

Ex. H-34

2011

NSUARB-NG-HG-R-11

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF AN APPLICATION BY HERITAGE GAS LIMITED FOR  
APPROVAL OF AMENDMENTS TO ITS SCHEDULE OF RATES, TOLLS AND  
CHARGES, PURSUANT TO SECTION 21 OF THE GAS DISTRIBUTION ACT

ADDITIONAL EVIDENCE

OF

J. RICHARD HORNBY  
SYNAPSE ENERGY ECONOMICS, INC.

ON BEHALF OF BOARD COUNSEL

**RECEIVED**  
MAY 22 2012  
Nova Scotia  
Utility and Review Board

MAY 22, 2012

## **A. INTRODUCTION**

**Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.**

A. My name is J. Richard Hornby. I am a Senior Consultant at Synapse Energy Economics, 485 Massachusetts Avenue, Cambridge, MA 02139.

**Q. ARE YOU THE SAME J. RICHARD HORNBY WHO SUBMITTED DIRECT EVIDENCE IN THIS PROCEEDING.**

A. Yes.

**Q. WHAT IS THE PURPOSE OF YOUR ADDITIONAL EVIDENCE IN THIS PHASE OF THE PROCEEDING?**

A. The Board decision of November 24, 2011 approved a settlement agreement (the "Agreement") between Heritage Gas Limited ("Heritage" or the "Company"), the Consumer Advocate and Dalhousie resolving a number of issues in this proceeding. The purpose of my additional evidence is to address two issues that were not resolved in the Agreement but were instead set for further consideration in this phase of the proceeding. Those two issues, as labeled in the Amended Final Issues List, are 2. Cost of Service Study (COSS) and Rate Design and 3. Mains Classification.

My additional evidence first addresses the rate classes that Heritage has used in its COSS and then addresses the Company's classification and allocation of distribution mains related costs in its COSS. This additional evidence refers to, and builds upon, the Direct Evidence

filed by Heritage and its COSS consultant Chymko Consulting Limited (“Chymko”), my Direct Evidence and the Rebuttal Evidence of Heritage and Chymko.

## **B. RATE CLASSES USED IN COSS**

### **Q. WHY ARE THE RATE CLASSES THE COMPANY USED IN ITS COSS AN ISSUE IN THIS PROCEEDING?**

A. The rate classes the Company used in its COSS are an issue because the Company is proposing to continue providing service to customers with annual usage of up to 5,000 GJ under a single rate class, Rate 1, rather than create a separate rate class for residential customers.

### **Q. PLEASE SUMMARIZE THE BACKGROUND TO THIS ISSUE.**

A. In its Order in NSUARB-NG-HG-R-08 the Board required Heritage to consider, as a rate making alternative, “Residential customers consuming up to 150 GJ per year as a separate rate class” as well as a change in the consumption boundary between Rate Class1 and Rate Class 2 (HG filing, 16-3). In its Direct Evidence the Company states that Chymko examined the alternative of creating a separate rate class for residential customers (HG filing, 16-10) and recommended that Heritage not make any change to its existing rate classes at this time (HG filing, 16-47). The Company agreed with the Chymko recommendation (HG filing, 16-11).

My Direct Evidence examined this issue, concluded that continuing service to customers with annual usage of up to 5,000 GJ under a single rate class was not reasonable and recommended that Heritage replace its existing Rate 1 class with two new rate classes, one that will accommodate all residential customers with an upper annual threshold usage of 200 GJ for example, and one for non-residential customers with annual usage of up to 5,000 GJ.

**Q. DID HERITAGE HAVE YOUR RESPONSE TO ITS INFORMATION REQUEST ON THIS ISSUE WHEN IT PREPARED ITS REBUTTAL?**

A. Yes. In response to Heritage Gas ("HG") IR-1, I answered Company questions regarding various potential barriers to the creation of a separate rate class for residential customers at this time. The potential barriers identified in IR-1 included:

- a definition of "residential" customer for inclusion in Heritage Gas's approved tariff and terms and conditions of service,
- a process for auditing and verifying that all distribution sites considered "residential" continue to satisfy all conditions and requirements of "residential" status,
- ongoing administrative cost and costs related to revising the Heritage Gas billing system, and /or
- the possibility of Rate 1A rates being considered unduly discriminatory.

