

**STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION**

**Docket No. DG 06-098**

**NORTHERN UTILITIES, INC.**

**2006 Long-Range Integrated Resource Plan**

**STIPULATION AND SETTLEMENT**

**I. INTRODUCTION**

**A. IDENTIFICATION OF SETTLING PARTIES AND CONDITIONS  
PRECEDENT**

This Stipulation and Settlement is entered into by and among Northern Utilities, Inc. (Northern) and the Staff of the New Hampshire Public Utilities Commission (NHPUC Staff) for the purpose of resolving contested filing requirement issues relating to Northern's next-filed Integrated Resource Plan (IRP). The settling parties agree to proffer and support this Stipulation and Settlement for the review and approval by the New Hampshire Public Utilities Commission (NHPUC). Northern is filing an identical settlement, reached with the Maine Office of Public Advocate (OPA), with the Maine Public Utilities Commission (MPUC) in Docket No. 2006-390. The parties to the New Hampshire settlement and the parties to the companion settlement in DN 2006-390 have agreed that the approval of the respective settlements by the NHPUC and MPUC is a condition precedent to the effectiveness of the terms in each.

**II. SETTLEMENT TERMS**

As a result of settlement conferences, the settling parties have entered into a Stipulation and Settlement that resolves all of the contested filing requirement issues relating to Northern's next-filed IRP (2010 IRP) as defined in Section II.B. The settling parties have also reached

agreement on how to process Northern's 2006 IRP (2006 IRP). As regards the latter, the settling parties agree as follows:

**A. STATUS OF FILED PLAN AND MPUC DOCKET NO. 2006-390**

The settling parties have engaged in an investigation of the 2006 IRP, and agree that the planning process used to develop the plan requires further development. However, the settling parties believe that it is not administratively efficient to litigate the issues arising under the 2006 IRP. Instead, the settling parties agree that Northern will prepare its 2010 IRP utilizing the planning process summarized in this Stipulation and Settlement, and Attachments A and B hereto.

This Stipulation and Settlement does not address issues identified in the MPUC's July 18, 2006 Order Initiating Investigation in Docket No. 2006-390 (Maine Issues) regarding the prudence of, or the applicability of 35-A M.R.S.A. § 4707 to the Wells Replacement Contracts.

**B. NEXT IRP**

The 2010 IRP shall be the IRP that Northern will submit to the MPUC and NHPUC for review no later than nine (9) months following the date that this Settlement has obtained the approval of both Commissions. Regarding development of the 2010 IRP, the settling parties agree as follows:

**1. ADMINISTRATIVE REVIEW PROCESS**

Northern operates a single gas supply portfolio that extends over two states, making its integrated resource planning process subject to the jurisdiction of both the MPUC and the NHPUC. Accordingly, the settling parties agree that it is appropriate for the MPUC and NHPUC to establish administrative review processes that ensure the efficient and timely review of Northern's IRPs. Review of Northern's IRP by the MPUC and NHPUC may be conducted

separately or jointly, in the interest of economy and efficiency. Each jurisdiction will attempt to have completed its initial review within nine (9) months, with the initial investigation, discovery and technical sessions to be concluded within six (6) months of the filing of the IRP. Subsequent to the initial reviews, the MPUC and NHPUC will attempt to complete any hearings and deliberations and to issue their decisions within three (3) months.

If, during the review or decision process, either the NHPUC or the MPUC concludes that Northern's IRP presents concerns that may result in inconsistent directives, joint meetings may be conducted with representatives from both the MPUC and the NHPUC with the goal of resolving any differences in an expeditious manner. The settling parties agree to work cooperatively to attempt to resolve any differences that may arise over planning processes and procedures.

**a. STANDARD OF REVIEW**

To facilitate the review of the 2010 IRP, the settling parties agree that the purpose of an IRP is to allow Northern to describe and explain the resource planning processes and procedures that it uses to develop an adequate, reliable and economic portfolio of supply and demand-side resources to serve firm customer demand and to allow the MPUC and NHPUC to evaluate the reasonableness of those planning processes and procedures. The criteria that the MPUC and NHPUC will use to review the 2010 IRP will include the completeness, comprehensiveness, integration, feasibility and adequacy of the planning process.

