

The Ground Transportation Industry

A Marketing Research Case Study

prepared for

Atmospheric Environment Service

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## Executive Summary

### Research Objectives and Justification

In order to meet the challenges of the increasingly competitive business environment, firms are forced to become more cost conscious and service oriented. AES, too, must become more marketing oriented so as to offer products and services which help the private sector face these challenges. Thus the general intent behind this study was to help AES to develop this marketing awareness.

A marketing research "map" indicating steps to follow was first developed. This guideline was then applied to the ground transportation sector. The research results were then used to describe the ground transportation user's needs, investigate opportunities for the private sector and offer recommendations for future strategies.

### Results and Recommendation

After surveying the trucking, bus and rail sectors and various transportation associations, it was found that a vast majority used weather information for the purpose of monitoring the environment, and not for planning or decision making. It seems that the ground transportation sector views the product as simply an informant and not as an additive in business activities or a potential cost saver.

It is in AES' best interest, therefore, to try to change the consumer's attitude of the product. This can be done by undertaking an educational and awareness campaign targeted at the transportation sector and publicizing the benefits of using weather information in planning and decision making.

Once the ground transportation sector knows about the product and its benefits, AES' product can be tailored to meet the specialized demands of each sector and the potential for private sector participation can be evaluated.

Getting industry to use weather information more in business may take time but when the industry becomes deregulated it may speed the process.

## 1.0 Introduction

As the business environment becomes increasingly competitive and demands for natural resources of food, water and energy expand there is a greater need for accurate and timely weather and climate information. Decision makers in business, government and every day life need useful and appropriate information to effectively solve problems.

This need for better and more specialized information means that AES must become more consumer oriented. Specifically, the information needs of AES users must be identified and services must be tailored to meet the consumer's demands.

This study was initiated in order to help AES to develop this marketing awareness. It was intended to show how marketing research can be done to determine the needs of users and potential users of AES' services.

A guideline to marketing research was first developed in order to show how marketing research is done. These marketing research steps were then demonstrated by applying them to the ground transportation sector. Finally, the results of the marketing research study were used to show how marketing research can guide decision making and future marketing strategies.

## 2.0 Research Objectives

On a general basis, the purpose of this study was to act as a model for future marketing research undertaken by AES. More specifically, this study was designed to develop preliminary insights into the weather information needs of the ground transportation sector and to assess the potential for private sector participation.

The study was also undertaken to assist AES in developing a better profile of the ground transportation consumer, evaluate present "product" offerings and become more market oriented.

## 3.0 Methodology

Information was gathered by first investigating secondary sources on the various transportation modes. The intent at this stage was to identify key factors in the industry which would detract from or enhance the use of weather information.

Information was then gathered in a series of 65 telephone interviews with transportation associations and companies in the Lower Mainland and across B.C. (See Appendix A for list of the questions.)

Telephone surveying was chosen as the questioning method to keep costs down and because of time constraints.

Also, policy within the government dictates that any formal survey must be done by Statistics Canada. Thus a less formal and smaller survey method had to be chosen. (See Appendix B for the survey limitations.)

The sample consisted of:

- 1) Trucking companies randomly drawn from the B.C. Motor Transport Association roster
- 2) Bus companies operating within B.C.
- 3) Rail companies operating within B.C.
- 4) Transportation associations across Canada
- 5) Magazine editors and writers.

(See Appendix C for the list of sources.)



#### 4.0 Transportation Overview Results

In studying the industry, the goal is to understand how the industry operates. Knowing more about the industry will highlight the important and weather related topics. Also, the competitive environment, economic aspects, technology and special West Coast characteristics of the industry influence the strategic options open to a firm or government trying to enter or supply the market. Thus the transportation sector was studied in order to locate questionable topics and to determine the key factors which would influence the demand for AES' services

##### 4.1 Competition

The transportation sector is characterized by a high degree of competition. Not only do the different companies within a specific transport mode compete, but also the combined trucking, bus and rail sectors compete with one another.

Competition will increase further due to the imminent de-regulation of the industry. With de-regulation, firms can enter the market more freely, thereby increasing the competitive pressure on each company and putting a ceiling on the price each is able to charge.

De-regulation will also open up competition with some American companies. Because of the larger population base, American transport firms have been able to attain lower cost structures, thus making it more difficult for Canadian operators to compete.

