

STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

DE 10-261

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2010 LEAST COST INTEGRATED RESOURCE PLAN

CLOSING ARGUMENT OF THE NEW HAMPSHIRE SIERRA CLUB

FOCUS OF THE NEW HAMPSHIRE SIERRA CLUB INTERVENTION

The focus of the New Hampshire Sierra Club [NHSC] intervention was to bring information to the New Hampshire Public Utilities Commission [PUC] about environmental programs and regulatory changes. Each program has the potential to substantially impact the costs of the continuing operation of the Public Service Company of New Hampshire [PSNH] fossil generating units.

LEGISLATIVE BACKGROUND

The New Hampshire legislature in RSA 378:37 declared that the energy policy of the state is that utilities meet the energy needs of citizens and businesses at the lowest reasonable cost while protecting the safety and health of its citizens and the physical environment.

The New Hampshire energy policy requires that PSNH file a least cost integrated resource plan [LCIRP] at least biennially that includes, *inter alia*, an assessment of the impacts of compliance with the Clean Air Act [CAA] amendments of 1990, together with an assessment of the long and short term environmental, economic and energy price and supply impact. RSA 378:38.

The New Hampshire Public Utilities Commission [PUC] is required to decide whether the LCIRP is adequate. The adequacy decision requires an examination of the potential environmental, economic and health related impacts of each proposed option. RSA 378:39.

On December 28, 2010, the PUC, by Secretarial Letter, advised that a sound planning process for environmental requirements should consider reasonably foreseeable regulatory changes, recognizing that the threshold at which a potential change in regulatory standards becomes too remote or speculative for

a utility to consider will depend on the particular facts and circumstances of the regulatory at issue.

IS THE LCIRP ADEQUATE? CRITICAL QUESTIONS

How can the PUC ensure that PSNH is planning to meet the energy needs of the citizens and businesses of the state at the lowest reasonable cost while protecting the safety and health of the citizens and the physical environment?

What information does the PUC need to decide whether an environmental requirement is reasonably foreseeable?

How is the PUC to assess the costs of environmental programs and regulatory changes on the PSNH fossil units?

How is the PUC to avoid huge and potentially costly “surprises” such as presented by the recent draft National Pollutant Discharge Elimination System [NPDES] permit for a cooling tower the Environmental Protection Agency issued for Merrimack Station?

How is the PUC to avoid other costly “surprises”, as suggested by PSNH, to avoid getting “sandbagged” by other environmental programs and regulatory changes known to be pending?

Only PSNH can provide the information to answer these questions.

WHAT IS THE PSNH RESPONSIBILITY FOR PLANNING?

PSNH must identify each and every environmental program and regulatory change that has the potential to impact company fossil generating units.

PSNH must provide an assessment of the regulatory changes on the operation of its units given the unique characteristics of each unit.

PSNH must provide a description of existing pollution control equipment of each unit and whether the equipment and operating procedures are adequate to meet additional emission reductions.

PSNH must provide a range of costs for compliance from worst case to no cost.

PSNH must provide its cost assessments with sufficient technical detail so that the PUC and the public can evaluate the integrity of the assessment.

PSNH must provide the information with candor, objectivity, diligence, and accuracy.¹

HOW HAS THE PSNH HANDLED ENQUIRIES ABOUT THE ADEQUACY OF ITS LCIRP?

The 2010 LCIRP is inadequate because PSNH did not plan for reasonably foreseeable environmental programs and regulatory changes.

The plan makes only cursory reference to several environmental programs including the regional haze rule and the MACT standard. The plan was silent on the programs specific applicability to each generating unit and the costs of those programs.

Worse, the LCIRP did not refer to new rules, that all, including the power generating industry, knew were pending. The plan omissions included, among others, ozone NAAQ re-designation, stringent fine particulate limits, cooling water intake existing facilities rule and the steam electric effluent guidelines for scrubber waste water.

These omissions make the plan worthless as a planning document.

NHSC DATA REQUESTS

NHSC, because of the PSNH omission of known regulatory changes, filed Data Requests addressing pending programs.² The Data Requests were drafted to do a couple things: one, programs and rule changes would be identified for the benefit of the PUC, and two, PSNH would be required to explain company planning for the rule changes and provide cost information.