**2. FILING DATE**

Northern agrees to submit for MPUC and NHPUC review the 2010 IRP no later than nine (9) months following the date that this Settlement has obtained the approval of both

Commissions. Northern further agrees to submit its IRP for MPUC and NHPUC review every three years thereafter.

### **3. CONTENTS OF NEXT IRP**

The 2010 IRP shall be prepared consistent with the terms herein and in Attachments A and B to this Stipulation and Settlement.

### **4. PLANNING PERIOD FOR THE NEXT IRP**

The settling parties agree that the 2010 IRP and all subsequent IRPs shall cover a planning period that includes the next five Gas Years after the filing date of the IRP, where "Gas Year" is the twelve months from November through the following October.

The settling parties understand that the planning period for the 2010 IRP does not prescribe the evaluative period for long-lived resource options. For example, if Northern were to identify a supply-side resource option that has a term in excess of the planning period, the economic evaluation of that resource option must extend beyond the planning period, up to the full term of the resource. On the other hand, the time period for evaluation may be shorter than the planning period if the term of the resource option falls short of the planning period.

### **5. CAPACITY RESERVE**

In MPUC Docket No. 2006-141 and NHPUC Docket DG 06-033, the settling parties established a capacity reserve equal to 30% of Northern's capacity-exempt transportation demand. Further, the settling parties agreed that the level of the capacity reserve was an appropriate issue for review as part of the 2006 IRP.

The settling parties agree that Northern has sufficient firm capacity to serve its projected sales demand over the period November 2006 through October 2012. For this reason, the settling parties agree that Northern will terminate, effective on the first day of the first month

succeeding the effective date of this Stipulation and Settlement, the capacity reserve and the interim surcharge. That agreement notwithstanding, in any future IRP proceeding, the settling parties may raise the capacity reserve issue and Northern may propose to re-establish a capacity reserve surcharge for Commission approval, if it is deemed necessary.

#### **6. MODIFICATION TO FUTURE IRP METHODOLOGY**

Northern will prepare the 2010 IRP in accordance with the terms of this Stipulation and Settlement. Upon acceptance by the MPUC and NHPUC of the methodology and analysis applied in the 2010 IRP, unless specific directives are given, there shall be an expectation that Northern will continue to follow similar processes in the preparation of subsequent IRP filings. However, there shall also be an expectation that Northern will seek continual improvements of its practices and procedures that further the objectives stated above under "Standard of Review." To the extent that Northern prepares an IRP filing subsequent to the 2010 IRP that deviates from the methodology that has received approval from the MPUC and NHPUC, Northern shall provide (a) a description of the modifications to the methodological processes and procedures; (b) an explanation of the purpose of the modifications; and (c) a discussion of the effect of the modifications, including quantification of the differences between the revised methodology and the previously approved methodology. All other settling parties reserve all rights to assert their views on the reasonableness of any such proposed methodological modifications.

#### **7. GRANITE STATE GAS TRANSMISSION**

In accordance with the Stipulations in Docket 2008-155 (ME) and DG 08-048 and DG 08-079 (NH), Northern is preparing a study of issues regarding the potential integration of Granite State Gas Transmission, Inc. (GSGT) and Northern (the GSGT Study) that is to be completed by January 11, 2010. The settling parties acknowledge that the issues related to the

GSGT Study may not be resolved at the time the 2010 IRP is to be filed. If so, the settling parties agree that the 2010 IRP will include a discussion of the regulatory and operational alternatives that were considered in the GSGT Study (Scenarios), the results of Northern's economic evaluation of these Scenarios, and the impact these Scenarios may have on Northern's future resource plans. If the issues related to the GSGT Study have been resolved at the time the 2010 IRP is filed, Northern's resource plans included in the 2010 IRP will reflect that final decision.

### **III. GENERAL PROVISIONS**

1. This Stipulation and Settlement is expressly conditioned upon the MPUC's and the NHPUC's acceptance of all its provisions, without change or condition. If either does not accept the Stipulation and Settlement in its entirety, without change or condition, or if either makes any findings that go beyond the scope of this Stipulation and Settlement, and any of the settling parties is unable to agree with said changes, conditions or findings, the Stipulation and Settlement shall be deemed to be withdrawn and shall not constitute any part of the record in this proceeding and shall not be used for any other purpose.