Rivalry among existing Canadian transportation firms also adds to the competitive pressure. Because there is a great importance to fill capacity (ie. a truck does not want to travel one way with an empty load), firms have a strong desire to attract and maintain business. This rivalry is further intensified given the nature of the product. Transportation is considered a "commodity" product. Although there are differences between the various modes of transportation, the differences between each company within a transport mode are minimal. All firms offer a service of getting from point A to point B. Thus buyers have no reservations about switching their business from one firm to another

Buyers of transportation services and especially trucking services exert pressure on the industry by posing the threat of vertical integration. Since large firms have the financial backing to operate their own trucking services, a trucking firm must offer the "right" price or schedule in order to prevent a large firm from operating its own transportation network.

#### 4.2 Economic Aspects

The demand for transportation can be classified as "derived" since the demand for transport is derived from the demand for products it carries. Thus the transportation sector mirrors the path of the general economy. During an economic downturn, the demand for transportation is low and vice-versa during strong economic times.

#### 4.3 Technology

Most equipment in the transport sector has been weather sensitized. For example, both rail cars and trucks have temperature controlled carriers and buses and trucks are equipped for winter driving.

In the trucking industry, however, there is a new 18-wheel vehicle in the introductory stages which is sensitive to weather conditions. These 18-wheel trucks are not yet approved, however, and are the center of controversy. The rail companies fear these new trucks will cut in on their business even more and are, therefore, raising the issue of safety of the vehicles. They feel that motorists will experience greater trouble over-taking the trucks on the highway due to the splash or spray given off by the heavy trucks.

The Canadian truckers, however, feel that these new trucks will be the necessary competitive edge required to survive in the new de-regulated industry.

#### 4.4 Special West Coast Considerations

The road network in the West is not as sophisticated as in the Eastern provinces. While there are 4 mountain passes connecting B.C. with the rest of Canada, the 3 passes, Rogers, the Crowsnest and the Yellowhead, are the only viable options for traffic travelling East. Each of these passes are approximately 200 miles apart and virtually guarantee the traveller of at least one weather change. What emerged from the industry study was then how do the various road transport companies decide which pass to take if one is closed? Do truckers wait between 12 to 36 hours for a pass to re-open or do they add at least 400 miles and take an alternate route? These issues were, therefore, included when questioning industry participants.

### 5.0 Threats and Opportunities

#### 5.1 Competition

Due to the increasing competitive nature of the industry, AES' services may be beneficial for the transportation sector in the future. As competitive pressure increases in the industry, price will become the

differentiating factor between companies. As firms strive to be more cost conscious, AES can help by offering advice on route planning and fuel consumption with the intent to save the company money.

### 5.2 Economic Aspects

The demand for weather information in the future, like transportation, is derived. Theoretically, the demand for weather information should be strongest when the transportation industry is in a down swing. However, if the weather service involves a fee, it may be treated as a discretionary expense and thus may be cut during poor economic times.

### 5.3 Technology

If the new 18-wheel trucks are approved, as will probably be the case, there could possibly be a need for AES' services. For example, forecasts regarding rain or snow could be needed so as to schedule when trucks operate and to warn motorists.

With an understanding of how the industry operates and pertinent topics to question, the trucking, rail and bus companies were then surveyed.

## 6.0 Survey Results

The industrial overview helped formulate a theoretical background on which to survey the bus, rail and trucking sectors. The primary research, however, was needed to understand what "really" goes on in the industry and the only way to do this is to ask the consumers. The ground transportation sector was, therefore, surveyed to first see if and how weather information is used in business, and then to see how the consumer can be satisfied more effectively.

### 6.1 Trucking Industry

Use of weather information in the trucking industry is very limited. Of those truck companies surveyed 55% did not use weather information at all while only 30% used it "occasionally".

When firms use weather information occasionally this is usually in conjunction with road reports or simply to become aware of expected conditions. Trucking companies, however, do not use weather information for any type of decision making.

The reasons for not using weather information given by trucking firms was, firstly, because they are being hired for their reliability and ability to transport goods, therefore, they cannot re-schedule or cancel due to weather.

As one interviewee stated, "We are here to do a service and we go through with it regardless of the weather." This business policy can be partly attributed to the competitive nature of the industry. A trucking firm will not sacrifice revenue and a potential long-term contract by canceling due to weather. Also, truck drivers feel they have enough experience with different weather conditions to know what to expect. Finally, as mentioned previously, most trucking equipment is weather sensitized, so companies feel they do not need weather information. Thus from the results majority of the trucking companies do not use weather information.

Those trucking firms that do use weather information do so because of the type of goods they transport or the line of business they pursue. For example, dry goods shippers require precipitation data in order to decide whether or not to cover the product. Also, those trucking firms that do snowplowing need forecasts for obvious reasons. Thus it appears that the present use of AES' services is highly dependent on the product shipped or the service offered.

