Q. Please provide copies of any studies on demand-side management which the Company has undertaken for the period 1998 to the present.

A. The Company has not completed any specific demand-side management studies during the period 1998 to the present.

The Company does complete a summary report of its annual demand-side management activities for submission to the Public Utilities Board. Attached are copies of these reports for the years 1998 to 2001 inclusive (Attachments A through D).

CA-57
Attachment A

1998 Demand Side Management Report

June 28, 1999

TABLE OF CONTENTS

I. Background 1

II. 1998 DSM Activities 1

Customer Energy Services and Programs 1
Load Shape Programs 3
DSM Research Projects 4

III. 1998 DSM Costs 5

IV. Summary and Outlook 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 DSM 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 1998. 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. 1998 DSM Activities

The intent of DSM programs is to manage the demand side use of electrical energy in order to minimize electricity rates. However, the primary focus for 1998 of many of the programs traditionally classified as DSM programs continued to be on improving customer service and enhancing the value customers receive from electrical energy. The activities for 1998 are described below under the general categories of Customer Energy Services and Programs, Load Shape Programs, and DSM Research Projects.

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 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.

***Power Smart Programs*:**
Activities under this heading include customer inquiries, financing, electric heating designs, and the Thermostat Rebate Program.

Customer Inquiries: The Company answered customer inquiries on energy efficiency and Power Smart programs through its toll-free service. Where necessary, these services were provided in conjunction with Energy Consultant field visits and the involvement of participating trade allies. In addition to the inquiries handled by Call Centre agents, approximately 6,900 calls were referred to Power Smart Representatives during 1998.

Financing: The Company provided financing to eligible customers for electric heating systems, heat recovery ventilation systems, electrical upgrades, high performance thermostats, and hot water tanks. A total of 1,600 loans were issued in 1998. These consisted of 943 loans for hot water tanks, 611 for electric heat financing, and 46 for insulation upgrades.

Electric Heat Design: The Company provided electric heat designs to customers building new homes. These designs indicate appropriate sizing for heating systems along with an estimate of annual heating costs. The heating design reports also provide customers with recommendations on insulation levels. The Company completed 234 electric heat designs in 1998.

Thermostat Rebate Program: The Company offered a $4 rebate on each purchase of selected high-accuracy thermostats under its Thermostat Rebate Program. The purpose is to increase the comfort and satisfaction of electric heat customers by encouraging customers to install highly accurate thermostats. There were 2,551 rebates issued in 1998.

***Energy Consultants*:**
The role of Energy Consultants at Newfoundland Power has evolved over the last two years. They are no longer focused on DSM, and are primarily considered to be customer service providers. This is reflected in the current position title, which was changed in early 1999 to "Customer Service Specialist". While Customer Service Specialists continue to be responsible for providing advice on energy issues, their role now includes such duties as delivery of safety and general consumer information, and the assessment and settlement of 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 element of good customer service. Information related to the wise use of electricity is now available from all employees performing customer service functions. The following is the breakdown for 1998 of Customer Service Specialist contacts by type:

	Residential	Commercial
Efficiency Improvements/ Customer Service	3,687 (88%)	1,375 (84%)
New Construction	347 (8%)	159 (10%)
Conversions	149 (4%)	95 (6%)
	4,183 (100%)	1,629 (100%)

***Energy Advertising*:**
The Company regularly advertises its programs and services including the Equal Payment Plan (EPP), Pre-authorized Payment Plan (PAP), TVD (automated power outage information system), Power Smart Energy Efficiency programs, Call Centre hours, and services and information available through the Company's website. The total 1998 expense for advertising programs and services was $23,867. It is estimated

that 15% of this amount was attributable to Power Smart programs and energy advertising. Brochures explaining programs and services continued to be displayed at Company locations. These brochures are also distributed along with other information provided 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 1998.

***Wrap Up For Savings*:**
This program is designed to improve energy efficiency, enhance the comfort level of 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 1998, 231 projects were completed under the program, resulting in an energy reduction of 810,000 kWh and a peak reduction of 250 kW.

The costs and benefits of this program were analyzed from the perspective of participants, non-participants, and total resources. In 1998, the DSM program tests indicated benefit to cost ratios as follows:

Participants Test[1] :	5.05
Rate Impact Test[2] :	1.03
Total Resource Cost Test[3] :	4.07

***Curtailable Service Option*:**

---

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

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

3 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.

