The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner

December 3, 2009

Mr. William H. Smagula, P.E., Director - Generation
Public Service Company of New Hampshire
P.O. Box 330
Manchester, NH 03105-0330

Re: Final Decision on Issuance of Bonus Carbon Dioxide Allowances

Dear Mr. Smagula,

The New Hampshire Department of Environmental Services Air Resources Division ("DES") has reviewed the requests and information submitted by Public Service Company of New Hampshire ("PSNH") regarding bonus carbon dioxide (CO_2) allowances to be awarded pursuant to New Hampshire statute RSA 125-O:5, III (repealed) and the Code of Administrative Rules Env-A 2900. DES has also reviewed the comments received after issuing its preliminary response. DES' final decision is attached.

If you have any questions regarding this decision, please contact Joe Fontaine of my staff at 271-6794. Any person aggrieved by the Director's final decision may file an appeal with the Air Resources Council, in accordance with Env-AC 200, within 30 days of the date of that decision.

Sincerely,

Robert R. Scott
Director
Air Resources Division

cc: John MacDonald, PSNH
Terry Large, PSNH
Lynn Tillotson, PSNH
Linda Landis, PSNH
Melissa Hoffer, CLF

New Hampshire Department of Environmental Services (DES) Response to Public Service Company of New Hampshire (PSNH) Regarding Request for Bonus Carbon Dioxide (CO_2) Allowances (amended by DES; December 2009)

I. Introduction

PSNH submitted requests for bonus CO_2 allowances dated April 16, 2007, April 15, 2008, and September 9, 2008, in accordance with RSA 125-O:24, III that established a submittal deadline of September 9, 2008 (90 days from the effective date of the amended statute). The first request was relative to the first two projects listed below, and the two subsequent requests included the additional two projects. Initially, DES processed the requests in the order that they were received, and issued a final response dated April 2, 2009 relative to the first request. A math error was discovered that necessitated amendment of that final response. Therefore, this is the final determination of DES regarding the amount of allowances to be awarded to PSNH pursuant to RSA 125-O:5, III, for all four of the following projects:

1. The Northern Wood Power Project (NWPP);
2. The J. Brodie Smith Hydro Station Runner Replacement Project (Smith Hydro Project);
3. The Merrimack HP/IP (MK) Turbine Project; and
4. The Newington Station (NT) Efficiency Lighting Project.

This award has been made pursuant to statute and after careful analysis of all relevant information.

II. Background

The original RSA chapter 125-O, consisting of sections 1 through 10, established a multi-pollutant reduction program. This program created emissions caps for three pollutants, including CO_2. *See* RSA 125-O:3 (Supp. 2008). CO_2 allowances were distributed to sources up to these cap limitations based on each source's previous emissions output. Affected sources needed to possess allowances sufficient to compensate for their actual emissions. Allowances outside of the state allocation could be used in some circumstances. According to RSA 125-O:4, IV(c): "Affected sources may use CO_2 allowances from federal or regional trading and banking programs, or other programs acceptable to the department, to comply with the CO_2 emission cap established under RSA 125-O:3, III." RSA 125-O:4, IV(c)(Supp. 2008).

As well as providing a compliance mechanism, the legislature also wanted to provide an additional incentive to PSNH to lower emissions by performing energy efficiency, energy conservation, or renewable energy projects rather than by purchasing

allowances. To provide such an incentive, the legislature created RSA 125-O:5, III. Prior to being repealed in 2008, RSA 125-O:5, III, stated in part:

> For expenditures made by PSNH independent of SBC funds for energy efficiency, new renewable energy projects, or conservation and load management, the department shall provide emissions allowances to PSNH equivalent to the amount of such allowances that could have been purchased at market prices by the same dollar amount as the expenditure made.

RSA 125-O:5, III (repealed). Under RSA 125-O:5, III, the legislature mandated that allowances be awarded to PSNH for qualifying investments equal in value to the allowance purchase alternatives available at the time of the expenditure. Id. The statute requires that PSNH be given the amount of allowances it "could have" purchased for the price of the project investment. Id. The statute, therefore, contemplates a "market price" for allowances. Id.

