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1996 General Rate Proceeding

NP-32

Industry Research Services Inc.

Newfoundland Power
Bi-Monthly Meter Reading Survey

August 31, 1995

IRS

Newfoundland Power

Bi-Monthly Meter Reading Survey

Prepared for:

Newfoundland Power

Energy Management Department

Prepared by:

Industry Research Services Inc.

August 31, 1995

Table of Contents

Executive Summary

On August 7, 1995 Industry Research Services Inc. was commissioned by the Energy Management Department of Newfoundland Power to conduct a telephone survey of 800 households across the Newfoundland Power service area to with the primary purpose of measuring the attitudes towards and acceptance of the bi-monthly meter reading policy. The survey was conducted between August 11, 1995 and August 21, 1994 and gathered information from 792 households in a general sample taken from the Newfoundland Power service area

The results indicate the following:

1. The bi-monthly meter reading policy is maintained its previous level of satisfaction among general public. Some people viewed it as a legitimate means of saving money, however others felt the high level of fluctuation in billing is very inconvenient. Most of the opposition to the policy arose from the inaccuracy of the meter reading and estimating.
2. Most people who were dissatisfied with the bi-monthly meter reading policy were displeased because the estimate was too high, not too low.
3. Although there is a significant level of dissatisfaction with the bi-monthly meter reading policy, most of it is not of a material nature. The majority of respondents who were not satisfied with the policy were not willing to expend additional money to rectify the situation.

4. The Equalized Payment Plan is viewed as having a positive impact on the fluctuation problem experienced by many people. Using the EPP as a means of overcoming dissatisfaction with the bi-monthly meter reading process is recommended. A telemarketing campaing to promote the EPP, targeting all electric, high use and high fluctuation customers is recommended.

Introduction

On August 7, 1995 Industry Research Services Inc. was commissioned by the Energy Management Department of Newfoundland Power to conduct a telephone survey of 800 households across the Newfoundland Power service area to measure the attitudes towards and acceptance of the bi-monthly meter reading policy, and to gauge the awareness and acceptance of the Equalized Payment Plan.

The survey was conducted between August 11, 1995 and August 21, 1994 and gathered information from 792 households in a general sample taken from the Newfoundland Power service area, stratified according to population and gender. The interviews were conducted at all times during the day and evening, and on the weekend.

Results

Each of the questions in the survey will be investigated in turn, along with any significant relationship between the question and the demographic variables measured. Also, comparison will be drawn between the results of the current survey and those of the survey taken in June of 1994. All relationships were screened using Chi Square significance tests at a 95% confidence level. In addition Yates Correction Factors were applied where applicable in order to aid in the analysis. A full explanation of the statistical screening process is contained in the Methodology section of this report. A copy of the frequency responses is contained in Appendix A, and all crosstabulation tables and ANOVA results referenced in the report are contained in Appendix B.

Appendix C contains a verbatim copy of all non-coded questions in the survey. A copy of the questionnaire used to collect the information is contained in Appendix D.

1. Demographics

The demographic elements measured in the survey serve two important purposes: they allow for more in-depth analysis of the remainder of the survey, and they measure the representativeness of the sample. It is for this latter purpose the demographic variables will now be used. By measuring the results of demographic questions in the survey against known population parameters, we can better determine how closely the sample represents the true proportions of the population.

a. Region

The first demographic element measured in the survey was region. This element was controlled through stratified random sampling in order to ensure representativeness in this area. The results are shown in Figure 1. The largest response was from the St. John's area with 39% of the responses, followed by the

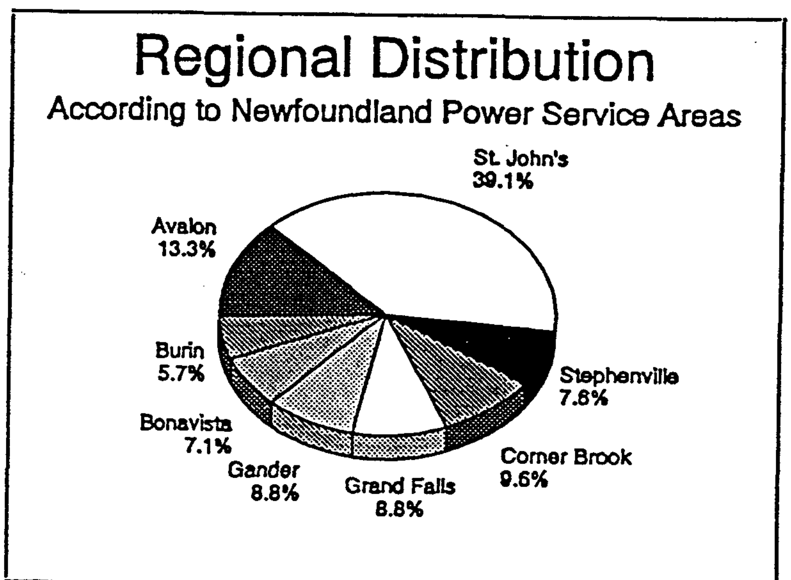

Figure 1

Avalon area with 13.3%. Burin was the smallest area in the survey with just under 6% of respondents. Due to the controlling mechanism employed during sampling, the proportionate representation from each area in the survey matches the proportion of customers in each of the Newfoundland Power service areas.

b. Income

Annual household income was the second demographic element measured in the survey. As shown in Figure 2, there were good response levels from all categories in the survey. The largest response came from the $20,000 to $39,999 group with 37.6% , followed by the Under $20,000 group with 24.7%. Overall there was a 78% response rate to this question, which was significantly higher than the response for this question in the June 1994 survey.