The Curtailable Service Option provides an incentive to large commercial customers to reduce electrical demand during system peak. Large commercial customers are offered a credit on their electric bill for curtailing their load when requested to do so. 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 1997/1998 winter heating season were submitted to the Board in a report dated April 22, 1998, entitled *1998 Curtailable Service Option Report*. Nine commercial customers participated in the Curtailable Service Option in the 1997/1998 winter heating season and were asked to curtail on four occasions. This option provided between 5 MW and 6 MW of curtailable load to the Company. The actual results depend on both the number of successful curtailments for each request and the coincidence of the curtailable customer's peak energy usage with the Company's peak energy use.

DSM Research Projects

DSM research projects are conducted to test the costs and benefits of potential programs through the analysis of small-scale pilots or demonstration projects and to research customer acceptance of innovative products. While there were no new projects initiated in 1998, the Company continued to monitor a number of past projects.

In 1997, the Company installed load monitoring equipment on approximately 110 customer services. These services had a variety of heating systems installed, e.g. air-source heat pumps with electric resistance back-up, air-source heat pumps with propane backup, ground source heat pumps, electric baseboard systems, and oil-fired systems. In addition, the sample also included a number of R-2000 homes. The data collected from these recorders in 1997 and 1998 has been downloaded for analysis. Once the analysis has been completed, it will assist in determining the potential impact of these technologies on system load shape and assessing the potential for load retention, peak clipping, conservation and valley filling.

III. 1998 DSM Costs

The following table summarizes the costs associated with the various activities classified as DSM activities in 1998. The majority of those costs are associated with Customer Energy Services and Programs.

1998 Costs

	Total
Customer Energy Services and Programs	
Power Smart Programs	$243,442
Energy Advertising	3,580
Load Shape Improvements	
Wrap Up for Savings	37,971
Curtailable Service Option	122,737
DSM Research Projects	2,224
Total DSM Costs	**$409,954**
Customer Service Specialists	643,901
Total Costs	**$1,053,855**

The total cost of the Customer Service Specialists (formerly Energy Consultants) was $643,901 in 1998. However, due to the significant evolution of their role, only a portion of those costs is directly related to DSM activities. In order to avoid confusion, the Company intends to exclude the costs associated with Customer Service Specialists from future reporting on DSM activities.

IV. Summary And Outlook

In 1998, the Company continued its transition from a focus on traditional DSM activities in favour of improving customer service and enhancing the value customers receive from electrical energy. In future, the Company's reporting on DSM activities will be modified to reflect this change.

The Company continues to see load shape improvements from customer participation in the Wrap Up for Savings Program and the Curtailable Service Option. Other DSM activities undertaken by the Company during 1998 did not have a measurable impact on generation planning. However, a combination of energy packages and customer service offerings that adds value to customers will contribute indirectly to minimizing the cost of generation over the long term.

In 1999, 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. DSM activities will continue to be influenced by load forecasts, competitive pressures and generation cost projections. The Company will continuously reassess DSM initiatives to ensure they meet customer requirements.

CA-57
Attachment B

1999 Demand Side Management Report

June 29, 2000

TABLE OF CONTENTS

I. Background 1

II. 1999 DSM Activities 1

Customer Energy Services and Programs 1
Load Shape Programs 3
DSM Research Projects 4

III. 1999 DSM Costs 5

IV. Summary and Outlook 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 1999. 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. 1999 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, competitive pressures 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 refocused its activities during the last two years 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 1999 are described below under the general categories of Customer Energy Services and Programs, Load Shape Programs, and DSM Research Projects.

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 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.

***Power Smart Programs*:**
Activities under this heading include customer inquiries, financing, electric heating designs, and the Thermostat Rebate Program.

Customer Inquiries: The Company answered customer inquiries on energy efficiency and Power Smart programs through its toll-free service. Where necessary, these services were provided in conjunction with Customer Service Specialist field visits and the involvement of participating trade allies. In addition to the inquiries handled by Call Centre agents, approximately 4,677 calls were referred to Power Smart Representatives during 1999.

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 1,473 loans were issued in 1999. Of this total, 948 loans were for hot water tanks, 490 for electric heat financing, and 35 for insulation upgrades.

