all other eligible projects.
- **Massachusetts** -- 5% is set-aside for energy efficiency and renewable energy and 5% is set-aside for new sources. Up to 2% is available to shift between the two.
- **Wisconsin** -- Plans a combined set-aside for energy efficiency and new sources, but stakeholders are concerned that there might not be enough allowances for new sources.
- **Indiana** – Asked if states had considered offering allowances to recyclers (since recycling saves considerable energy over use of virgin material: recycled aluminum saves 80%; steel, 60%; and plastics, 25%)? No states currently offer allowances on this basis.

⁷ Illinois did not participate in the call, but is considering a pool with 12% of allowances earmarked for energy efficiency and renewables generally and an additional 13% for clean coal and other specific types of projects.

Discounting

- MO, MA, NY, and OH noted that they do not use a discount factor to determine how many allowances to give energy efficiency projects.

Under-Subscription

- Question: Would the value of the application process be affected by having unused allowances flow back to utilities - since it gives them two chances at allowances? If unused allowances do not flow back to the utilities, there may be greater incentive for them to sponsor projects and apply for the allowances. Massachusetts noted that under its program, if banked allowances exceed 10% of the total budget, they go back to utilities on a pro rata basis. Missouri and Ohio both noted that they do give unused set-aside allowances to affected sources on a pro rata basis.

Remaining Issues

- **Massachusetts** -- Would like guidance on marketing to renewable energy providers.
- **Missouri** -- Would appreciate guidance on marketing to energy efficiency providers as well as measurement and verification (M&V) and CAIR set-aside related advice.
- **Missouri** -- How can you attract projects and get them to apply? Missouri expects applications from many new landfill gas projects but noted that it's hard to find energy efficiency projects that are large enough to apply, even with rounding, and at this point, no aggregators have stepped forward.

C. Internet Links for More Information

The following list provides Internet links to obtain further information about each state's program (either in draft or final form). The links are to specific guidance documents or general descriptive web pages, if available, or to draft or final rules that include the EE/RE set-aside program. The final link is to EPA's report on state EE/RE set-aside programs.

- **Georgia** -- Georgia's Draft Clean Air Interstate Rule NO_x Annual Trading Program Rule
http://www.air.dnr.state.ga.us/airpermit/cair/downloads/GA_NOx_CAIR_DRAFT.pdf
- **Indiana** -- Indiana NO_x Budget Trading Program, Energy Efficiency & Renewable Energy Set-Aside Guidance Manual
<http://www.in.gov/idem/programs/air/sip/guide.pdf>
- **Massachusetts** -- Massachusetts' EE/RE Set-Aside Program, Incorporating Renewables Under CAIR – PowerPoint presentation
http://www.eere.energy.gov/windandhydro/windpoweringamerica/pdfs/workshops/2006_clean_air/clean_air_ma_dep.pdf
- **Minnesota** -- Air Quality Proposed Rule Changes Governing US EPA's Clean Air Interstate Rules (CAIR) and Clean Air Mercury Rules (CAMR)

<http://www.pca.state.mn.us/air/rulechange-cair-camr.html>

- **Missouri** -- Missouri Energy Efficiency and Renewable Energy Set-Aside Program
<http://www.dnr.mo.gov/energy/renewables/set-asideprogram.htm>
- **New Jersey** -- New Jersey NO_x Budget Program Regulations (final)
<http://www.state.nj.us/dep/aqm/Sub31v2004-04-05.pdf>
- **New York** -- New York NO_x Budget Program Regulations (final)
http://www.dec.state.ny.us/website/regs/subpart204_5.html#204-5.3
- **Ohio** -- Ohio EPA Guidance Manual Energy Efficiency/Renewable Energy and Innovative Technology Projects (NO_x Budget Trading Program in Ohio)
<http://www.epa.state.oh.us/dapc/files/OhioGuidanceFINAL.pdf>
- **US EPA** – [State Set-Aside Programs for Energy Efficiency and Renewable Energy Projects Under the NO_x Budget Trading Program: A Review of Programs in Indiana, Maryland, Massachusetts, Missouri, New Jersey, New York, and Ohio. Draft Report.](http://www.epa.gov/cleanenergy/pdf/eere_rpt.pdf)
http://www.epa.gov/cleanenergy/pdf/eere_rpt.pdf