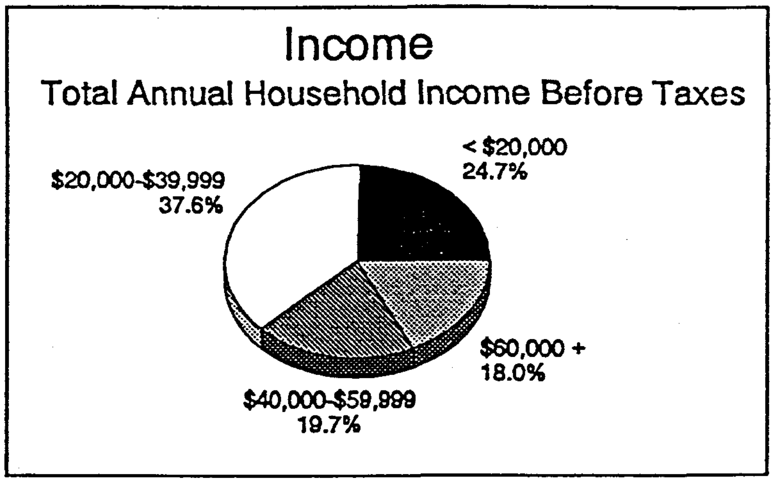

Figure 2

c. Gender

The next element measured in the survey was gender. The true proportion of males and females in the population is 48% and 52% respectively. Figure 3 shows the proportion of males and females in the survey. 48.9% of the respondents were male and 51.1% were female, which is a close approximation to the actual population. As with region, this element was controlled through a stratified random sampling technique. However, gender did not play a significant role in how people responded to most questions in the survey.

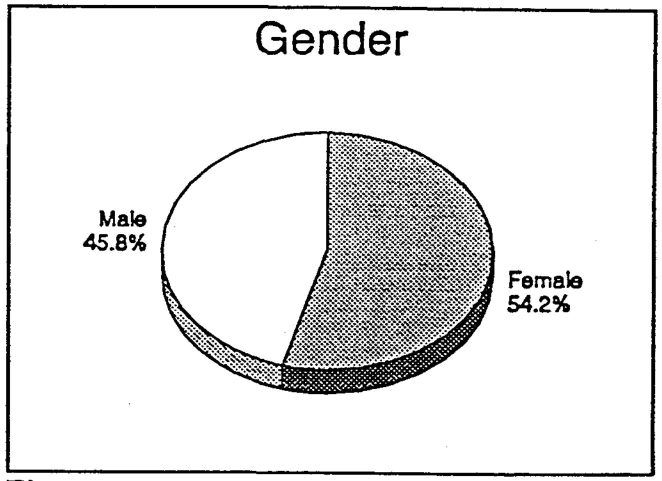

Figure 3

d. Family Size

Household size was also measured in the survey. Respondents were asked to indicate the approximate number of people currently living in their household. The average family size for the survey, as shown in Figure 4, was 3.22 which closely approximates the actual Newfoundland average of 3.2 people. This shows the survey does represent the population in the three key areas of region, gender and household size.

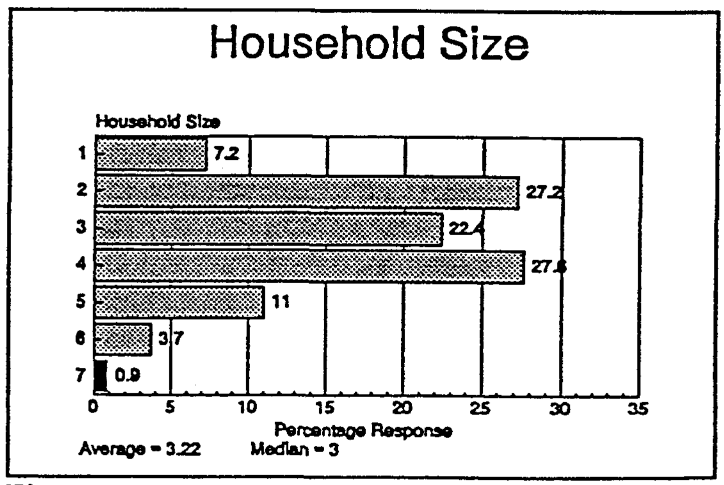

Figure 4

e. House Type

Another element measured was house type. Respondents were asked to indicate which type of home they lived in. As shown in Figure 5, the largest response was for detached houses with 82.4% of responses, followed by apartments at 11.1%. The response for this question was weighted slightly more towards single detached homes than was seen in the previous survey.

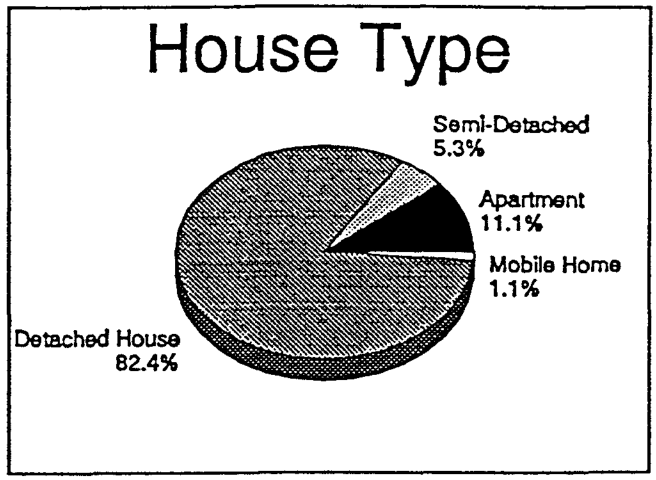

Figure 5

f. Main Fuel

The next demographic element measured in the survey was the main fuel used to heat the home. The results are shown in Figure 6. Electricity was the most common response at 51.3% with oil having the next highest response at 33.8%. This showed a marginal change in the proportion of electricity users as compared with the previous survey.

