

ATTACHMENT A

Contents of 2014 IRP

A.1. Demand Forecasts

Northern shall submit separate base case design day demand and annual demand forecasts for its firm sales service and transportation-only customers based on the methodology summarized in Attachment B. As a comparative reference, Northern shall provide the historical actual peak day sendout, noting the actual 24-hour effective degree day total and the date of the peak day occurrence. The annual demand forecast will be developed using both normal and design weather conditions. The demand forecasts will include Northern's projected growth numbers and Northern will identify and explain any notable deviations from historical growth trends reflected in its demand forecasts. Finally, Northern will discuss the predictive ability of its demand forecast models.

A.2. Planning Standards

Northern's design day and design year planning standards shall be based on statistical analyses of an updated set of weather data.

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 using actual degree day data from the coldest 10-day stretch embedded within a December-February period in Northern's most recent 30-year historical weather data).

A.3. Current Portfolio

Northern shall describe the existing resources that comprise its current portfolio, as described below. Resource descriptions in the 2014 IRP narrative will be organized by resource

path and will identify each pipeline segment in each path, from the supply source to supply destination, as applicable. Resource path narratives will describe Northern's current strategies, including information on supply source (market region, liquid or illiquid price point, etc.), whether or not the resource is primarily used as a base load supply, for daily balancing or as peaking supply, and Northern's current method of assigning the resource to delivery service customers subject to capacity assignment as a company managed resource or a capacity release.

A.4. Resource Balance

Northern shall provide information showing the difference between projected design day demand and the peak-day resource capacity based on existing contracts during the planning period, known as the "Resource Balance." In addition, Northern shall provide information showing the difference between projected annual demand based on both normal and design weather conditions and annual supply capability based on existing contracts during the planning period. The Resource Balance information will be provided in both tabular and graphical form with all resources organized by resource path, consistent with the resource descriptions described in Section A.3.

A.5. Incremental Supply Resources

Northern shall identify reasonably available supply resource options that are capable of meeting any portfolio shortfall identified in the projected resource balance over the planning period, including the renewal of existing contracts scheduled to expire during the planning period. Northern will describe incremental supply resources in a manner similar to the descriptions of existing resources provided in the Current Portfolio and Resource Balance section. Specifically, as applicable, the descriptions will be organized by resource path and will identify each pipeline segment from the supply source to supply destination. Resource path

narratives will describe Northern's expectations, including information on supply source (market region, liquid or illiquid price point, etc.), whether or not the resource would be primarily used as a base load supply, for daily balancing or as peaking supply, and Northern's expected method of assigning the resource to delivery service customers subject to capacity assignment as a company managed resource or a capacity release.

A.6. Preferred Portfolio

Northern will identify the combination of existing and incremental resources that meets forecasted loads over the planning period (on a design day and design year basis) at the lowest reasonable cost, known as the "Preferred Portfolio." The methods that Northern uses to evaluate available resource options shall be described in full in the 2014 IRP along with the conclusions drawn. The description of the preferred portfolio will include 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.¹ The preferred portfolio will be provided in both tabular and graphical form. Lastly, Northern shall discuss the flexibility inherent in its resource planning process, including its approach to acquiring additional resources or releasing contracted resources in the event that actual customer demand is greater than or less than projected needs in the short or long term, and the implications for lowest cost resource procurement.

¹ To the extent such information is available 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 2014 IRP.

Attachment B
Demand Forecast Methodology

The demand forecast that Northern prepares for the 2014 IRP shall consist of separate design day and annual demand forecasts for the Maine and New Hampshire Divisions, and a total Northern demand forecast (the sum of the Maine and New Hampshire Divisions' combined forecast results).

The separate annual demand forecasts for the Maine and New Hampshire Divisions shall be 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. Additionally, Northern’s forecasts should segregate unbundled transportation customer volumes from bundled sales service volumes. The unbundled transportation data should be further segregated into capacity assigned and capacity exempt categories for each division.

The forecast model data will be obtained from Northern’s historical records and/or from commercial vendors. To allow the Parties to assess the reasonableness of Northern’s demand forecasts, the 2014 IRP will include detailed information on the processes used to develop the demand forecasts including: (1) a detailed description of the process used and the statistic output provided; (2) a list of all variables that were tested in developing each forecast model; (3) statistical output that demonstrates the “goodness of fit” of the final forecast models; and (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 known or expected changes in company use. In addition, since the customer segment forecasts will be based on metered demand at customer premises, while total Northern system sendout requirement is measured at pipeline city gates and at on-site peak shaving facilities, the demand forecast will be grossed-up for lost and unaccounted for gas volumes in order to project total system sendout requirements. The demand forecast may also include other load adjustments that, for reasons to be explained by Northern, the normal forecast methodology does not capture. The demand forecast will be reduced by the amount of incremental energy savings known to Northern from approved DSM programs expected to be in operation during the planning period. Finally, Northern will provide a description of and supporting schedules that reconcile the billing month demand forecast to the calendar month demand forecast.

The use per customer components of the annual demand forecast will contain weather variables to which normal expected weather data will be applied to determine the normal weather forecast. Design weather data will be applied to determine the design weather forecast.

The design day demand forecast models will be estimated using total system level data (not distinguishable by customer segments). The design day demand forecasts will be based on design daily weather conditions, calculated using Northern's most recent 30 year historical weather data.

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 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.

(End of document.)