In actuality, no mandatory federal or regional market for allowances existed in the United States at the time PSNH made the relevant investments. The United States had not yet enacted a federal CO_2 allowance cap-and-trade program and there was no RGGI allowance market prior to July 2008. Therefore, no mandatory scheme established a definitive "market price" at the time of investment. Even absent such a market, but presumably relying on being granted some number of free allowances under RSA 125-O:5, III, PSNH invested in the projects named above in Section I.

PSNH and DES seem to agree that the absence of a regional or federal mandatory program means that there was no definitively established "market price" at the time of the investment. PSNH and DES also appear to agree that DES should look to an outside market or markets in order to establish the appropriate "market price" described in RSA 125-O:5, III. However, PSNH and DES disagree over the appropriate market to use when determining this "market price".

III. Information Reviewed

DES reviewed all available relevant information prior to making its determination. This information is located or otherwise referenced in the relevant DES file. This information includes the PSNH requests dated April 16, 2007, April 15, 2008, and September 9, 2008 for allowances for the above-referenced projects. Upon request of DES, PSNH provided additional information on the month-by-month expenditures associated with these projects, as well as other correspondence. Information submitted from other interested parties was also considered. Initially, DES issued a "preliminary determination" dated September 12, 2007, based on European Union Allowance (EUA) market information that was viewed on-line at http://new.evomarkets.com/, and print-outs that were later saved to the DES file.[1] Subsequently, EUA market information, including

[1] The information and analysis found within the DES original determination is hereby incorporated by reference into this final decision.

volumes of trading, was obtained from Point Carbon and from the European Climate Exchange (ECX). Information was also provided by the Commonwealth of Massachusetts (MA) regarding its decision to allow Phase II EUAs to be used for compliance with MA regulation 310 CMR 7.29(5)(a)5. DES also obtained information from a report titled *"EU Emissions Trading Scheme – 2005 results for the UK Summary Sheet 17: The Carbon Market"* (the DEFRA report) available on the United Kingdom's Department for the Environment Food and Rural Affairs website at www.defra.gov.uk.

IV. Analysis

As a preliminary matter, DES assumes that the legislature did not intend its repeal of RSA 125-O:5, III, to operate retroactively. Therefore, DES is providing allowances to PSNH pursuant to the terms of the former RSA 125-O:5, III. Application of this provision to the PSNH requests requires interpretation of the statutory language, context, and history.

A. The Use of Other Markets

RSA 125-O:5, III, does not specifically provide a mechanism for incorporating outside markets into the bonus allowance calculation. However, RSA 125-O:5, III, is part of a larger regulatory scheme. DES interprets the language of RSA 125-O:5, III, within this larger context. Specifically, DES interprets the phrase "could have been purchased" as meaning those allowances that "could have been purchased" for use within the relevant regulatory scheme. RSA chapter 125-O provides mechanisms for determining which outside allowances could have been used.

To the extent RSA chapter 125-O looks outside of an actual implemented local regulatory "cap and trade" program, the statute invests DES with the discretion to determine which outside programs are acceptable in New Hampshire. For instance, the original language in RSA 125-O:4, IV(a)(1) related to SO_2 states that "allowances or credits from other programs may be acceptable *as determined by the department.*" RSA 125-O:4, IV(a)(1) (Supp. 2008)(emphasis added). For NO_x, the original program allowed affected sources to use "federal or regional trading and banking programs, *or other programs acceptable to the department.*" RSA 125-O:4, IV(b) (Supp. 2008)(emphasis added). The same language is used in RSA 125-O:4, IV(c) with respect to CO_2. RSA 125-O:4, IV(c) (Supp. 2008). Therefore, the only allowances PSNH "could have" purchased that also could have had any use to PSNH were allowances from programs "acceptable" to DES. In addition, as part of the more recent enactment relative to RGGI, the legislature gave DES similar discretion. For instance, in RSA 125-O:22, I(b), the legislature allowed allowances from "international trading programs" to be used "as approved by the department." RSA 125-O:22, I(b) (Supp. 2008). These sections indicate that the legislature has recognized that the expertise of DES is necessary in evaluating outside programs.