PSNH both objected to and did not forthrightly answer the NHSC Data Requests.³

¹ PSNH owes this duty, because it enjoys regulated status with a guaranteed rate of return, to rate payers.

² NHSC 1.

³ The Commission, in error, granted the PSNH objection to NHSC Data Requests 1, 2 and 3. The Data Requests were calculated to test the integrity of the PSNH cost analysis for NOx BART limits.

The PSNH responses to the NHSC Data Requests did reveal some information, none of which lends value to the LCIRP.

One, PSNH asserts that it does not plan for rule changes during the development of the rules.

In each case, the PSNH response to the Data Requests was: "...PSNH does not prepare analyses or scenarios based upon possible regulatory rules or outcomes, such as proposed limits, nor has PSNH otherwise performed the required calculations. Therefore, no such analyses were contained in the Integrated Least Cost Resource Plan filed by PSNH on September 30, 2010, and PSNH does not have information responsive to question posed."

Two, PSNH is willing to avoid forthrightly responding to Data Requests.

Let's explain.

The first four NHSC Data Requests related to the pending Regional Haze State Implementation Plan. [SIP] The proposed SIP required a best available control technology [BART] limit on NOx emissions from Merrimack Station.⁴ BART rules require a cost analysis of compliance be submitted to the permitting authority.

NHSC filed the Regional Haze Data Requests knowing that PSNH *had prepared cost analyses* for compliance for different scenarios.⁵ NHSC, during rule change advocacy, learned that PSNH had, before the filing of the LCIRP, submitted cost analyses, based on several emissions limit scenarios, with New Hampshire Department of Environmental Services [NHDES].⁶

Here's the point.

⁴ MK2 is a BART eligible electric generating unit [EGU]. Also, MK2, with its cyclone boiler, is a huge NOx emitter.

⁵ NHSC 3.

⁶ PSNH filed the cost calculations with a claim of confidentiality. NHSC objected to the confidentiality claim and NHDES ordered the calculations released. The Commission will recall the time consuming exchange regarding the confidentiality claim between PSNH counsel and NHSC counsel during the merit hearing.

PSNH answered Data Request 4 regarding costs of BART compliance with its stock answer that it does not prepare analyses based on possible regulatory rules or outcomes.⁷

The response to NHSC Data Request 4 is manifestly incorrect. NHSC 3 is documentary proof that PSNH did cost analyses of various BART limits.

THE MERIT HEARING TESTIMONY

PSNH testimony during the merit hearing did not enhance company credibility.

Review of the cross-examination by NHSC of witnesses Smagula and Tillotson about the cost calculations for BART limits reveals a series of non-responsive answers and evasions. Mr. Smagula and Ms Tillotson never answered whether the calculations in NHSC 3 could have been included in the LCIRP and if not those cost calculations, why not other cost calculations. [Tr. pages 51-54].

Matters went down from there when NHSC asked about the pending ozone re-designation, which all utilities, including particularly those with ozone non-attainment issues such as in New England, know is approaching.

Cross-examination regarding the ozone re-designation elicited more non-answers, particularly with respect to the pollutant NO_x, an ozone precursor. When pressed, Ms Tillotson argued that PSNH does not need to do more to increase NO_x reduction capabilities. [Tr. Page 59].

The point: PSNH, knowing that the Merrimack Station cyclone boilers are huge NO_x producers, must fully explain how the ozone re-designation will impact the units; provide emissions data; provide information on the efficiency of its current controls; project potential emission limits; and, provide, for the Public Utilities Commission in the exercise of its responsibilities, a range of costs for the various scenarios.

Take MACT [now MATS] and the New Hampshire Clean Power Act, for example.

Cross-examination about cost analyses of the MATS standard elicited more lengthy non-answers. [Tr. pages 59-70]. The NHSC cross-examination

⁷ PSNH objected to the first three Data Requests, each of which was directed to its cost analysis of BART limits. The Commission erroneously granted the objection.

elicited from Mr. Smagula the admission that PSNH is litigating with NHDES over the mercury [Hg] input baseline. [Tr. page 66].