2. The acceptance by the MPUC and the NHPUC of this Stipulation and Settlement does not constitute continuing approval of, or precedent for, any particular issue in this proceeding other than those specified herein. Acceptance of this Stipulation and Settlement by the MPUC and the NHPUC shall not be deemed to restrain either Commission's exercise of its authority to promulgate future orders, regulations or rules that resolve similar matters affecting other settling parties in any fashion.

3. Amendments and Modifications. This Stipulation and Settlement may be amended or modified only in a writing signed by each of the settling parties hereto.

4. This Stipulation and Settlement shall not be deemed an admission by any of the settling parties that any allegation or contention in this proceeding by any other Party, other than those specifically agreed to herein, is true and valid.

5. This Stipulation and Settlement is the product of confidential settlement negotiations. The content of these negotiations, including any documents prepared during such negotiations for the purpose of reaching a settlement, shall be privileged and all offers of settlement shall be without prejudice to the position of any party presenting such offer.

NORTHERN UTILITIES, INC.

By:  Dated: 12/14/2009  
Gary Epler, Attorney for Northern Utilities, Inc.

STAFF OF THE NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION

By:  Dated: 12/14/09  
Marcia A. B. Thunberg, Staff Attorney





## **ATTACHMENT A**

### **Contents of 2010 IRP**

#### **A.1. Demand Forecasts**

Northern shall submit separate design day demand and annual demand forecasts for its firm sales and transportation-only customers based on the methodology summarized in Attachment B. The design day demand forecast will present three scenarios: base case, high case and low case. The annual demand forecast will be developed using both normal and design year weather conditions, each of which will also be presented under base case, high case and low case demand scenarios. The high and low case scenarios will be based on extreme but plausible growth rates. In addition, Northern will identify and explain any notable deviations from historical growth trends reflected in its demand forecast. Finally, Northern will discuss the predictive ability of its demand forecast models and explain how the 2010 IRP addresses uncertainty associated with different demand scenarios.

#### **A.2. Resource Balance**

Northern shall provide information showing the difference between projected design day demand based on expected low and high demand cases and the peak-day resource capacity based on existing contracts not scheduled to expire during the planning period, known as the Resource Balance. In addition, Northern shall provide information showing the difference between projected annual demand based on expected low and high demand cases and annual supply capability based on existing contracts not scheduled to expire during the planning period. This information will be provided in both tabular and graphical form. Northern shall also provide a

discussion of the potential variability in the Resource Balance and the implications of the Resource Balance for lowest cost resource procurement.

### **A.3. Planning Standards**

Northern's design day and design year planning standards shall be based on statistical analyses of an updated set of weather data and shall include consideration of how, if at all, climate change is or should be reflected in the plan. Northern will investigate whether historically observed weather is normally distributed and, if not, address the implications of this finding for the calculation of planning standards.

In addition to determining the adequacy of its resource portfolio under design day and design year weather conditions, Northern shall evaluate the capability of its resource portfolio to meet sendout requirements during a protracted period of very cold weather (i.e., conduct a cold snap analysis).

### **A.4. Supply-side Resource Assessment**

Northern shall identify reasonably available supply-side resource options that are capable of meeting the projected resource balance over the planning period, including the renewal of existing contracts scheduled to expire during the planning period. The methods that Northern uses to evaluate supply-side resource options shall be described in full in the 2010 IRP along with the results of the evaluations.

### **A.5. Demand-side Resource Assessment**

Northern shall present estimates of the technical and economic potential for energy efficiency in its Maine and New Hampshire divisions, which in the case of New Hampshire shall

be taken from, or based upon, the GDS Associates, Inc. 2009 report titled Additional Opportunities for Energy Efficiency in New Hampshire. Such estimates shall account for expected savings from existing programs that have been approved for implementation in Maine or New Hampshire.

Northern shall also include in the 2010 IRP estimates of avoided costs: (i) a description of its avoided cost methodology; (ii) the resulting avoided cost forecast by cost component; (iii) a description of the approach used to define and evaluate potential programs; (iv) avoided costs by such program; (v) estimated implementation costs by such program; and (vi) a ranking of evaluated potential programs based on appropriate criteria including avoided costs. In assessing demand-side resource programs, Northern shall use the Total Resource Cost (TRC) test for evaluating cost effectiveness.

Northern shall model the expected savings from efficiency measures previously installed, and expected to be installed, in its Maine and New Hampshire divisions under programs that have been approved for implementation in Maine and New Hampshire as a reduction in its demand forecast.