Therefore, DES has used this expertise in evaluating the appropriateness of alternative market prices as applied to RSA 125-O:5, III. For the reasons stated below, DES has determined that it would not have accepted Chicago Climate Exchange ("CCX") credits for use in New Hampshire but that it would likely have accepted European Union Emissions Trading Scheme ("EU ETS") allowances.[2] DES also rejects the argument that because no outside allowances were actually accepted for use at the time of expenditure, no allowances should be awarded.

B. The Zero Allowance Alternative

DES has reviewed information from jointly interested parties, namely the Appalachian Mountain Club (AMC), New Hampshire Rivers Council, New Hampshire Sierra Club, Campaign for Ratepayers Rights, Clean Water Action, REACH, Conservation Law Foundation (CLF), Society for the Protection of New Hampshire Forests (SPNHF), Environment New Hampshire, Union of Concerned Scientists (UCS), Granite State Conservation Voters, Worldview, Ltd, and The Nature Conservancy. Although generally supportive of DES' initial position, these entities question whether any allowances should be awarded to PSNH. These parties argue that, under the strict language of the statute, PSNH could not have obtained any allowances at the time of investment and, therefore, should be awarded none.

DES agrees that the language in RSA 125-O:5, III, that refers to allowances that "could have been purchased" indicates that the legislature was looking at those allowances available at the time of investment. As stated above, neither a federal nor a regional trading program existed at the time of investment and no affected source requested DES approval for the use of any other allowance as provided for by RSA 125-O:3, IV(c). Therefore, no allowances "could have been purchased" at the time of investment and a strict construction of the statutory section would result in an allowance award of zero.

DES, however, believes that it is reasonable to interpret RSA 125-O:5, III, in the context of certain specific references found in the recently enacted sections entitled "Regional Greenhouse Gas Initiative," embodied in sections RSA 125-O:19 through RSA 125-O:28. RSA 125-O:19-28 (Supp. 2008). Specifically, RSA 125-O:24, which references allowances granted pursuant to the now repealed RSA 125-O:5, III, was enacted after PSNH had already made expenditures and after it was already widely recognized that no mandatory market existed at the time of these expenditures. Therefore, although DES agrees that absent the broader statutory context, one could argue that PSNH should be awarded zero allowances, DES interprets the former RSA 125-O:5, III, as intending to provide PSNH with some number of allowances even absent a mandatory market if at all possible. DES also believes that the remainder of RSA 125-O provides sufficient guidance to allow DES to determine an appropriate allowance award. However, deviation from the strict language of RSA 125-O:5, III, necessitates a broader interpretation of the chapter and requires that DES use the discretion implied and

[2] No determination about the use of outside allowances was made at the time of expenditure because no request for the use of outside allowances was made.

explicitly granted to it throughout RSA chapter 125-O. For these reasons, DES rejects the zero allowance alternative.

C. The Emissions Reductions Alternative

On November 21, 2007, the New England Power Generators Association, Inc. ("NEPGA") wrote a letter to DES advocating the use of actual emissions reductions rather than a market price in determining the amount of bonus allowances to award PSNH. NEPGA fears that large PSNH investments could result in only modest CO_2 reductions. NEPGA states:

> Therefore, PSNH should only be awarded an allowance for every ton of CO_2 in absolute emissions reductions. To award allowances based upon PSNH's unmonitored expenses in pursuit of modest reductions would reward PSNH disproportionately to the remainder of New Hampshire's generation fleet.

The approach taken by NEPGA is a rational one; however, it is one that is not supported by the language of the statute. DES must adhere to the language of the statute and the intent of the legislature. Therefore, DES rejects the emissions reductions alternative.

D. The Chicago Climate Exchange ("CCX")

PSNH has advocated the use of prices from the Chicago Climate Exchange ("CCX"). For the following reasons, DES has determined that the use of a CCX price cannot be justified.

