

## **2000 Demand Side Management Report**

**2000  
Demand Side  
Management  
Report**

**June 29, 2001**

## TABLE OF CONTENTS

<b>I.</b>	<b>Background</b> .....	1
<b>II.</b>	<b>2000 DSM Activities</b> .....	1
	Customer Energy Services and Programs .....	1
	Load Shape Programs.....	3
<b>III.</b>	<b>2000 DSM Costs</b> .....	4
<b>IV.</b>	<b>Summary and Outlook</b> .....	5

## I. Background

In Order No. P. U. 1 (1990), the Board of Commissioners of Public Utilities (the “Board”) ordered Newfoundland Power Inc. (the “Company”) to file annually a progress report of its Demand Side Management (DSM) activities. In Order No. P.U. 7 (1996-97), the Board expanded on the reporting requirement, stating: *“The Applicant shall continue to file DSM progress reports annually, indicating the validity of individual programs and documenting their impact on conservation, valley filling, peak shifting, peak clipping and strategic load growth; their impact on minimizing customer rates; and their impact on next generation planning.”*

This report provides an overview of the Company’s DSM activities during 2000. It includes a description of the various activities, together with the results and associated costs. Where applicable, the costs and benefits of the programs are analyzed from the perspectives of participants, non-participants and total resources.

## II. 2000 DSM Activities

The intent of DSM programs is to manage the demand side use of electrical energy in order to minimize electricity rates. However, because of the size and isolated nature of the Newfoundland electrical system, and its current dynamics as reflected in load forecasts and generation cost projections, larger scale DSM activities are unlikely to have a significant impact, either on load or on generation requirements. In this context, Newfoundland Power has focused its activities on programs that improve customer service and enhance the value customers receive from electricity. The current focus will be maintained unless circumstances warrant a change in direction.

The activities for 2000 are described below under the general categories of Customer Energy Services and Programs and Load Shape Programs.

### **Customer Energy Services and Programs**

The Customer Service Department provides assistance and information to customers on a variety of customer and energy related matters. These energy services and programs affect load shape either directly by influencing customers’ use of electricity, or indirectly by influencing the use of products that have the potential to affect load shape.

#### ***Energy Services and Programs:***

Activities under this heading include customer inquiries, financing, electric heating designs, and the Thermostat Rebate Program.

*Customer Inquiries:* The Company responds to customer inquiries on energy services and programs through its toll-free service. Where necessary, these inquiries are referred for Customer Service Specialist field visits and the involvement of participating trade allies. During 2000, Call Centre agents handled 4,782 inquiries regarding energy services and programs.

*Financing:* The Company offers financing to eligible customers for electric heating systems, heat recovery ventilation systems, insulation upgrades, electrical upgrades, high performance thermostats, and hot water tanks. A total of 1,416 loans were issued in 2000. Of this total, 1,037 loans were for hot water tanks, 362 for electric heat financing, and 17 for insulation upgrades.

*Electric Heat Design:* The Company provides electric heat designs to customers building new homes. These designs indicate appropriate sizing for heating systems and provide estimates of annual heating costs. The heating design reports also provide customers with recommendations on insulation levels. The Company completed 126 electric heat designs in 2000.

*Thermostat Rebate Program:* The Company offers a \$4 rebate on each purchase of a selected high performance thermostat under its Thermostat Rebate Program. The purpose is to increase the comfort and satisfaction of electric heat customers by encouraging customers to install quality thermostats that perform more accurately. The Company issued 1,479 such rebates in 2000.

***Customer Service Specialists:***

Customer Service Specialists are responsible for providing advice on energy issues, delivering safety and general consumer information, and assessing and settling customer damage claims.

Energy conservation continues to be an important issue for the Company's customers, and the Company considers the provision of information on this topic to be an essential component of good customer service. Information related to the optimal use of electricity is available from all employees performing customer service functions. In 2000, there were a total of 4,925 contacts by Customer Service Specialists. Of this total, 3,514 were contacts with residential customers. There were 1,411 such contacts with commercial customers.

***Energy Advertising:***

The Company advertises its many programs and services including the Equal Payment Plan (EPP), Pre-authorized Payment Plan (PAP), TVD (automated power outage information system), Energy Efficiency programs, Call Centre hours, and the services and information available on the Company's Internet website. The expense for advertising energy programs and services in 2000 was \$619.