#### **A.6. Integration of Demand-Side and Supply-Side Resources**

Northern shall describe its process for integrating demand-side and supply-side resources in a manner that meets customers' future needs at the lowest reasonable cost while maintaining reliability and taking into account other non-cost planning criteria. Among other things, the Company should discuss how differences in the reliability of supply-side and demand-side

resources are taken into account in the integration process and whether it expects to acquire the incremental resources through Company-sponsored programs and/or programs acquired on its behalf by third settling parties through an RFP process.

**A.7. Preferred Portfolio**

The 2010 IRP shall include a description of the results of the integration process; namely the preferred portfolio of existing and new resources (on a design day and design year basis) that meets forecasted loads over the planning period at lowest reasonable cost. The description of the preferred portfolio for the 2010 IRP will be supplemented with a discussion of the key factors that led to the conclusion that renewal of existing contracts is economic (or uneconomic) and that certain new resource options are more cost-effective than others.<sup>1</sup> In addition, the preferred portfolio will be provided in both tabular and graphical form. Finally, a copy of the 2010 IRP shall be provided for informational purposes to the New Hampshire Energy Efficiency & Energy Sustainability Board and to Efficiency Maine.

**A.8. Plan Flexibility**

The Resource Balance discussion to be included in the 2010 IRP shall explicitly consider the flexibility inherent in Northern's demand-side and supply-side resource planning process, including Northern's process for acquiring additional resources or releasing contracted resources

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<sup>1</sup> To the extent such information is available to Northern and Northern has considered other strategies for use, information on the performance of the preferred portfolio as compared with other strategies will be provided in the workpapers submitted along with the 2010 IRP.

in the event that its actual customer demand is greater than or less than forecast needs in the short or long term.

**A.9. Hedging**

The 2010 IRP shall include a description of Northern's goals and strategy to financially hedge the cost of gas supply. This description should address the following issues: (i) why financial hedging is appropriate; (ii) the type of financial products the Company purchases to hedge certain supply costs; (iii) the timing as to when any financial hedges are purchased (e.g., close to delivery or multiple months prior to delivery); (iv) the time periods for which financial hedges are purchased (e.g., peak or off-peak); and (v) the magnitude of the Company's hedging program in relation to its sales requirements.

To place this strategy in context, Northern shall describe generally its gas supply price risk management strategy, the organization responsible for its development and implementation, and the internal protocols that allow for its timely execution.



## **Attachment B**

### **Demand Forecast Methodology**

The demand forecast that Northern prepares for the 2010 IRP shall consist of separate demand forecasts for the Maine and New Hampshire Divisions that are derived from a statistical analysis of data relating to distinguishable customer segments, such as: Residential Non-Heating (RNH); Residential Heating (RH); Commercial and Industrial Low Load Factor (C&I LLF); and Commercial and Industrial High Load Factor (C&I HLF) (collectively, Customer Segments). The demand forecast for each Customer Segment will be derived from separate forecasts of number of customers and use per customer using a standard commercially available regression analysis package.

The forecast model data will be obtained from Northern's historical records and/or from commercial vendors. To allow the settling parties to assess the reasonableness of Northern's demand forecast, IRP filings will include detailed information on the processes used to develop the demand forecasts including: (1) a list of all variables and model forms that were tested in developing each forecast model; (2) a discussion of the reasons that any tested variable or model form was not included in the final forecast models; (3) an analysis of the "goodness of fit" of the final forecast models and comparison to other tested models; (4) a discussion of the reasonableness of Northern's forecast including the reasonableness of assumptions relating to expected changes in use per customer and changes in regional and national economic growth over the planning period.

Natural gas demand for company use will be added to the demand forecast based on historical data, with adjustments to reflect changes in Company use. In addition, since the customer segment forecasts will be based on metered demand at customer premises, the demand

forecast will be grossed-up for lost and unaccounted for gas to obtain the equivalent city-gate sendout requirement. The demand forecast will be reduced by the amount of incremental energy savings from approved DSM programs implemented during the planning period. Finally, the billing month demand forecast will be converted to calendar months.

The forecast shall be a rigorous analysis based on sound application of statistical and economic principles and approaches that is described in detail in the filing.

Nothing in this document prohibits Northern or other settling parties from developing additional “alternative” forecasts and explaining why the use of that “alternative” forecast is preferable to the use of the one prescribed above.



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