The CCX program trades emissions credits rather than "allowances." In the CCX market, a participant is given a credit for voluntarily reducing its emissions below a previously established baseline. In other words, a "credit" constitutes a recognition that an entity has voluntarily refrained from emitting some pollutant. The baseline is derived from the sources and is not subject to approval by any regulatory agency. "Allowance," on the other hand, is defined in RSA 125-O:2, II, as "a limited authorization to emit ... one ton of CO_2 during a specified year." RSA 125-O:2, II (2005). This was the only definition of allowances in existence when RSA 125-O:5, III was written. More specific definitions of certain Regional Greenhouse Gas Initiative ("RGGI") program allowances were later provided in RSA 125-O:20. *See* RSA 125-O:20 (Supp. 2008). This definition of allowance comports well with the definition of an allowance in other state and federal contexts. It also fits with the description of allowance as an "emission" allowance in RSA 125-O:5, III, itself. In addition, the legislature understood the difference between allowances, offset allowances, and credits and used any or all of these terms as appropriate. In short, the concept of an "allowance" and the concept of a "credit" refer to opposing aspects of emissions. These two aspects may appear similar but they are not fungible.[3]

[3] PSNH asserts on pages 5 through 8 of its letter of November 21, 2007, that DES' decision to exclude CCX credits is one of "semantic gamesmanship" rather than substance; a decision based merely on the

The legislature's recognition of the difference between credits and allowances is clear from its most recent amendments to RSA chapter 125-O related to RGGI. With respect to RGGI, the legislature only allowed "credits" to be used in limited circumstances, only from international trading programs, and only upon approval of the department. *See* RSA 125-O:22, II(b); *see also* RSA 125-O:20, VIII. It is also telling that the legislature only allowed the use of credits from "international programs" even though the domestic CCX program was already well-established at the time the relevant RGGI sections were enacted.

In addition, even if DES had discretion to accept CCX credits, DES would not approve CCX credits as an acceptable substitute for an allowance. As stated above, the CCX is a voluntary private program rather than a mandatory regulatory program. CCX has no cap on emissions. The CCX program is run by the emissions sources themselves. Also, the CCX does not possess the transparency associated with regulatory programs and is not "truth checked" by independent parties in the manner required in regulatory programs. In addition, the CCX reductions are a form of voluntary offset. Even more widely accepted voluntary offsets are approved for the purpose of fulfilling compliance obligations in only rare circumstances. One reason their use is limited is the problem of "additionality." "Additionality" involves proving that the reduction or offset is quantifiable, is not compensated for by increased emissions elsewhere, and is something other than business as usual. The CCX does not have mechanisms to appropriately deal with "additionality."[4] These problems have led other jurisdictions, such as Massachusetts, to refuse to accept CCX credits.[5] For these reasons, DES has determined that the use of a CCX credit price is inappropriate.

E. The European Union Emission Trading Scheme (EU ETS)

In contrast to CCX, the EU ETS is a mandatory, regulated cap and trade emissions reductions program. The EU ETS uses an "allowance" as the tradable quantity of emission authorization. "Allowances" are defined as an authorization to emit one ton of CO_2. More information on the EU ETS can be obtained at http://www.pewclimate.org/eu-ets/foreword. Although the EU ETS program and the recently enacted regional program involving New Hampshire, RGGI, are not identical, a number of reasons indicate that the EU ETS is the best analog for determining the number of bonus allowances to be awarded under RSA 125-O:5, III.

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words "credit" and "allowance." DES respectfully disagrees with this assertion. The distinction between a "credit" and an "allowance" is important to the extent those terms are used and defined in RSA chapter 125-O. With respect to outside trading programs, the decision to exclude CCX credits was based on the attributes of the commodity, not on any quirk of vocabulary.

[4] *See* pages 10 and 11 of the "Overview of RGGI CO_2 Budget Trading Program" available at http://www.rggi.org/docs/program_summary_10_07.pdf.

[5] On page 6 of its letter dated November 21, 2007, PSNH states: "Notably, DES' own definition of an allowance encompasses CFI contracts, the commodity traded on the Chicago Climate Exchange...." DES believes that this statement is incorrect but invites PSNH to further elucidate its assertion if it chooses to do so. The use of any credits in the RGGI program is strictly limited.