The PSNH-NHDES litigation is about the Hg content of the coal that will be combusted. PSNH argues that it should be allowed to burn coal with a much higher Hg content. NHDES contends that the Hg content should be much lower. [Tr. page 67].

The Hg baseline litigation will have cost consequences. Coal costs money, and different coal has different costs, cost consequences that should have been part of the planning process.

This raises another important issue.

If PSNH chooses to litigate rather than plan, planning that includes various assumed outcomes with a range of costs for those outcomes, the litigation decision should be explained in the plan.

That is the point of planning for a regulated utility.

THE COOLING TOWER TESTIMONY AND THE DRAFT NPDES PERMIT

NHSC Data Request 9 asked about the proposed EPA rule for cooling water intake rule, including the costs of compliance, expected in March, 2011. [NHSC 1]. PSNH responded with its stock answer: "...PSNH does not prepare analyses based upon possible regulatory rules or outcomes..."

Mr. Smagula, during the NHSC cross-examination about planning for a Merrimack Station cooling tower, was asked:

"By Mr. Cunningham: 'And, during that process [discussions with EPA], which appears to be extensive, did PSNH do any examination of costs of the various cooling water scenarios, that we all know now has resulted in a Draft NHDES Permit that has serious cost implications here?

Chairman Ignatius: And Mr. Cunningham, the time frame of you question?

Mr. Cunningham: Prior to the filing of the least cost plan.

Chairman Ignatius: Thank you.

By the witness:

A. [Smagula] The Company, as I indicated, has not, on its own and for its own benefit, conducted any such studies. However, at the request of the EPA, we were asked to do that for them....”

Contrary to this testimony, PSNH *has* commissioned a cooling tower study on its own and for its benefit, a study that should be made part of this docket.⁸

The significance of this matter cannot be overstated. The Draft NPDES Permit requires a closed loop cooling tower that will cost over \$100,000,000, a very expensive “surprise”.

EXPERT REPORT AND TESTIMONY OF DR. RANAJIT SAHU

The stock responses from PSNH to the NHSC Data Requests about regulatory changes exposed deep flaws in the LCIRP.⁹

Because of the LCIRP omission of known environmental programs and pending regulatory changes, NHSC decided to retain Dr. Ranajit Sahu, an expert with engineering expertise who could describe both the programs and their applicability to the PSNH fossil fleet.

Dr. Sahu delivered significant value to the Commission.

One, Dr. Sahu’s comprehensive Expert Report [Report]¹⁰ details the environmental programs and potential regulatory changes that *PSNH itself should have described and analyzed*, each of which was reasonably foreseeable at the time of filing the LCIRP.^{11 12}

⁸ On April 9, 2010, NHSC filed a version of a Sargent & Lundy *Merrimack Boiler Study* in DE 08-103, *Investigation of PSNH Installation of Scrubber Technology*. The *Study* has pages of analysis, all redacted, including cost analysis of cooling tower scenarios.[*Study*, pages 2-65-2-72] During the direct examination of its expert, Dr. Ranajit Sahu, NHSC attempted to elicit testimony regarding the *Study*. Chair Ignatius granted the PSNH objection to the *Study*. [Tr. page 29]. NHSC, in its Request for Relief asks for reconsideration of the Chair’s ruling on the admissibility of the *Study*.

⁹ PSNH repeatedly answered: “PSNH does not prepare analyses or scenarios based upon possible regulatory rules or outcomes.” Commissioner Harrington accurately described the responses as “boilerplate”.

¹⁰ NHSC 4.

¹¹ In accord with Secretarial Letter, December 28, 2010.

¹² Dr. Sahu notes limitations on the analytical framework because of the lack information available in the public record, including current air dispersion modeling, current background values for ambient air quality,

Two, Dr. Sahu testified that information about environmental programs and pending regulatory changes is widely available without a significant expenditure of resources. He noted that the electric utility industry has the Electric Power Research Institute [ERPI]. ERPI looks at regulations and does technical assessments. Law firms specializing in utility law do assessments. The Utility Air Resources Group and other groups do assessments. Investment groups provide detailed analyses and projections. The vendor community does assessments about potential costs and outcomes. [Tr. pages 70-72].