Although most companies surveyed operated in B.C. and across Canada, one company surveyed also operated in the United States. Interestingly, it was this United States serving company that used weather information for route planning. The information, however, was received from the

United States Weather Service. The only explanation is that the greater degree of competition in the United States requires firms to use weather information.

For both occasional and frequent users of weather information, the principal sources of information is the radio and word-of-mouth. This is consistent with the importance trucking firms place on weather information. Trucking firms would not seek out information for their operations since they do not consider weather to be an important aspect of the business. Instead, they simply listen to radio reports or ask other drivers since this information is adequate for their needs.

In keeping with the lack of importance trucking firms place on weather, they indicated that they would not pay for a specialized weather service. Not only do trucking firms not consider weather information valuable, but also not credible. For example, typical comments from interviewees about weather information were "not accurate" or "unreliable". Finally, as described earlier, the transportation industry is very competitive. Thus trucking firms are not going to spend valuable dollars unless it will pay off some way and, as the present perceptions of the industry toward the product are negative, this would not occur.



A final topic covered in the interviews was the route planning. How do trucking companies decide which mountain pass to take if one is closed? For a number of firms, one route was dictated since the company had a subsidiary just over a particular pass. Other firms have a policy to still go to the closed mountain pass (if it is actually on their desired route) because "by the time the trucker reaches it the pass is open." Still other companies have have no policy and "scramble" by either waiting for the pass to open or re-routing depending on the situation.

## 6.2 Bus Industry

The bus industry, like the trucking industry, is a regular scheduled service and, as such, does not see a need for weather information. Bus companies have to get people to a certain destination regardless of the weather, therefore, they cannot cancel. However, the bus company's cargo, people, is much more valuable than the products shipped by trucking firms, therefore bus companies must be more cautious. Their policy is to go as far as possible, warning the passengers that their destination may not be reached, and to turn back if the weather is too bad.

Tour operators also make up the bus industry. These services, while also scheduled bus operations, use weather information to pass on to potential customers. Tour

operators, like Pacific Coach Lines receive calls from hotels enquiring about the weather forecast. The hotels then pass this information onto tourists staying in the hotel so as they can decide whether or not to take the tour. The bus companies get their information from the radio as well as from the weather office. However, weather is merely used as a monitoring and information function, not a decision tool.

Bus companies, like trucking companies, receive most of their weather information from the radio. The weather office is also called by some companies on a regular basis during the summer and when conditions are extreme. Also, one company indicated that they received information from the RCMP at times.

One company, travelling in the United States, does use weather for route planning. An area the bus company is thinking of servicing is researched with respect to the expected weather conditions. If it is estimated that the buses cannot enter the area during bad weather, the area will not be accessed.

While weather information for buses is more of an all-year variable than for trucking, it too is not considered important by the bus industry. Bus companies feel that the free services given by AES are adequate for their needs and

anything beyond is excessive. They would not be willing to pay for a weather service.

### 6.3 Rail Industry

The fact that railroads, like the trucking and bus industries, is a scheduled operation leads to the same basic conclusions. Railroads operate regardless of the weather and use weather information simply to become aware of the situation. Weather affects railroads, unlike trucks or buses, on more of an "after-the fact" basis for example, rain wash-outs or avalanches.

Most information used by the railroads is received from the radio or the weather office, and "there are no complaints" with either of the sources.

Of all the railroad companies operating in B.C., B.C.Rail uses the greatest amount of weather information. They receive information from the weather office daily and distribute it in a daily memo. However, weather is not an additive in decision making, but simply plays a monitoring function.

## 7.0 Survey Conclusions

Although the survey results indicate that transportation companies do not use weather in their operations, this may not be the complete picture. Transportation companies perceive the weather as solely an uncontrollable factor in their business. For example, typical comments from survey participants included: "we can't change the weather, so we have to live with it." However, while this is true, there is also another side to weather. Transportation companies do not think in terms of how weather can help their business. For example, weather can be used to help forecast fuel consumption, the number of staff to schedule, expected passenger loads and also to help plan the most efficient travel route. Thus it becomes evident that the target customer must think of the product in an alternate fashion in order to effectively use AES' services.

In marketing terms, this product re-definition is called product positioning. This term describes how the target customer pictures the product in the market--ie what characteristics it attributes to the product. In the case of the transportation sector, firms see weather as merely an informant but not as a potential cost saver. The product must, therefore, be re-positioned in the minds of the

transportation sector to include the benefits that using weather can offer.