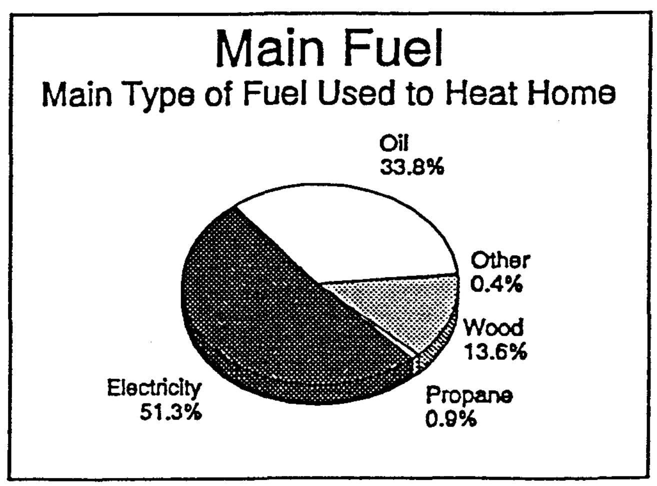

Figure 6

g. Education

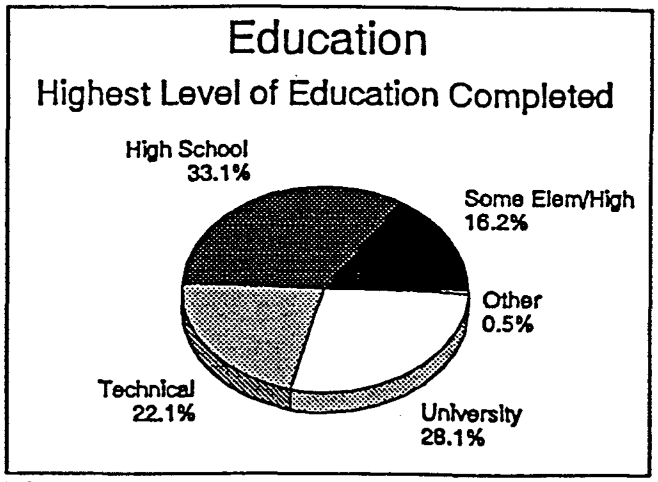

Figure 7

The last demographic variable measured was education. Respondents were asked to indicate the highest level of education they had completed. As shown in Figure 7, the High School category received the highest response rate at 33.1%. This was followed by University and Technical School / Community College at 28.1% and 22.1% respectively. The responses were fairly evenly distributed over all the categories.

From the demographic analysis it appears the sample does closely approximate the actual population in most regards. In addition, the responses to key demographic elements are similar to the responses seen in the previous survey, which would point to having a high level of confidence in any noted changes which may have occurred in the period of time between the two samples.

2. Service Companies

The first question in the survey asked respondents to indicate their general attitude towards four service companies. People were given five possible responses: very positive, positive, negative, very negative, and indifferent. Each of the attitudes will be viewed in turn.

a. The Telephone Company

As shown in Figure 8, just over 85% of respondents indicated they were pleased with the telephone company's service. 74.4% chose "positive" and another 12.3% responded with "very positive". The third highest response was "indifferent" with just under 10%. Approximately 5% indicated a negative attitude towards the company. This company received the lowest level of dissatisfaction of all companies measured in the survey. The responses to this question were consistent with those received in the previous survey.

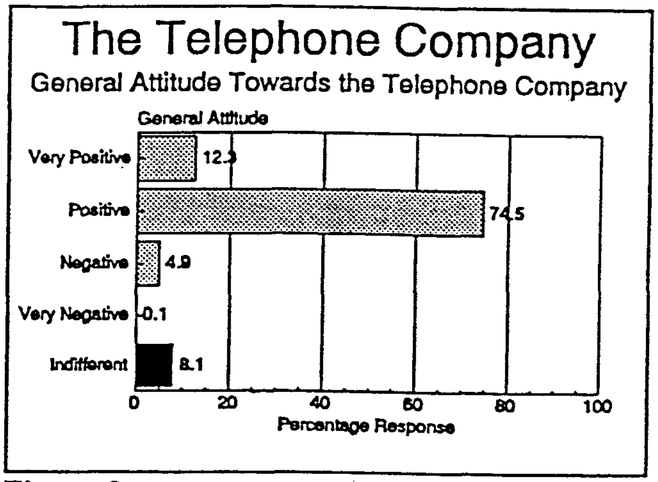

Figure 8

When the responses to this question were broken down according to demographic information there were four variables which were associated with how people responded. The first demographic variable was region with people in the Avalon and Bonavista regions having higher levels of "very positive" responses. Education was associated with the responses with the level of satisfaction with the service provided by the telephone company tending to decrease as education increased. The "very positive" response went from a low of 9.4% for people with a trades certificate to a high of 17.6% for people with some high school education. Income was also associated with the responses. In general, as the level of income increased so did the level of indifference to the telephone company. The final element was house type with people in mobile homes tending to have higher levels of "very positive" response than those in other types of dwellings.

b. The Cable Company

The cable company was the subject of the next rating question. As shown in Figure 9, approximately 59% of respondents had a positive attitude towards the cable company. This was followed by "indifferent" with 21.2% and "negative" with 17.5%. The lowest response rate was for "very negative" with 2.3%. In the previous survey this company had received the lowest level of satisfaction of all the companies measured in the survey. In the current survey it received the second lowest rating.

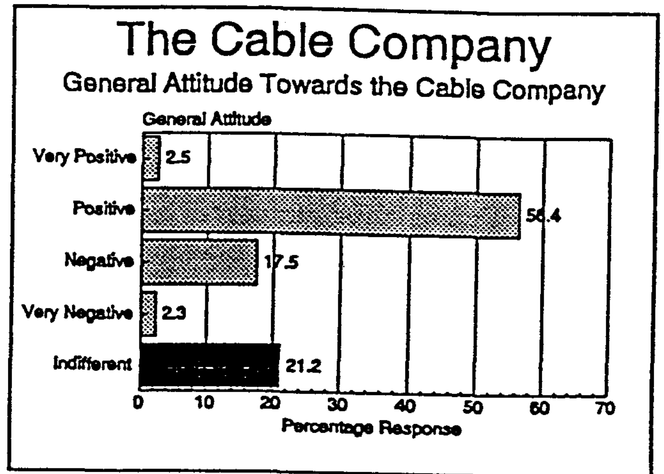

Figure 9

Only one element, region, was associated with responses to this question. People in the Stephenville and Grand Falls areas had higher levels of indifference to the cable company while people in the Corner Brook area tended to view the cable company more negatively than respondents from other areas.

c. The Electric Company

The most important rating in the survey was the rating given to the "electric company". It is important to note that the name "Newfoundland Power" was not used in the question. 73.9% of the responses to this question were in the "positive" category and another 4.8% were in the "very positive" category, as shown in Figure 10. The electric company received the second highest level of satisfaction of the four companies, behind only the telephone company. Only 1.7% of respondents replied "very negative". This was consistent with the result shown in the previous survey.