Three, Dr. Sahu provided, in an exchange with PSNH attorney Eaton regarding the pendency of changes in the ozone standard, *the essence of proper planning*:

“...And, my familiarity, counsel, with planning like this is, you look at future outcomes based on a reasonable set of anticipated inputs. And, here, that is what we are talking about. If the standard could be in a certain range, how does that affect the station?

The precise usefulness of the plan would have been to say ‘well if EPA did set it at 65 parts per billion, my gosh, we’re looking at \$40,000,000 of upgrades. However, if EPA did set it at 75/billion, we’ve got to do nothing. That is precisely the type of thing that this plan should discuss, is a sense of the assessment for need for capital or O&M, given a range of outcomes...” [Tr. page 63]. [Emphasis added].

In response to a question from Commissioner Scott about the ozone standard proposals that PSNH could have used for bounding, Dr. Sahu testified that it is a standard forecasting technique to do bounding assessments because EPA was considering set of future potential standards, that PSNH did not have to guess. [Tr. page 72-73].

In testimony, PSNH witness Smagula had argued, in defense of the LCIRP, that PSNH does not envision any large capital investments. Witness Tillotson took a conflicting position, arguing that PSNH cannot plan until the program had progressed to the point without having a known and quantifiable standard; that PSNH could not guess.

and design information on current and proposed controls and the new scrubber, noting that reliance on the unsupported assertions of PSNH is neither adequate nor proper. [Report, pages 4-5].

Dr. Sahu testified that the contradictory positions are not planning strategies; that he could not reconcile the different positions. He noted that other utilities, equally responsible to their shareholders and ratepayers, as is PSNH, are able to do planning; that the very nature of planning is to account for a reasonable uncertainty and a range of future outcomes by making those assumptions part of the plan. Dr. Sahu pointed out that there are very established ways to account for reasonable uncertainty and a range of future outcomes through sensitivity analysis, a Monte Carlo analysis that PSNH could use to account for uncertainty in a range of outcomes, as opposed to requiring a clear guarantee. [Tr. 21-26].

Dr. Sahu criticized Mr. Smagula's testimony that PSNH will not have to make any large capital investments. He pointed to at least three instances that cannot be reconciled with the Smagula testimony: the cooling tower matter; the mercury baseline dispute with NHDES, and, disposal of scrubber wastewater. Tr. pages 25-26].

Each of these "surprises" will cause very substantial capital and operating costs, "surprises" that should have been analyzed in the LCIRP with proper planning assumptions and a range of costs for projected outcomes.

NHSC HAS TREATED THE LCIRP MUCH MORE SERIOUSLY THAN PSNH

The Executive Committee of the New Hampshire Sierra Club made the serious decision to intervene in this docket after analysis of the LCIRP. The omissions of known environmental programs and regulatory changes in the LCIRP were of grave concern.

NHSC retained Attorney Arthur B. Cunningham¹³ and directed him to intervene. NHSC also authorized the expenditure of funds for an expert witness.

On the first day of the hearing, in response to questions by Commissioner Harrington, PSNH witness Terry Large, the executive charged with the responsibility of developing the LCIRP, made the *shocking* admission that the LCIRP has very limited value. He admitted that the LCIRP is only a "snapshot" in time that it does not drive decision making, saying its import to decisions PSNH makes real time, many of the things that have been discussed

¹³ Attorney Cunningham agreed to cap his fees at \$25,000, calculated at the rate of \$200 per hour.

about these environmental regulations have changed to be more clear or less clear, is only how PSNH views the world at the time the LCIRP is prepared. [Tr. pages 115-116].

The Large admission that the LCIRP is not a planning document, a “playbook”, is obvious from the document itself, but the admission itself demands sanction by the Commission.

NHSC has paid \$25,000 to Attorney Cunningham.

NHSC has paid Dr. Ranajit Sahu \$13,550.50 for his Data Requests advice, his Expert Report and testimony before the Commission.¹⁴

NHSC has expended \$38, 550.50 of its limited resources in an important PUC docket that PSNH has treated as a throwaway, little more than an exercise done only because the law says so.