First, DES believes that if an analog is to be used, it must possess the essential elements of the program envisioned by RSA chapter 125-O. RSA 125-O foresees a tradable allowance program operating "under a strictly limited overall emissions cap." RSA 125-O:1, IV (2005). The aspects of the EU ETS described above mirror the program envisioned by RSA chapter 125-O and the program eventually enacted as RGGI. DES has determined that the EU ETS is the only program that possesses these essential elements. Further, the recent changes to RSA 125-O recognize EU ETS allowances as presumptively similar to RGGI allowances, subject to DES approval. RSA 125-O:22, II(b) states that allowances or credits from "eligible international trading programs," defined in part as "programs approved by the department such as the European Emission Trading Scheme (ETS)," can be used during a stage-two trigger event. RSA 125-O:22, II(b) (Supp. 2008).

Second, the EU ETS existed at the time that PSNH made its investments. Therefore, it is possible to analyze the amount of expenditures made by PSNH against the actual price of EU ETS allowances at the time of the expenditure.[6] For these reasons, DES has determined that the EU ETS allowance price should be used to determine bonus allowances.

F. Response to PSNH Comments

PSNH has raised a number of issues with respect to the award of bonus allowances both in its original submittals and in subsequent correspondence. The following paragraphs address those specific issues not previously addressed in this decision.

1. Acceptance of New Hampshire Allowances in EU ETS

On page 2 of its Request, PSNH states that Bonus CO_2 Early Allowances (as defined in Env-A 2903.17) may not be accepted by other jurisdictions for trading into other cap-and-trade markets, such as the EU ETS. The purpose here, however, is not to guess at whether other jurisdictions would accept New Hampshire allowances. Instead, the purpose of this evaluation is to determine, in the best possible way, what outside allowances would have been accepted by DES. For the reasons discussed above, DES has determined, based on available information, that the EU ETS allowance is the only viable candidate for acceptance during the relevant period.

2. Other Trading Programs

On page 5 of a letter from PSNH dated November 21, 2007, PSNH argues that the choice of EU ETS over other programs such as the United Kingdom Trading Scheme, the

[6] PSNH asserts that any acceptance of EU ETS allowances by DES would violate the prohibition against treaties by states or state entities. However, acceptance of such allowances (a circumstance envisioned by RSA 125-O) would not, and will not involve agreements or transfers between New Hampshire and any foreign country. It would consist merely of a recognition on the part of DES of certain activities by a regulated entity, i.e., that the entity purchased and retired an allowance from a program acceptable to DES.

New South Wales Abatement Scheme, the Chicago Climate Exchange, Norway's Greenhouse Gas Emissions Trading System, and Japan's Voluntary Emissions Trading Scheme, is arbitrary, stating:

> Apparently, in trolling for markets, DES missed these, or at least offers no reason they were not more compatible or preferable.

There are many schemes, programs, and initiatives worldwide addressing CO_2 emissions in some form and it would be impractical to provide a full written analysis of all of these absent some genuine issue regarding the viability of a market's use. Although PSNH identified the programs mentioned above in a footnote in its November 21, 2007 response, it did not analyze or propose the use of these programs in either its response or its original Request. However, DES is aware of these other programs and has determined not to use them for the purposes of a bonus allowance award. For the reasons discussed above, DES specifically rejects the CCX trading scheme. For similar reasons, DES rejects the voluntary Japanese trading scheme. Both the United Kingdom ETS and the Norway program were done partly in preparation for the EU ETS and were subsumed by the EU ETS.[7] The New South Wales Abatement Scheme requires electricity retailers to achieve reductions by using project-based activities to offset the production of greenhouse has emissions, and it is not equivalent to trading schemes such as EU ETS or RGGI.[8]

3. NERA Report

In its November 21, 2007 letter, PSNH referenced a report created by its consultant, National Economic Research Associates, Inc. ("NERA"). In the report, NERA makes arguments against the use of the EU ETS and in favor of the prices predicted for the recently enacted RGGI program. For the following reasons, DES does not find the reasoning in the NERA report persuasive.

The NERA report states the conclusion that:

> future allowance prices provide an upper bound on the cost that entities or facilities should incur in order to reduce emissions before the cap-and-trade program is put in place. Early actions to reduce emissions are desirable, but only so long as the cost is less than expected future allowance prices.