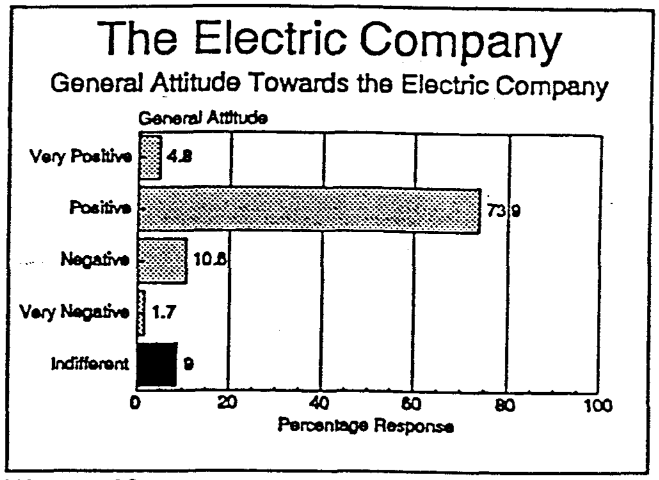

Figure 10

When broken down according to demographic information there were five elements which affected how people responded to this question. In general the following trends were noted:

- Region - People in the Grand Falls, Bonavista and Stephenville areas tended to have a more positive rating for the electric company than did those in other regions. People in the St. John's and Avalon areas tended to have lower ratings.
- Income - As income increased there was a decreased level of satisfaction with the service provided by the electric company and an increased level of indifference to the service.
- Education - As the level of education increased the level of "very positive" and "positive" responses tended to decrease.

- Household Size - People who were very positive or indifferent about the electric company tended to have larger average household sizes than those who in other response groups.
- House Type - People living in mobile homes tended to have a more positive view of the electric company then did their counterparts living in other types of dwellings.

d. The Oil or Gas Company

The final rating was for the oil or gas company. As shown in Figure 11, 44% of the responses were in the "positive" and "very positive" category. This company received the highest level of "indifferent" responses with 49.6%. This may be indicative of many in the population who do not use oil as a fuel source and therefore do not think about this service company. This high level of indifference was consistent with the findings of the previous measurement.

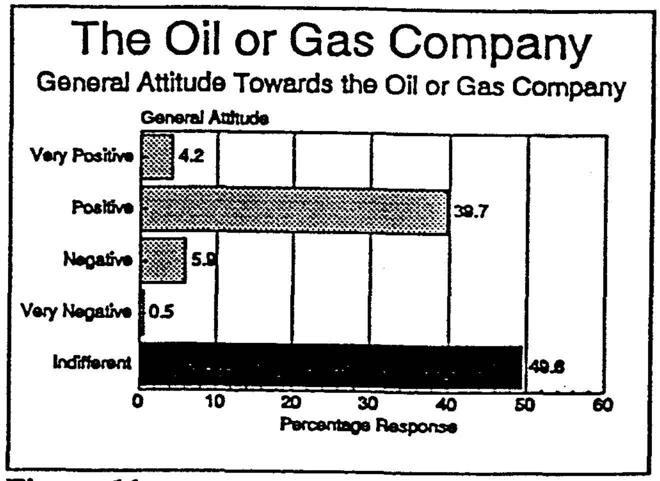

Figure 11

There were two demographic variables affecting how people responded to this question. People in apartments and semi-detached houses tended to have a higher level of indifference than people living in other types of homes. Main fuel type was also important with people using either oil or wood as their main fuel having a more positive rating of the oil company than those who used electricity. Electricity users tended to have a higher level of indifference.

3. Service Provided by Newfoundland Power

The rest of the questions in the survey asked respondents to think specifically of Newfoundland Power and the service Newfoundland Power provides. It is important to note that the term "service" was not defined in the survey in any way. It was meant to include everything from meter reading and billing to power interruptions and counter service.

a. Satisfaction Level

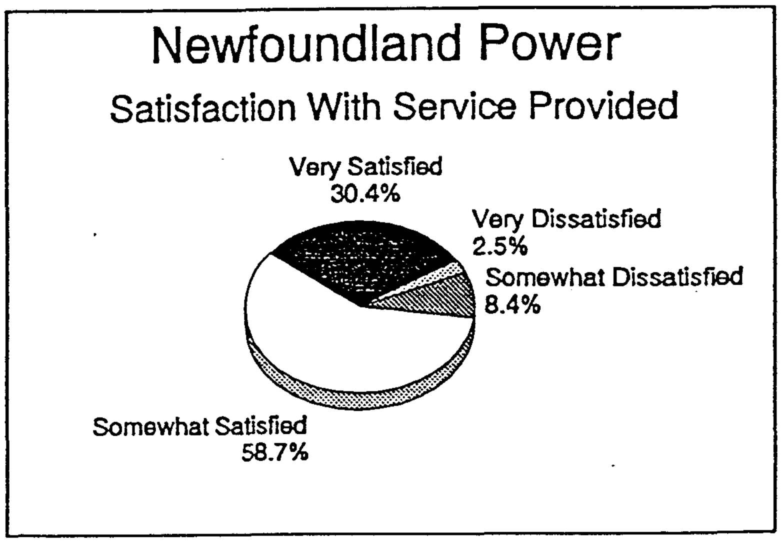

Figure 12

The first question in the second section of the survey asked respondents to identify how satisfied they were with the service provided by Newfoundland Power. Respondents were able to indicate they were either very satisfied, satisfied, dissatisfied or very dissatisfied. The responses are shown in Figure 12. Approximately 90% of respondents indicated they were either satisfied or very satisfied with the service Newfoundland Power provides. Only 2.5% indicated they were very dissatisfied with the service. This is very positive as it shows the majority of the public perceive the company to be providing a level of service that meets their needs. The results were consistent with the level of satisfaction shown in the June 1994 survey.

