

NRG Energy, Inc.
Comments on Proposed Section 22a-174-22d
Post-2011 Connecticut Ozone Season Nitrogen Oxides (NOx) Budget Program

Introduction

The Connecticut Department of Energy and Environmental Protection (“DEEP”) has proposed Section 22a-174-22d, “Post-2011 Connecticut Ozone Season Nitrogen Oxides (NOx) Budget Program” (the “22d Regulations”) as the means to demonstrate to the Environmental Protection Agency (“EPA”) that no backsliding will occur with regards to NOx emissions from regulated sources as a result of the state’s exclusion from the Cross State Air Pollution Rule (“CSAPR”). The 22d Regulations are planned to be effective starting with the 2012 Ozone season, therefore DEEP is faced with the task of implementing an effective intrastate cap-and-trade program in a short period of time.

An effective program will be one that meets EPA’s requirements, is easily implemented and understood, minimizes additional regulatory burden on sources and fairly allocates allowances to the sources. The intent, Implementation, and result of the program must not lead to or cause uneconomic outcomes such as installation of costly NOx controls and/or unwarranted premature retirements. We believe that an equitable distribution of allowances would mitigate against unintended consequences of a regulation whose purpose is to ensure no net increase in NOx emissions over those seen under the Clean Air Interstate Rule (“CAIR”).

We note that DEEP has used its existing CAIR regulations as the basis for the 22d Regulations, maintaining the same level of annual NOx allowances (2,619), the same emissions monitoring, recordkeeping, and reporting criteria and compliance demonstration as under CAIR. We agree with this approach.

NRG Sources under Proposed 22d Regulations

NRG owns and operates 30 sources that will be included in the 22d Regulations. These sources represent a variety of technologies (including steam boilers and combustion turbines) and NOx controls. In particular, under the proposed 22d Regulations, for the 2012 Ozone season NRG would have 16 Phase I units, 4 Phase II and 10 New Units (each as defined by the 22d Regulations)¹. The NRG portfolio is the most varied of all the affected owner/operators in the state. As such, our comments provide suggested changes to the 22d Regulations that will allow the continued use of the Phase I units until additional new/repowered sources can be permitted and constructed, and a proper allowance allocation to the Phase II and New Units.

Support of CAIR Program Mechanisms

NRG supports the use of DEEP’s CAIR regulations as the starting point for the proposed 22d Regulations. The ability to use the sources’ existing emissions monitoring system under EPA’s Part 75 regulations without the need for an additional certification for the measurement, recordkeeping, and reporting of NOx emissions ensure that emissions are properly measured without the need for additional certification, which can be costly and time-consuming. Additionally, the ability to use the EPA compliance demonstration process through CAMD and

¹ Eight of the ten NRG New Units are owned by GenConn LLC, a 50/50 partnership between NRG Energy Inc. and the United Illuminating Company.

maintaining the appointment of the existing Authorized Account Representatives (“AAR”), Alternate AARs, and Compliance Agents ensures a smooth transition to the compliance obligations under the proposed 22d Regulations.

Design of the Proposed Cap-and-Trade Program

In designing a cap-and-trade program there are several key issues that must be addressed. These issues include the liquidity of the market, a fair and equitable allocation of allowances, and the treatment of new units. Each of these issues is discussed below along with NRG recommended changes to the allocation method.

Liquidity of the Market

The federal Acid Rain programs and the CAIR program (and its predecessor programs) were based on wide geographic areas and a lengthy implementation period that ensured a very liquid market. In contrast, the proposed 22d Regulations will be effective beginning with the 2012 Ozone season and is applicable to only a small group of in-state sources previously regulated by CAIR. Also, these sources would start the program without any banked allowances. The combination of a fast-approaching implementation date, a single-state program, and the lack of banked allowances makes it imperative that the allowance market be as liquid as possible. Without a liquid market, source owners needing to purchase allowances may be faced with exorbitant allowances prices, or worse, an inability to purchase allowances, thus being forced to not operate their sources. These potential issues can be avoided through a method that adequately allocates allowances to all affected sources.