**Q. DID HERITAGE ADDRESS YOUR DIRECT EVIDENCE ON THIS ISSUE IN ITS REBUTTAL?**

A. No. Heritage did not address my recommendation in its Rebuttal Evidence. As a result, it is not clear whether Heritage remains opposed to the creation of a separate rate class for residential customers in this proceeding and, if so, on what grounds.

**Q. HAVE YOU FOUND EVIDENCE THAT HERITAGE DISTINGUISHES BETWEEN RATE 1 RESIDENTIAL CUSTOMERS USING LESS THAN 200 GJ AND ITS REMAINING RATE 1 CUSTOMERS IN OTHER ASPECTS OF ITS OPERATIONS?**

A. Yes. Heritage uses different types of meters for Rate 1 customers using less than 200 GJ and Rate 1 customers using more than 200 GJ. According to NSUARB-CA-IR-51 a, the Company installs an AC250TC meter for residential and small commercial customers with annual loads up to 200 GJ and a different meter for small to medium commercial customers with annual loads up to 900 GJ. In addition, Heritage currently analyzes the competitive position of “residential” customers separately from the competitive position of its remaining R1 customers (NSUARB-Synapse Energy-IR-2 d).

**Q. HAS THE COMPANY DEVELOPED OR PROVIDED ANY NEW EVIDENCE OR ANALYSIS ON THESE ISSUES SINCE THE INITIAL PHASE OF THIS PROCEEDING?**

A. No. The Company did not provide any new or updated evidence on this issue in response to NSUARB Synapse Energy IR-24 f or g.

**Q. DID YOUR DIRECT EVIDENCE DEMONSTRATE THAT HERITAGE WAS NOT RECOVERING ITS FULL COSTS OF CONNECTING RESIDENTIAL CUSTOMERS WITH ANNUAL USE LESS THAN 60 GJ?**

A. Yes. My Direct Evidence explained, on page 18, that the Heritage rates in effect in 2011 were not recovering the full cost it incurred to connect customers with annual use less than 60 GJ to its system. Based upon that conclusion I recommended that the Company periodically provide the Board documentation to verify that it is applying the economic analysis and special charges specified in sections 3.1.4 and 3.3 of its distribution service rules in response to every request for connection; and that it develop a proposal for increasing the rates of existing customers using less than 100 GJ/year over time that will move their revenue to cost ('R/C') ratio closer to 1 while avoiding rate shock.

**Q. DID HERITAGE ADDRESS YOUR DIRECT EVIDENCE ON THAT ISSUE IN ITS REBUTTAL EVIDENCE?**

A. No.

**Q. DID HERITAGE HAVE YOUR RESPONSE TO ITS INFORMATION REQUEST ON THIS ISSUE WHEN IT PREPARED ITS REBUTTAL?**

A. Yes. In response to HG IR-2, I answered several Company questions regarding various recovery of costs from customers using less than 50 GJ per year.

**Q. SHOULD THE BOARD REQUIRE HERITAGE TO BEAR ANY ADVERSE FINANCIAL CONSEQUENCES OF ITS DECISION TO CONNECT CUSTOMERS FROM WHOM IT DOES NOT RECOVER THE FULL CONNECTION COSTS?**

A. Yes. As I noted in my Direct Evidence, my understanding is that the Company has the authority, under provision 3.1.4 of its *Distribution Service Rules*, to not connect a customer if it determines the economic benefits will not justify the costs. In addition, the Company has the authority, under section 3.3 of its *Distribution Service Rules*, to ask a prospective residential customer for a contribution towards the cost of the service line if that prospective customer does not plan to use gas for space heating and water heating. Therefore, the Company has the responsibility to exercise that authority before agreeing to connect prospective customers, particularly customers using less than 50 GJ per year. Thus, the Company should absorb any losses it incurs from failing to exercise that authority by connecting customers from whom it does not recover those costs.

**C. CLASSIFICATION OF DISTRIBUTION MAIN COSTS**

**Q. WHY IS THE CLASSIFICATION OF DISTRIBUTION MAIN COSTS AN ISSUE IN THIS PROCEEDING?**

A. The classification of distribution main costs is an issue in this proceeding for two reasons. First, they are a dominant component of the Company's revenue requirements. Second, as joint and common costs there is no generally accepted method for classifying and allocating those costs among rate classes.