Electric Heat Design: The Company provided electric heat designs to customers building new homes. These designs indicate appropriate sizing for heating systems along with an estimate of annual heating costs. The heating design reports also provide customers with recommendations on insulation levels. The Company completed 129 electric heat designs in 1999.

Thermostat Rebate Program: The Company offered 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. There were 1,721 rebates issued in 1999.

***Customer Service Specialists*:**
Customer Service Specialists are responsible for providing advice on energy issues, delivery of safety and general consumer information, and the assessment and settlement of 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 wise use of electricity is available from all employees performing customer service functions. In 1999 there were a total of 4,510 contacts by Customer Service Specialists. Of this total, 3,542 contacts were with residential customers, while 968 were with commercial customers.

***Energy Advertising*:**
The Company regularly advertises its many programs and services including the Equal Payment Plan (EPP), Pre-authorized Payment Plan (PAP), TVD (automated power outage information system), Power Smart Energy Efficiency programs, Call Centre hours, and services and information available on the Company's Internet website. The total 1999 expense for advertising programs and services was $13,265. It is estimated that 15% of this amount was attributable to Power Smart programs and energy advertising. Brochures explaining programs and services continue to be displayed at Company locations. These brochures are also distributed along with other information provided 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 affect on load shape in 1999.

***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 1999, 150 projects were completed under the program, resulting in an energy reduction of 527,000 kWh and a peak reduction of 162 kW.

The costs and benefits of this program were analyzed from the perspective of participants, non-participants, and total resources. In 1999, the DSM program tests indicated benefit to cost ratios as follows:

Participants Test[1] :	3.76
Rate Impact Test[2] :	1.12
Total Resource Cost Test[3] :	3.54

***Curtailable Service Option*:**
The Curtailable 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 1998/1999 winter heating season were submitted to the Board in the *1999 Curtailable Service Option Report*, dated April 30, 1999. Fourteen commercial customers participated in the Curtailable Service Option in the 1998/1999 winter heating season. As a result of unseasonably warm weather customers were only asked to curtail on one occasion. This option provided between 6 MW and 7 MW of curtailable load to the Company. The actual results depend on both the number of successful curtailments for each request and the coincidence of the curtailable customer's peak energy usage with the Company's peak energy use.

DSM Research Projects

DSM research projects are conducted to test the costs and benefits of potential programs through the analysis of small-scale pilots or demonstration projects and to research customer acceptance of innovative products. In 1998, the Company collected data from a small number of load monitoring devices that had been deployed to assess the impact of various heating systems on load. While the data sample was not large enough to provide statistically-valid results, the analysis yielded conclusions that will enable the Company to provide better advice to customers on appropriate heating solutions.

There were no new projects initiated in 1999.

---

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

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

3 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.

III. 1999 DSM Costs

The following table summarizes the costs associated with the various activities classified as DSM activities in 1999.

1999 Costs

	Total
Customer Energy Services and Programs	
Power Smart Programs	$195,068
Energy Advertising	1,990
Load Shape Improvements	
Wrap Up for Savings	23,458
Curtailable Service Option	216,392
DSM Research Projects	0
Total DSM Costs	**$436,908**

IV. Summary And Outlook

In 1999, the Company's DSM activities continued to focus on improving customer service and enhancing the value customers receive from electrical energy. The Company continues to see load shape improvements from customer participation in the Wrap Up for Savings Program and the Curtailable Service Option. Other DSM activities undertaken by the Company during 1999 did not have a measurable impact on generation planning. However, a combination of energy packages and customer service offerings that adds value to customers will contribute indirectly to minimizing the cost of generation over the long term.

In 2000, 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, competitive pressures and generation cost projections. The Company will continuously reassess DSM initiatives to ensure they meet customer requirements.

CA-57
Attachment C

2000 Demand Side Management Report

June 29, 2001

TABLE OF CONTENTS

I. Background 1

II. 2000 DSM Activities 1

Customer Energy Services and Programs 1
Load Shape Programs 3

III. 2000 DSM Costs 4

IV. Summary and Outlook 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[1] :	3.27
Rate Impact Test[2] :	1.28
Total Resource Cost Test[3] :	3.50

[1] A *Participants Test* is used to determine if a DSM program minimizes the overall energy costs for users.

[2] A *Rate Impact Test* is used to determine whether the program minimizes rates for non-participants.

[3] 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.