Fair and Equitable Allocation of Allowances

To ensure that the proposed 22d Regulations meet the intended purpose and are properly implemented, there must be a fair and equitable allocation of allowances. For the 2006 – 2010 Ozone seasons DEEP data show that the historic combined emissions from all affected sources are less than proposed statewide budget of 2,691 allowances. This implies that there will be adequate allowances on a statewide basis, but does not ensure that these allowances will be properly allocated. The harm in a misallocation of allowances is the concern that suppliers will accumulate allowances rather than selling allowances. This action would have the same effect as there being an inadequate supply of allowances on a statewide basis.

While other interested parties may propose that the allocation method be based on a generating unit’s output, we believe such allocation method will not meet the need for a robust trading program to enable compliance and continued operation of units that are an integral part of the electric system. An output-based system in a single state program benefits mainly gas fired combined cycle units with significant generation in the Ozone season. However, the electric system, including its very stability, relies on a variety of different generation types encompassing different fuel sources, technologies, and capacity factors. An output-based system would not accommodate the required broad mix of generation, specifically in the Ozone season where satisfying peak load requires the full spectrum of resources.

DEEP proposes to use its CAIR allocation method that distributes allowances based on a unit’s classification as Industrial, Cogeneration, Reciprocating Grate Waste Tire-Fired, Phase I, Phase II or New. This method adequately allocates allowances to the Industrial, Cogeneration,

Reciprocating Grate Waste Tire-Fired units (collectively the “Industrial Units”) because their respective operations are relatively stable year-to-year. However, the method may under-allocate to Phase I units, over-allocate to Phase II units, and under-allocate to New Units. Over-allocation is defined as an allocation in excess of what a unit can legally emit during the Ozone season. Comparing DEEP’s spreadsheet showing the allocations under the proposed 22d Regulations to the Phase II units’ permitted emissions during an Ozone season demonstrates that seven units, located at three sites, and representing just two owners, are over-allocated allowances in the range of two to four times their permitted Ozone season emissions. Additionally, the total allocation to these seven units represents approximately 50% of the allowances to be allocated.

This over-allocation results in a situation where there could be limited sellers of allowances, putting Phase I and New Units at risk. This is of particular concern for the 2012 Ozone season with the lack of banked allowances.

EPA recognized the concern of an over-allocation to units in its CSAPR regulations and developed an allocation method where an existing unit’s allocation is no greater than its historic emissions over the past 10 years. An existing unit under CSAPR would be a Phase I or II unit under the proposed 22d Regulations. NRG proposes an allocation method that uses the basis of EPA’s allocation justification, but still allows some over-allocation to a Phase II unit, in the interest of making the market as liquid as possible.

Allocation to a New Unit

As proposed, a New Unit would be allocated allowances for its first six Ozone seasons based on its emissions in the prior Ozone season; i.e., 2012 Ozone season allocation would be based on 2011 Ozone season operations. After six Ozone seasons of operations, the New Unit is then instead classified as a Phase II unit. This allocation is based on the assumption that a New Unit’s operations and therefore its emission are identical season-to-season. As a practical matter, this may not be true, and may lead to the situation where a New Unit may be forced to purchase allowances. This would be an unfortunate and an unintended adverse consequence in that many of the units that fall under the New Unit category have a permitted NOx limit as low as, if not lower, than the over-allocated Phase II units. This perverse outcome should not be allowed to occur. NRG proposes a fair and equitable allocation method to a New Unit where the unit’s total Ozone season emissions will be covered by allowances allocated to the unit.

Proposed Allocation Method

NRG’s proposed allocation method retains the proposed 22d Regulations allocation method for the Industrial and Phase I units and refines the methodology for Phase II and New Units. The proposed revisions address the issues discussed above. The allocation method involves no significant additional work on the DEEP’s part in determining the allocations year-to-year. An example of the allocation method is contained in Table 1 and is structured as:

- Step 1 – All allowances are initially in the State Account.
- Step 2 – Allocate allowances to the Industrial Units as currently proposed.
- Step 3 – Allocate allowances to the Phase I Units as currently proposed.
- Step 4 – Calculate the allocation of allowances to the Phase II units as currently proposed.