**Q. PLEASE SUMMARIZE THE BACKGROUND TO THIS ISSUE.**

A. In its Order in NSUARB-NG-HG-R-08 the Board required Heritage to prepare a study examining how other utilities classify distribution mains. In its application Heritage presented a study of distribution main classification prepared by Chymko (HG application, page 16-117). Chymko chose to limit its study to nine Canadian utilities (HG application, page 16-137 to 16-140). The Chymko study found:

- there are a number of possible methods to classify distribution mains, each with its own theoretical and practical constraints. (HG application, page 16-120),
- there is no clear and indisputably superior method for classifying mains (HG application, page 16-120),
- each of the nine Canadian utilities it reviewed use some form of minimum system method (HG application, Table 5, page 16-137), and
- a frequently quoted text on rate regulation, "Principles of Public Utility Rates", does not support use of the minimum system method because once a utility's distribution mains have been



installed and the distribution mains costs have been incurred, connecting a new customer does not “cause” the utility to incur any additional distribution main cost (HG Application page 16-123).

Based upon the results of that study, Chymko used a minimum system method to classify the Heritage distribution mains as 54 percent site related, i.e. customer connection related, and 46 percent as demand related.

My Direct Evidence presented empirical evidence demonstrating that Heritage’s decisions to incur distribution main costs are “caused” or driven by the annual energy use of prospective customers and the revenues it expects to recover from those customers rather than by the number of customers it expects to connect. Based on that evidence, and my experience with the approaches that various U.S. utilities have used to classify distribution mains, I recommended that distribution main be classified using a peak and average method. Under that approach 54 percent of distribution main costs would be classified and allocated on an energy basis and 46 percent on a demand basis.

**Q. DID HERITAGE HAVE YOUR RESPONSE TO ITS INFORMATION REQUEST ON THIS ISSUE WHEN IT PREPARED ITS REBUTTAL?**

A. Yes. In response to HG IR-3, I answered several Company questions regarding the classification of distribution main costs using a peak and average method. In response I provided my testimony on this approach in six other proceedings (IR-3 Attachment 3) as well filings of experts in 11

other proceedings who have classified distribution mains using either a peak and average, peak or average and excess method.

**Q. DID THE COMPANYS REBUTTAL EVIDENCE CHALLENGE YOUR DOCUMENTATION OF CASES IN WHICH REGULATORS HAVE ACCEPTED THE CLASSIFICATION OF DISTRIBUTION MAINS ON METHODS OTHER THAN THE MINIMUM SYSTEM?**

A. No.

**Q. DID THE COMPANYS REBUTTAL EVIDENCE CHALLENGE YOUR RATIONALE FOR CLASSIFYING DISTRIBUTION MAINS AS PARTIALLY ENERGY RELATED AND PARTIALLY DEMAND RELATED?**

A. Yes. In the Rebuttal Evidence, at page 22 of 94, Chymko challenges my rationale for classifying a portion of distribution main costs as partially energy related on the grounds that "...once Heritage Gas decides to expand the distribution system, the cost of designing, constructing, owning and operating distribution facilities does not meaningfully change with revenue or annual energy use."

The Chymko rebuttal misses the point. First, my position is based not how costs change after the Company makes its investment decision. Instead it is based upon the factors that "cause" the Company to make that investment decision. Second, their rebuttal statement does not support their proposed classification of 54 percent of distribution main costs as customer related. All things being equal, once Heritage has

installed a distribution main to serve a new area, its cost of designing, constructing, owning and operating a specific distribution main does not meaningfully change if it connects more customers to that main (HG application, paragraph 114 page 16-59).

**Q. HAS THE COMPANY DEVELOPED OR PROVIDED ANY NEW EVIDENCE OR ANALYSIS ON THIS ISSUE SINCE THE INITIAL PHASE OF THIS PROCEEDING?**

A. No. The Company did not provide any new or updated evidence on this issue in response to NSUARB Synapse Energy IR-24 c, d, h, l, k or m.

**Q. DOES THIS CONCLUDE YOUR ADDITIONAL EVIDENCE?**

A. Yes.