Another characteristic transportation firms attribute to AES' product is a lack of credibility. Numerous companies said they could not rely on the accuracy of the weather information. However, while the weather information may be very accurate, it is the target customer's perception that weather is not accurate and, therefore, the soundness of the weather must be "sold" to the customer in order to change their perceptions. Like re-positioning weather as a potential cost saver, AES must too re-position the product as a credible source of information. AES cannot hope to "sell" or market the product in the future unless the customer has trust and a positive attitude toward the product.

The matrix in Exhibit A shows how AES' product is presently perceived by the target group and also shows the position that AES must strive towards. Once the target group sees weather as a helpful tool in business and believes in the product, AES or the private sector can then start to tailor product offerings to suit the customer's needs. It is impossible to evaluate AES' products before this time since ground transportation companies do not use the product and AES, therefore, cannot determine what the consumer requires.

Product Positioning Matrix

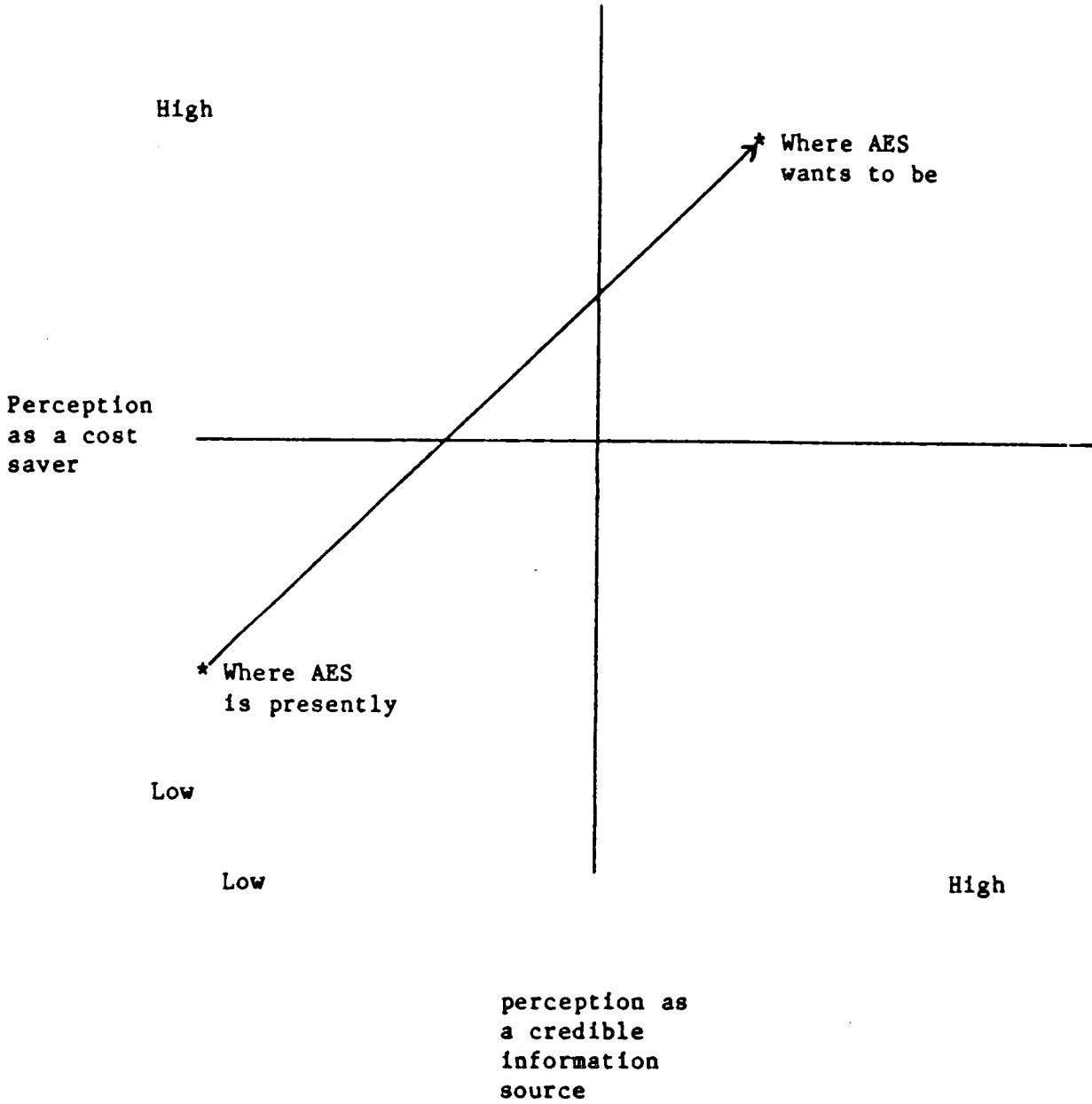


Exhibit A

## 8.0 Recommendations

The recommendations are just proposals emerging from the industry analysis and the survey results. It has become evident that AES needs to re-position its product in the minds of the target consumer, in this case the ground transportation sector. In order to fulfill this task, AES must first educate the consumer and create an awareness of the product.