When broken down according to demographic information there were only two elements which played a role in how people responded to this question. Region was the first element. People in the St. John's and Avalon areas tended to have a higher level of dissatisfaction with Newfoundland Power's service than did people in other regions. 15.8% of respondents in the St. John's area and 14.3% of people in the Avalon area were either dissatisfied or very dissatisfied as compared to an average 7% in other regions.

The house type was the second element associated with how people responded to this question. People in apartments tended to have higher dissatisfaction levels than those living in other types of dwellings. The highest level of satisfaction came from those living in semi-detached homes where over 95% indicated they were either satisfied or very satisfied with the service provided by Newfoundland Power.

b. Main Reason for Dissatisfaction

As a follow-up question, people who indicated they were either somewhat dissatisfied or very dissatisfied with the service provided by Newfoundland Power were asked to indicate the main reason for their dissatisfaction. This question was unaided and the responses were categorized

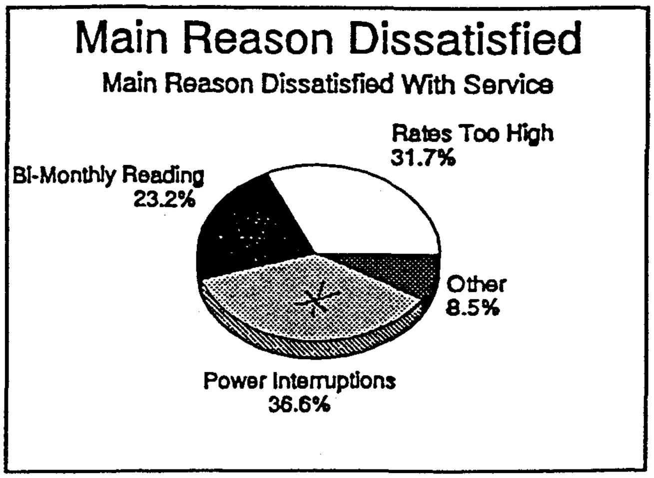

Figure 13

by the interviewers. As shown in Figure 13, only one-quarter of those dissatisfied stated that the bi-monthly meter reading policy was the main reason for their dissatisfaction. The highest response was for "power interruptions" with 36.6%. It should be noted that this measurement was taken while there were a number of significant power interruptions in the St. John's and Avalon areas, which would tend to skew the responses. Not withstanding this, the level of dissatisfaction shown with the bi-monthly meter reading process was down significantly from the previous survey where it received over 45% of responses. Due to the small sample size a demographic analysis of this question was not possible.

In addition to identifying why they were dissatisfied or very dissatisfied, respondents who indicated choices other than "rates too high" and "bi-monthly meter reading" were asked how they would improve Newfoundland Power's service. There were very few responses to this question, however most centred around upgrading equipment and adding more employees to handle emergencies.

4. Best Aspect of Service

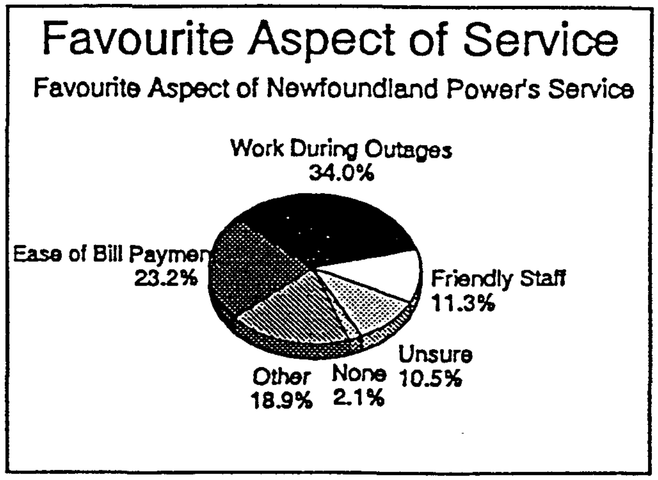

Figure 14

The next question in the survey asked respondents which aspect of Newfoundland Power's service they liked the most. The responses are shown in Figure 14. The highest response was for work during outages and storms with 34% of responses, followed by ease of bill payment with 23.2% and "other" with 19%. Unlike the previous measurement there was a low response for the "unsure" and "none" categories which comprised 50% of responses in the June 1994 survey. It should be noted that people who indicated they were dissatisfied with the bi-monthly meter reading did not answer this question.

Response to this question was affected by three demographic variables. They were as follows:

- Region - People in the St. John's, Gander and Corner Brook areas were more likely to chose "work during outages" than those from other areas of the province. People in the Avalon and Bonavista areas tended to select "unsure" more frequently
- Education - People who completed some high school tended to indicate they were most pleased with the staff of Newfoundland Power more frequently than those with other levels of education.

- Gender - Males tended to chose "work during power outages" more often than females. Females tended to select "POWERSMART information" and "ease of bill payment" more frequently.