PSNH has treated its legal obligation to prepare the LCIRP with disdain because the company has never had accountability; it has never been sanctioned for the inadequacies of its LCIRP work. That conduct must change.

NHSC wants its attorney fees and expert expenses reimbursed.

The NHSC intervention and the Expert Report and testimony of Dr. Ranajit Sahu provide the basis for recovery of its costs under RSA 365:38-a.

REQUESTS FOR RELIEF

1. NHSC requests that the Commission reconsider the Decision of the Chair granting the PSNH objection to the Sargent & Lundy, LLC study, for the reason that the study demonstrates that PSNH did a cost assessment of a cooling tower at Merrimack Station in various scenarios, contrary to the testimony of PSNH witness Smagula, in which he testified, under oath, that PSNH has not conducted such any studies on its own and for its benefit;
2. NHSC requests that the LCIRP be found inadequate and returned to PSNH for an assessment of each and every environmental program and regulatory change detailed in the Expert Report of Dr. Sahu; that the assessment include a detailed description of the regulatory changes with anticipated emission

¹⁴ See Attachment 1, Affidavit of Catherine M. Corkery, Chapter Director, NHSC.

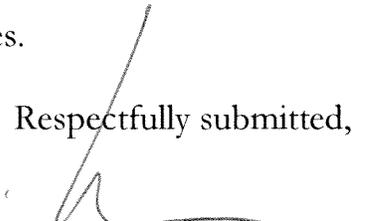
bounds; the applicability of the changes to the PSNH fossil units; whether the changes will require pollution control equipment upgrades, new equipment, and changed operating procedures; a description of the current and proposed equipment with sufficient information of the design capabilities to ensure that the controls will reduce the pollutants to the emission bounds; and, projected capital and operating costs based on a range of outcomes;

3. NHSC requests that the Commission, pursuant to RSA 365:38-a, order that PSNH reimburse NHSC for its attorney fees and expert expenses. The NHSC intervention together with the Expert Report and testimony of Dr. Ranajit Sahu provided by NHSC substantially contributed to the Commission understanding of the environmental programs and regulatory changes, and, if ordered by the Commission [as set forth in Request for Relief 2], will substantially contribute to the adoption by the Commission of the position advocated by NHSC; and,

4. NHSC requests such other relief proper in the premises.

6/13/12

Respectfully submitted,

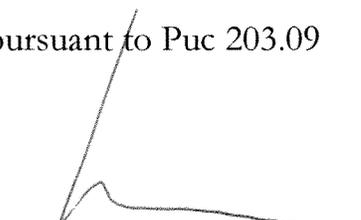

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Certificate of Service

New Hampshire Sierra Club served this Closing Argument pursuant to Puc 203.09 on this 13th day of June, 2012.


Arthur B. Cunningham

STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

DE 10-261

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
2010 LEAST COST INTEGRATED RESOURCE PLAN

AFFIDAVIT OF CATHERINE M. CORKERY

I, Catherine M. Corkery, having been duly cautioned and sworn, do, upon my oath, state:

I am the Chapter Director of the New Hampshire Sierra Club. Upon the Public Service Company of New Hampshire filing in the New Hampshire Public Utilities Commission of its Least Cost Integrated Resource Plan, DE 10-261, I asked for and received the authorization of the New Hampshire Chapter Executive Committee to retain the services of Attorney Arthur B. Cunningham to intervene and represent the Chapter in the docket. Attorney Cunningham agreed to limit his fees to no more than \$25,000, chargeable at the rate of \$200 per hour. The Executive Committee also authorized Attorney Cunningham to engage an expert in environmental programs applicable to fossil fuel electricity generating plants. Attorney Cunningham engaged Dr. Ranajit Sahu who prepared an Expert Report and testified at the hearing of DE 10-261.

The Chapter has paid Attorney Cunningham the full \$25,000.

The Chapter has paid Dr. Sahu \$13,550.50 for his Expert Report and his testimony.

Affiant saith further naught.


Catherine M. Corkery

*St of NH /
City of Merrimack*

Sworn to and subscribed before me this 13 day of June, 2012.
Notary Public