There appear to be several errors or unsupported assumptions in this conclusion.

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[7] *See* http://www.ucl.ac.uk/~uctpa15/uk_ets.htm; http://www.defra.gov.uk/environment/climatechange/trading/uk/pdf/ukets-marketanalysis2005.pdf; and http://www.regjeringen.no/Upload/MD/Vedlegg/Horinger/Allokeringsplan/Norwegian_National_Allocation_Plan_for_the_emissions_trading_system_in_2008_2012.pdf.

[8] *See* http://www.greenhousegas.nsw.gov.au.

First, the NERA report states that one must compare the cost of the investment into energy efficiency projects against "expected future allowance prices" in order to determine whether there was an incentive for the project. There is no evidence in the statute that the legislature adopted this type of cost-benefit analysis. The statute clearly provides an incentive by providing free allowances but describes this incentive purely in terms of providing free allowances for expenditures made. In addition, a true cost-benefit analysis would be a complicated one including many factors not submitted to DES for review or considered in the NERA report. Specifically, the NERA report assumes that the ability to obtain bonus allowances is the only benefit of an energy-efficiency investment. In reality, any investment into energy efficiency would have additional economic benefits. Namely, in addition to free bonus allowances given for investment costs, a unit that was made twice as efficient would use half as much fuel, saving on fuel cost, and produce half of the emissions resulting in avoided compliance costs.[9]

Second, the report's methodology for determining "expected future allowance prices" seems convoluted. The NERA report uses the prices predicted for the RGGI program made by ICF prior to the inception of RGGI and then attempts to hindcast these forecasted prices to the applicable time period starting in 2004. It is interesting to note that the forecasted 2009 price turned out to be about one dollar less than what we now know to be the actual RGGI price. In addition, the hindcasted price for allowances in 2004 and 2005 end up being below the RGGI established reserve price. Therefore, even if we accepted the proposed cost-benefit analysis offered by NERA, this methodology does not seem inherently reliable in determining what an entity in 2004 through 2008 would have predicted RGGI prices to be.

Even if one were to accept NERA's premise, a thorough analysis would require an evaluation of what all market forecasters, including the regulated entities, predicted RGGI prices to be starting in 2004. In this respect, DES notes that no information has been submitted as to what PSNH actually predicted RGGI prices to be in 2004 and further notes that PSNH testified at the RGGI legislative hearings that it feared allowance prices could escalate dramatically. In response to these concerns, the legislature included certain relief measures if allowance prices reached $7.00 per ton (referred to as a stage-one trigger event) and $10.00 per ton (referred to as a stage-two trigger event). RSA 125-O:20, XVI and XVII (Supp. 2008); RSA 125-O:22 (Supp. 2008). In addition, DES's *Clean Power Strategy* dated January 2001, a document often relied on by the legislature when it enacted the original RSA 125-O, states that under a high cost scenario, CO_2 reductions could cost as much as $25.00 per ton. Such a cost would directly impact the price of CO_2 allowances.

Therefore, because the legislature did not provide for the use of a cost-benefit analysis, because the analysis presented is not complete, because an actual market for

[9] There could be other economic benefits of certain energy efficiency projects such as increased unit life span and reduced future maintenance costs. Compliance costs with any future federal program could also be an ancillary benefit.

RGGI allowances did not exist until August 2008[10], and because the methodology for supposed price predictions is unreliable, DES rejects the proposal found in the NERA report.

4. The Existence of the EU ETS Market

PSNH claims that the EU ETS cannot be used because it did not exist during the relevant period. On page 4 of its letter dated November 21, 2007, PSNH states: "For example, the EU ETS carbon regime began on January 1, 2005 – well into the relevant period for the PSNH initiatives that are the subject of the Request." However, EU ETS allowances were being bought and sold at all times during the relevant period. It is true that the EU compliance periods did not begin until January of 2005 but this fact bears no relevance to the issue of allowances. At this time, DES has shared the information it has regarding trading of EU ETS allowances with PSNH and hopes that this resolves any misunderstanding on the part of PSNH.