5. Worst Aspect of Service

Respondents were next asked to indicate their least favourite aspect of Newfoundland Power's service. As shown in Figure 15, "Rates too high" received the majority of the responses with 47%. This was followed by "bi-monthly meter reading" with 23.1% and "power interruptions" with 15.3%. People who had previously indicated they were dissatisfied with the bi-monthly meter reading process did not answer this question. The responses to this question showed a significant increase in the percentage of people who indicated they were dissatisfied with the bi-monthly meter reading policy, however when this is coupled with the reduction in response for the unaided question on dissatisfaction there would appear to be only a slight increase in the level of dissatisfaction with the service.

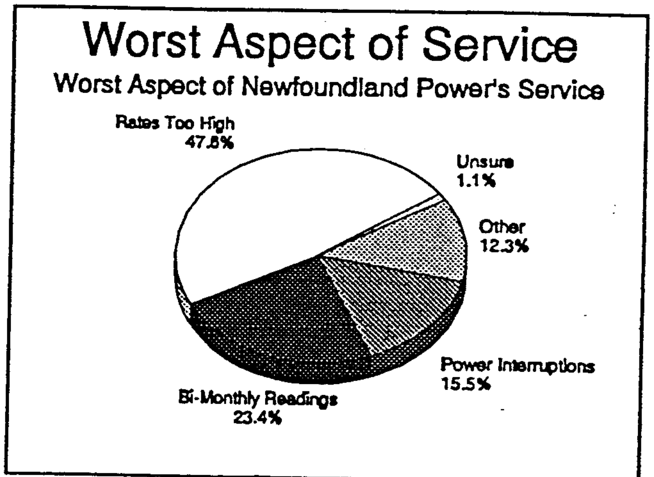

Figure 15

Only one demographic element was associated with the responses to this question. Region was important with residents of Burin, Grand Falls and Stephenville areas selecting "bi-monthly meter reading" more frequently and people in the St. John's area selecting "power interruptions" more frequently.

As with the previous question dealing with dissatisfaction, people who responded they were dissatisfied with elements other than the electricity rates and the bi-monthly meter reading were asked how they would improve the service. Most people indicated having more equipment available and better service to restore power.

6. Aided Response to Bi-Monthly Meter Reading

The next question asked people who had previously noted no dissatisfaction with Newfoundland Power's bi-monthly meter reading policy to indicate whether they were very satisfied, satisfied, dissatisfied, or very dissatisfied with the change, or if they were even aware of the policy. The question indicated the change in policy was initiated to control rates. The responses are shown in Figure 16. Less than one-quarter of customers indicated they were either very dissatisfied or dissatisfied with the change, while over 70% of respondents

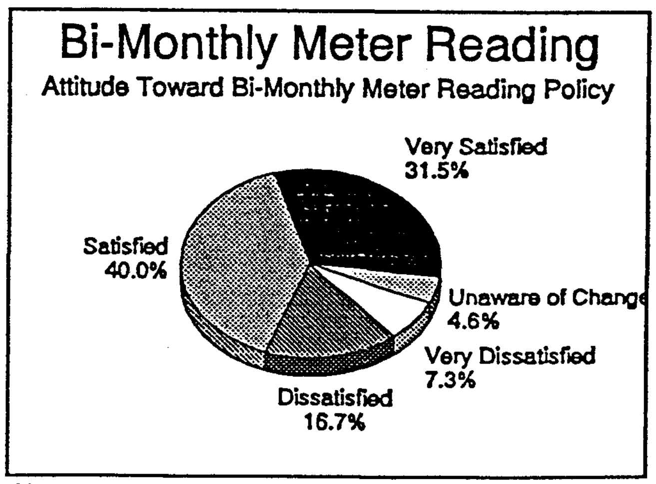

Figure 16

indicated they were either very satisfied or satisfied. Just under 5% were unaware of the change. Overall this is a positive response with a 3:1 ratio of satisfaction to dissatisfaction with the new policy. It should be noted, however, that this did not include people who had indicated previously they were dissatisfied with the policy. When these people are included the ratio falls to 1.3:1 which is close to the ratio seen in the previous survey. This would point to a slight overall reduction in the level of dissatisfaction with the bi-monthly meter reading policy. Overall, of those who were aware of the change 57% were satisfied and 43% were dissatisfied.

When the responses to this question were analyzed according to demographic information there were two elements which were associated with how people responded. Region was important with people in the Bonavista, Avalon and Stephenville areas tending to have higher levels of satisfaction than people in other regions.

Main fuel was the second factor. People using wood as their main heating source tended to have higher levels of dissatisfaction than people using either electricity or oil. In a change from the previous survey, electricity users had a satisfaction levels slightly higher than the average for the survey.

Two follow-up questions were asked in this section. First, people who were dissatisfied with the bi-monthly meter reading policy were asked an open-ended question concerning why they did not like the new system. It should be noted that all people from previous sections who had voiced dissatisfaction with the bi-monthly meter reading policy were asked this question. The responses were fairly consistent across all groups. Most people did not like the policy because of the perceived inaccuracy of the reading, as well as fluctuations in the size of the bill. Consistency between the estimated bill and the actual bill was viewed as the single largest problem, and necessarily must be viewed as the main area the bi-monthly meter reading policy must address. Other areas of concern included lack of trust in the system and inability to properly budget for bills.

The second follow-up question asked respondents how they would improve the system. As with the previous question, the responses were open-ended. Most people felt monthly reading was the best way to overcome the problem. Some people did mention averaging out the bills over a longer period of time to overcome fluctuations in the size of bills.