Brochures explaining programs and services continue to be displayed at Company locations. These brochures are also distributed, along with other information, to customers building new homes.

## Load Shape Programs

Load Shape Programs improve the Company's load factor by reducing demand for energy during system peak periods. These programs have the potential of deferring capital expenditures and associated customer costs by making more effective use of the electrical system. Wrap Up For Savings and the Curtailable Service Option were the two DSM programs quantitatively measured as having an effect on load shape in 2000.

### *Wrap Up For Savings:*

This program is designed to improve energy efficiency, enhance the comfort level of customers living in electrically heated homes, and increase customer satisfaction with the value they are receiving from electricity. The program offers rebates to customers to upgrade insulation in basements, crawl spaces, and attics. Customer Service Specialists meet with customers to provide advice on insulation and how to properly upgrade existing insulation levels.

The load shape impacts of this program are conservation and peak clipping. Improved insulation and air sealing tend to reduce both demand and energy at the time of system peak and throughout the remainder of the heating season. The program also functions as a load retention mechanism, as increased customer satisfaction with electric heating will likely ensure continued customer usage of electric space heating.

In 2000, 80 projects were completed under the program. This resulted in an annual energy reduction of approximately 280,000 kWh and a peak load reduction of approximately 90 kW.

The costs and benefits of this program were analyzed from the perspective of participants, non-participants, and total resources. In 2000, the DSM program tests indicated benefit to cost ratios as follows:

Participants Test <sup>1</sup> :	3.27
Rate Impact Test <sup>2</sup> :	1.28
Total Resource Cost Test <sup>3</sup> :	3.50

---

<sup>1</sup> A *Participants Test* is used to determine if a DSM program minimizes the overall energy costs for users.

<sup>2</sup> A *Rate Impact Test* is used to determine whether the program minimizes rates for non-participants.

<sup>3</sup> A *Total Resource Cost Test* is used to determine if a DSM program minimizes the overall cost of supplying energy. As such, the Total Resource Cost Test is a test of the program's impact on generation planning.

***Curtable Service Option:***

The Curtable Service Option provides an incentive to large customers to reduce electrical demand during system peak. The option is available to general service customers who can curtail load by at least 330 kVA. Participants who curtail their load at the request of the Company receive an annual credit on their electric bills at the end of the winter season.

This project has a peak clipping impact on the load shape. Results for the 1999-2000 winter heating season were submitted to the Board in the *2000 Curtable Service Option Report*, dated April 26, 2000. Fourteen general service customers participated in the Curtable Service Option in the 1999-2000 winter heating season. As a result of unseasonably mild weather, customers were only asked to curtail on one occasion. This option provided between 6 and 7 MW of curtable load to the Company. The actual level of curtable load realized for any one curtailment request depends on both the number of successful customer curtailments for each request, and the coincidence of curtable customers' peak energy usage with the time of the curtailment request.

### III. 2000 DSM Costs

The following table summarizes the costs associated with the various activities classified as DSM activities in 2000.

#### 2000 Costs

	<b>Total</b>
<b>Customer Energy Services and Programs</b>	
Energy Services and Programs	\$160,090
Energy Advertising	619
<b>Load Shape Improvements</b>	
Wrap Up for Savings	12,436
Curtable Service Option	189,305
<b>DSM Research Projects</b>	0
<b>Total DSM Costs</b>	<b>\$362,450</b>

#### **IV. Summary And Outlook**

In 2000, the Company's DSM activities continued to focus on improving customer service and enhancing the value customers receive from electrical energy. Customer participation in the Wrap Up for Savings Program and the Curtailable Service Option continues to provide load shape improvements. Other DSM activities undertaken by the Company during 2000 did not have a measurable impact on generation planning. However, the availability of customer energy services and programs will enhance the value customers receive from electricity and contribute indirectly to minimizing the cost of generation over the long term.

In 2001, the Company will continue to facilitate the optimal use of electricity by customers through its customer energy services and programs. These programs are designed to maximize the value of electrical energy by ensuring customers use electricity efficiently and wisely. The Company will also continue with its Wrap Up For Savings and Curtailable Service Option.

It is the intent of the Company that all customers benefit from the Company's DSM activities either directly as participants, indirectly as non-participants or through improved customer service. The focus of DSM activities will continue to be influenced by load forecasts and generation cost projections. DSM initiatives will be assessed on an ongoing basis to ensure they meet the needs of the Company's customers.