G. EU ETS Phase I versus EU ETS Phase II

The decision to use the EU ETS program, however, does not end the DES analysis with respect to the amount of allowances to be awarded. The EU ETS sold two distinct "vintages" of allowances, referred to as Phase I allowances and Phase II allowances, related to two separate compliance periods. For the most part, the prices of these two types of allowances tracked closely. Predictably, however, the value of Phase I allowances dropped precipitously towards the end of its compliance period (December 31, 2007) because these allowances would soon become unusable. For this reason, the value of Phase I allowances dropped to nearly zero in parts of 2007 whereas Phase II allowances continued to trade within a normal price range. DES has accounted for the variability between Phase I and Phase II allowances in the following manner.

DES used a volume-weighted average to account for the difference in prices between Phase I and Phase II allowances on the EU ETS. This average takes into account both the value of the traded allowance and the number traded so that, for instance, a single allowance trading at a low price would not skew the results. Trading information regarding Phase I and Phase II allowances is shown on the attached Table 1. DES used this information, along with unit and monetary conversions and the information on PSNH expenditures to develop the amount of bonus allowances awarded below in Section V.

DES checked the reliability of this methodology against an alternative wherein PSNH would be allowed to use the lower of the two EU ETS prices up to the point where Phase I prices ceased being traded in a fully-functional market. DES posits that it would not have allowed EU ETS allowances to be used for compliance in New Hampshire at the point that the price of the allowance did not reflect market conditions. DES has determined that Phase I allowances ceased being traded in a fully-functioning market in

[10] *See* "Report on the Secondary Market for RGGI CO2 Allowances" prepared by Potomac Economics and available at http://www.rggi.org/docs/Secondary_Markets_Report_News_Release_FINAL.pdf.

approximately October of 2006, due in part to reduced demand for allowances because of the announcement of actual 2005 emissions that were significantly below the cap, as documented in the DEFRA report. Prior to this time, both Phase I and Phase II allowances experienced increases and decreases and the performance of each, though not exactly the same, mimicked the other. In October of 2006, however, while Phase II allowances continued to trade for steady or even increasing values, Phase I allowances steadily declined until the value of Phase I allowances was only a few cents. During this time, the Phase I prices showed no response to broader market conditions. The Phase I allowance price only reflected the impending end of the Phase I compliance period indicating that the trading of these allowances was merely part of the "winding down" of Phase I. In December of 2007, for instance, Phase II allowances were trading for approximately $17.00 per metric ton – a price 425 times higher than the contemporaneous Phase I allowance price. For this reason, DES has determined that it would have accepted either Phase I or Phase II allowances up until October of 2006. After that time, DES would only have accepted Phase II allowances.

The result of using this second approach is shown on the attached Table II. The outcome was almost exactly the same as that using the volume-weighted averages. This lends support to the idea that the trade volume was reflective of overall market conditions and that the volume-weighted average accounts for all relevant factors including the termination of Phase I.

V. Conclusion

Based on analysis of the monthly market value of EU ETS allowances using data obtained from Point Carbon, the appropriate market value to assign to Bonus CO_2 Allowances is shown in the attached amended Table III. The equivalent U.S. dollar per short ton values and the monthly expenditure amounts that qualify for conversion to Bonus CO_2 Allowances are also shown in amended Table III. Table III was amended after DES discovered that it had inadvertently inverted the metric tonne-to-ton conversion factor in the calculations. Table IV shows the amounts for the two additional projects identified below.

Based on the analysis above, DES has determined that the following amounts of allowances are awarded to PSNH pursuant to RSA 125-O:5, III:

1. 4,976,223 for the NWPP.
2. 149,125 for the Smith Hydro Project.
3. 510,328 for the MK Turbine Project.
4. 14,110 for the NT Efficiency Lighting Project.

Total allowances awarded = 5,649,786 bonus CO_2 allowances

DES intends to record these awarded bonus CO_2 allowances in its Clean Power Act Allowance Tracking System, and then convert Clean Power Act allowances to Regional Greenhouse Gas Initiative allowances recorded in the RGGI CO_2 Allowance Tracking System, in accordance with RSA 125-O:24.