7. Value of Monthly Reading

In order to better understand the level of dissatisfaction with the bi-monthly meter reading policy people who were dissatisfied with the policy were asked whether they would be willing to pay more each month on their electric bill to have the meter read each month. As shown in Figure 17, almost 90%

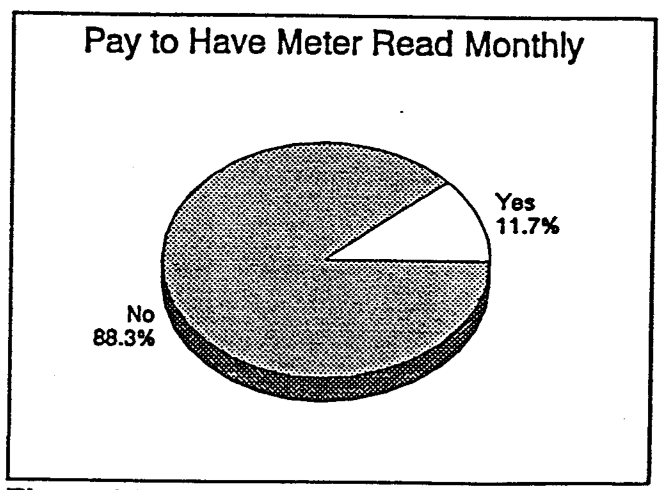

Figure 17

indicated they <u>would not</u> be willing to pay more to have their meter read each month. This shows that, although there is a level of dissatisfaction with the policy it is not of a "material" level. In other words, people are not willing to pay more to return to the monthly system and reduce the perceived inconvenience. The response points to a fairly broad, but not material, level of dissatisfaction with the service. The response to this question was consistent with the findings of the June 1994 survey.

There were no statistically significant associations between how people responded to this question and the demographic variables measured in the survey.

As a follow-up question people who were willing to pay more on their monthly electric bill were asked how much they would be willing to pay monthly. The average response was $3.46 while the median response was $2.00. This was consistent with the response shown in the June 1994 survey.

8. Equalized Payment Plan

The final four questions on the survey were concerned with peoples' awareness and perceptions of the Equalized Payment Plan.

a. Awareness

The first question in this section asked respondents whether they were aware of the Equalized Payment Plan (also called the Budget Payment Plan). There was no explanation given for the term. The results are shown in Figure 18. Approximately 72% of people indicated they were aware of the plan with the remaining 28% indicating they were not aware. This was significantly higher than the response shown in the previous survey. In the June 1994 measurement only 56% indicated they were aware of the Equalized Payment Plan. This points to positive impacts of Newfoundland Power's awareness advertising for this program.

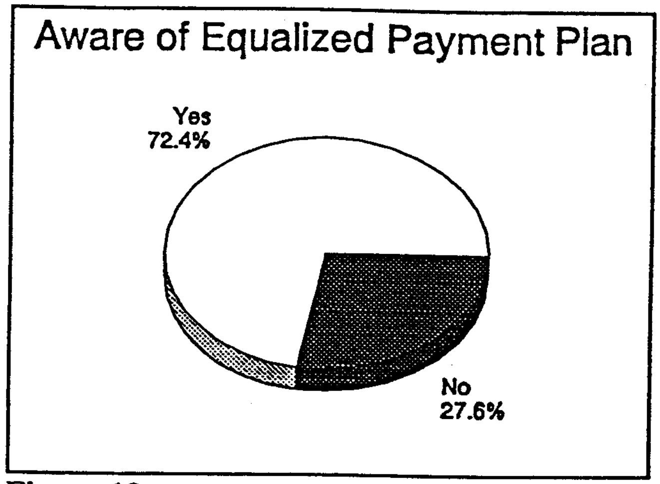

Figure 18

A total of four different demographic elements had an influence on how people responded to this question. In general the following interactions occurred:

- Fuel Type - People who used either oil or electricity as their main fuel source tended to have a higher level of awareness for the equalized payment plan than those who used other fuel sources.
- Education - In general, as the education level of the respondent increased so did the likelihood the person was aware of the Equalized Payment Plan.
- Income - In similar fashion to education level, as income level increased the respondent was more likely to be aware of the Equalized Payment Plan.
- Gender - Females tended to be more aware of the Equalized Payment Plan than were males.

b. Enrollment

People who indicated they were aware of the Equalized Payment Plan were then asked whether they were currently an Equalized Payment Plan customer. As shown in Figure 19, 12.4% of respondents indicated they were currently EPP customers. This is just under 10% of the entire sample (since 28% of respondents did not answer this question). It is important to note that current EPP customers were

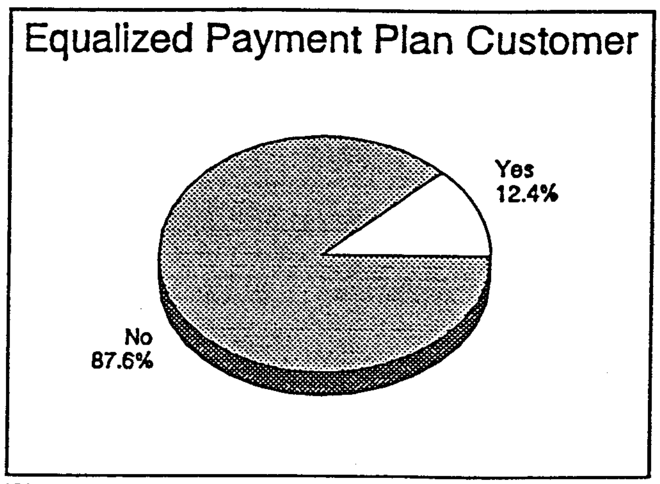

Figure 19

not asked any more questions in this section. This was a slight improvement from the June 1994 measurement, and it would indicate that, while more people were aware of the Equalized Payment Plan, the promotion efforts of Newfoundland Power have not been successful in enticing a large number of customers to take action and subscribe to the service.

Broken down according to demographic information there were two elements which played a role in how people answered this question. Main fuel affected responses with people using electricity as their main fuel source having a higher level of enrollment in the Equalized Payment Plan than people using other fuel sources. Income was also important with people in the $40,000 to $59,999 income range tending to have a much lower level of involvement in the Equalized Payment Plan than those in other income ranges.

c. EPP and Bi-Monthly Meter Reading

Question three in the section asked respondents whether they felt the Equalized Payment Plan would be beneficial to customers experiencing problems with the bi-monthly meter reading policy. The question read as follows:

> *The Equalized Payment Plan evens out electricity costs over 12 months so the payment is the same each month and monthly changes in electricity costs are eliminated. Do you think the Equalized Payment Plan would be beneficial to customers who experience problems with the bi-monthly meter reading process?*

As shown in Figure 20 almost three-quarters of respondents indicated they felt the EPP would be beneficial to customers who experience problems. It is important to note this response was from people who were not currently EPP customers. This response was up from two-thirds reported in the last survey.