- Step 5 – Calculate an allocation for each Phase II unit equal to their permitted Ozone season emissions. In the case where a unit has only an annual NOx ton limit, the permitted Ozone season emissions are calculated as (Annual NOx tons *5/12).
- Step 6 – Allocate to each Phase II unit the lower of the allowances from Step 4 and Step 5.
- Step 7 – Allocate to each New Unit allowances equal to their current Ozone season NOx emissions.
- Step 8 – Reallocate to each Phase I and II unit that did not receive an allocation equal to their permitted Ozone season emissions any unallocated current-year Ozone season allowances using the reallocation method in the proposed Section 22d Regulations.

Steps 1 – 6 would occur prior to the start of the Ozone season while Steps 7 and 8 would occur at the end of the Ozone season once each source has reported its Ozone season emissions. Steps 7 and 8 must occur no later than November 15th in order for sources to meet the November 30th compliance deadline.

Safety Valve Option

The proposed 22d Regulations contain a “safety valve” option to increase the state budget of allowances in the event of either a shutdown of a nuclear generating unit in the state or the inability of a local distribution company to provide natural gas to an affected unit. In either case, the event must last at least 30 days before the state budget is increased.

The proposed 22d Regulations do not, however, include a safety valve option in the event that a source’s owner is unable to procure needed allowances despite reasonable efforts to do so, or if allowances cannot be procured on commercially reasonable terms. The concept of a safety valve provision is commonly used and is contained in the DEEP’s and other states’ RGGI regulations in order to provide additional compliance flexibility and price dampening in the event of anomalous pricing.

The proposed 22d Regulations should include a provision that allows an alternative compliance option. This option would allow a source’s owner to pay into a DEEP account for supplemental environmental projects at an amount equal to the number of allowances needed times \$500 per allowance, adjusted for inflation. The \$500 threshold was chosen based on EPA’s forecasted cost for annual NOx under CSAPR. The payment into a state fund is similar to the process used in the Massachusetts multi-pollutant regulations for power plants, 310 CMR 7.29.

NRG proposes the following new Subsection (9) to Section 22d(g), **NOx allowance use and transfer:**

“(9) In the event that the unit owner/operator demonstrates by November 20th that it has been unable to procure any needed allowances or that the procurement of such allowances could only be accomplished at an unreasonably high price or on commercially unreasonable terms, then the source owner/operator shall make a payment into a DEEP Supplemental Environmental Project fund at a rate of \$500 per needed allowance, with the \$500 adjusted annual for inflation.”

Table 1
Example of NRG Proposed NOx Allowance Allocation Method

This table is for illustrative purposes only and not reflective of actual allocations under NRG’s proposed allocation method.

Assumptions:

1. State Budget = 1,500
2. Phase II Unit A permitted annual NOx emissions = 120 tons, equates to 50 tons in Ozone Season
3. Phase II Unit B permitted annual NOx emissions = 600 tons, equates to 250 tons in Ozone Season

Allocation Example

| Step | Action | Amount | Remainder in State Account | Date |
|------|--|--------|----------------------------|---|
| 1. | Allocate to Industrial Sources | 200 | 1,300 | Prior to May 1 st |
| 2. | Allocate to Phase I units | 500 | 800 | Prior to May 1 st |
| 3. | Allocate to Phase II units after the determination of over-allocation is completed | 150 | 650 | Prior to May 1 st |
| 5. | Allocate to New Units based on actual emissions | 120 | 530 | No later than November 15 th |
| 6. | Allocate remainder to Phase I and II units | 530 | 0 | No later than November 15 th |

Determination of Over-allocation

Phase II Unit A calculated allocation = 250 allowances

Phase II Unit A permitted Ozone season emissions = 50 tons, therefore 200 allowances remain in the State account.

Phase II Unit B calculated allocation = 100 allowances

Phase II Unit B permitted Ozone season emissions = 250 tons, therefore, Phase II Unit B is allocated 100 allowances.

Total allocation to Phase II units = 150 allowances (Unit A’s 50 + Unit B’s 100)