***Curtailable Service Option*:**
The Curtailable 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 Curtailable Service Option Report*, dated April 26, 2000. Fourteen general service customers participated in the Curtailable 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 curtailable load to the Company. The actual level of curtailable load realized for any one curtailment request depends on both the number of successful customer curtailments for each request, and the coincidence of curtailable 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

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

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.

CA-57
Attachment D

2001 Demand Side Management Report

June 25, 2002

TABLE OF CONTENTS

I. Background 1

II. 2001 DSM Activities 1

Customer Energy Services and Programs 1
Load Shape Programs 3

III. 2001 DSM Costs 4

IV. Summary and Outlook 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 2001. It includes a description of these 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. 2001 DSM Activities

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

The activities for 2001 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 responding to 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 2001, Call Centre agents handled 7,104 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 2,062 loans were issued in 2001. Of this total, 1,622 loans were for hot water tanks, 429 for electric heat financing and 11 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 148 electric heat designs in 2001.

Thermostat Rebate Program: Under its Thermostat Rebate Program, the Company offers a $4 rebate on each purchase of a selected high performance thermostat. The purpose is to increase the comfort and satisfaction of electric heat customers by encouraging customers to install quality thermostats that perform more accurately. In 2001, the Company issued 2,461 such rebates.

***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.

The Company has also allied with the Conservation Corps of Newfoundland and Labrador, a non-profit organization that can provide homeowners with detailed household energy assessments. The Company assists the Conservation Corps generally with the promotion of their aims by making their promotional material available to customers at Company offices. In addition, Customer Service Specialists will, in appropriate cases, discuss with customers the benefits they may obtain from availing of the energy assessment services of the Conservation Corps.

In 2001, there were a total of 6,150 contacts by Customer Service Specialists. Of this total, 4,589 were contacts with residential customers. There were 1,561 such contacts with general service customers.

***Energy Advertising*:**
The Company advertises its many programs and services including the Equal Payment Plan (EPP), Pre-authorized Payment Plan (PAP), the Automated Power Outage Messaging system, Energy Efficiency programs, Call Centre hours, and the services and information available on the Company's Internet website. The expense for advertising Energy Efficiency programs in 2001 was $586.

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 2001.

***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 2001, 155 projects were completed under the program. This resulted in an annual energy reduction of approximately 540,000 kWh and a peak load reduction of approximately 170 kW.

The costs and benefits of this program were analyzed from the perspective of participants, non-participants and total resources. In 2001, the DSM program tests indicated benefit to cost ratios as follows:

Participants Test[1] :	4.99
Rate Impact Test[2] :	1.16
Total Resource Cost Test[3] :	4.82

***Curtailable Service Option*:**
The Curtailable Service Option (the "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.

The Option has a peak clipping impact on the load shape. Results for the 2000-2001 winter heating season were submitted to the Board in the *2001 Curtailable Service Option Report*, dated April 27, 2001. Thirteen general service customers participated in the Option in the 2000-2001 winter heating season. The Option provides the Company with 5 to 6 MW of potential curtailable load. Customers were asked to curtail on two occasions during the 2000-2001 winter season. The actual level of curtailable load realized for any one curtailment request depends on both the number of successful customer curtailments for each request, and the coincidence of curtailable customers' peak energy usage with the time of the curtailment request.

III. 2001 DSM Costs

The following table summarizes the costs associated with the various activities classified as DSM activities in 2001.

2001 Costs

	Total
Customer Energy Services and Programs	
Energy Services and Programs	$151,255
Energy Advertising	586

[1] A *Participants Test* is used to determine if a DSM program minimizes the overall energy costs for users.

[2] A *Rate Impact Test* is used to determine whether the program minimizes rates for non-participants.

[3] 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.

Load Shape Improvements	
Wrap Up For Savings	15,173
Curtailable Service Option	160,336
Total DSM Costs	**$327,350**

IV. Summary And Outlook

In 2001, 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. While the other DSM activities undertaken by the Company during 2001 (i.e. customer energy services and programs) did not have a measurable impact on generation planning, they enhance the value customers receive from electricity and contribute indirectly to minimizing the cost of generation over the long term.

Through its customer energy services and programs, the Company will continue in 2002 to facilitate the optimal use of electricity by customers. By assisting customers in the wise and efficient use of electricity, these programs maximize the value of electrical energy. 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.