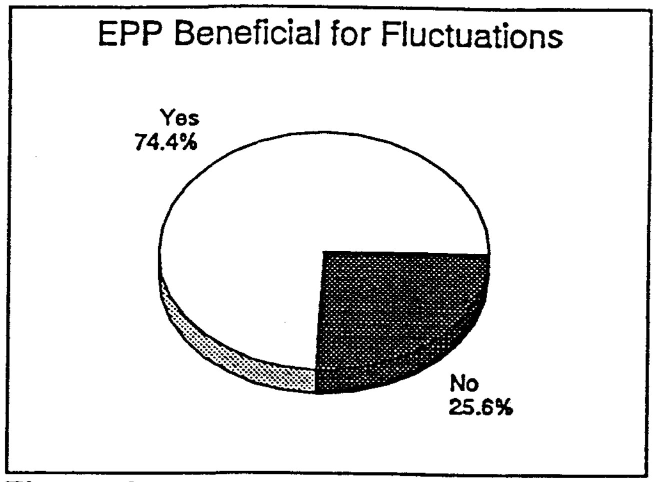

Figure 20

When the results were viewed according to demographic information there was only one element, gender, which was associated with how people responded to this question. Males were less likely to indicate the Equalized Payment Plan would be beneficial than were females.

As a follow-up, people were asked why they held their particular point of view towards the EPP. Those who felt the plan would be beneficial tended to cite the ease of budgeting and being able to plan for the next month more easily. Those who did not feel the plan would be beneficial tended to indicate they mistrusted the system, or that they liked lower summer bills as a break from the high winter bills. Also people felt that the EPP would mean Newfoundland Power would be receiving its money earlier and it would be taken from their account more quickly.

d. Interest in EPP

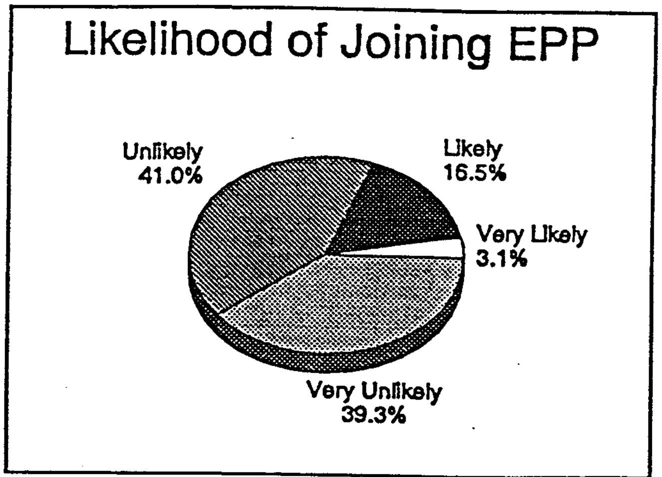

Figure 21

The final question on the survey asked respondents whether, having heard about the Equalized Payment Plan, they would be very likely, likely, unlikely or very unlikely to join. the responses are shown in Figure 21. Of those respondents who were not currently EPP customers, 19.6% indicated an interest in becoming involved while the remaining 80.4% indicated they would be either unlikely or very unlikely to become involved. This was consistent with the results of the June 1994 survey.

There were two elements associated with how people responded to this question. Again the region the respondent lived in played a role in how they responded to this question. People in the Gander and Burin areas tended to have higher interest in the EPP while those in the Avalon and Bonavista areas tended to have lower levels of interest. Main fuel was also important with people who used electricity as their main fuel source tending to have a higher interest in the Equalized Payment Plan than those who used other types of fuel.

Observations and Conclusions

The purpose of the survey was to measure the attitudes towards and acceptance of the bi-monthly meter reading policy, and to gauge the awareness and acceptance of the Equalized Payment Plan. In general the following was observations and conclusions can be drawn:

1. Very little has changed since the last measurement of acceptance of the bi-monthly meter reading policy in June of 1994. The bi-monthly meter reading remains a negative perception element among the general public. Some people view it as a legitimate means of saving money, however others feel the high level of fluctuation in billing is very inconvenient. Most of the opposition to the policy arose from the inaccuracy of the meter reading and estimating. Specific care must be taken to address the estimation formula so as to better estimate billing.
2. Most people who were dissatisfied with the bi-monthly meter reading policy were displeased because the estimate was too high, not too low. Large fluctuations can occur either because the estimate was too low and the reading the next month resulted in a higher than normal bill, or because the estimate was too high and the reading the next month was lower than normal. Dissatisfaction tended to be more associated with the second of these two problems, and as such erring in estimation should be done on the side of conservatism.
3. Although there is a significant level of dissatisfaction with the bi-monthly meter reading policy, most of it is not of a material nature. The majority of respondents who were not satisfied with the policy were not willing to expend additional money to rectify the

situation. Since receiving a bill is not a pleasant experience for the majority of households, this additional problem, while not pleasant, is not of a material nature.

5. The Equalized Payment Plan is viewed as having a positive impact on the fluctuation problem experienced by many people. Since the previous survey there has been a significant increase in the level of awareness of the plan, however this has not translated into action. Therefore, if the EPP is viewed by Newfoundland Power as the most advantageous means of billing customers for service an aggressive telemarketing campaign is recommended, targeting all electric, high bill, and high fluctuation customers first. The telemarketing campaign should be established so that customers who have an interest in the plan can sign-on while on the telephone with the sales representative in a very swift and efficient manner, with additional information and confirmation being available via the mail. This campaign should be implemented prior to the high energy bill season.