To educate and make the ground transportation industry aware of AES' product, direct communication with the sector is necessary. This is best achieved by using trade journals or trade association newsletters. A number of trade associations and magazines expressed an interest in publicizing AES and the product and should be contacted further (see Appendix C). Also, if there are trade conventions, AES should consider taking part.

The general message to the ground transportation sector would be how using weather in planning activities can benefit the company. Specific applications and dollar figures saved would be an effective "selling point".

Once the ground transportation sector demands the product, private sector opportunities can be assessed and future research on product offerings can be done.

## 9.0 Conclusion

Although re-positioning the product in the minds of potential users seems a formidable task, the process will be helped by changing consumer attitudes towards the product. Using weather in business operations is a very new concept on the West Coast, however, in Ontario and the United States this is not new. Thus as the ideas begins to permeate west ward, AES may find it easier to market their product. Also, when de-regulation is officially sanctioned in January 1988, transportation companies will be forced to cut costs. They will, therefore, be more receptive to ideas proposed by AES.

It is a prime time for AES to begin looking at servicing the ground transportation sector more effectively. The future is very optimistic. By preparing now, AES will be ready to meet the challenging demands of the future.



## Appendix A

### List of topics covered in interviews

Does the company use weather information in its business activities?

~how and how often?

~how important is weather in decision making?

~principal sources of weather information?

~most important weather elements to the business?

~preferred data compilation formats (ie hourly, weekly, monthly and terminology)?

Do other businesses in the industry use weather information?

Is there a potential for new uses of weather information due to new technology or government de-regulation? Is there a potential for obsolescence?

Are there requirements not presently being met by AES?

If the business does not use weather information, why not?

Has the company ever thought about using weather information or how weather information could be used?

Would the company favor a more specialized approach to weather information?

If such a specialized service was provided by the private sector, would the company purchase the service?

When travelling inter-provincially, what route or mountain pass is usually taken?

What does the company do if the mountain pass on their route is closed? Do they wait or re-route?

General comments about AES included:

~quality of the information

~availability of the information

~reliability and credibility of the information

## Appendix B

### Limitations of the study

#### 1) Results are not conclusive.

Due to the structure of the study and the sample size, the research results are not able to suggest a specific course of action. Because the objective of the study was to develop initial insights and to provide direction for further research, conclusions cannot be made regarding a path to follow. Also, the sample size makes it unable to generalize the research results to the rest of the population.

#### 2) Appropriate contacts not made.

The survey participants, while in charge of operations, were usually located at head office. These people may, therefore, be somewhat removed from "field practices" and unable to provide useful information.

## Appendix C

### List of Contacts

#### Associations Contacted

B.C. Motor Transport Association  
4090 Graveley St., Burnaby, B.C.  
299-7407

Rob Weston

\*A copy of the association's membership roster was loaned for the study and was very helpful. Also, Rob Weston was sent a copy of the report.

Canadian Bus Association  
112 Kent St, Tower B  
Ottawa, Ont  
238-1800

Canadian Conference of Motor Transport Administration  
1765 St. Laurent Blvd.  
Ottawa, Ont  
526-0550

Canadian Industrial Transportation League  
706 Global House  
480 University Ave.  
Toronto, Ont  
596-7833

Robert Dion

\*Very helpful and indicated they would publish material for AES in their newsletter. Also, a copy of the report was sent to Robert Dion.

Canadian Institute of Traffic and Transportation  
4450 Portland  
Burnaby, B.C.  
433-6199

Canadian Trucking Association  
130 Alberta St, Suite 300  
Ottawa, Ont.  
236-9426

Private Motor Truck Council of Canada  
52 Village Centre Place Suite 102  
Mississauga, Ont  
273-6275

The Railway Association of Canada  
1117 St. Catherines St. West Suite 721  
Montreal, P.Q.  
849-4274

Roads and Transportation Association of Canada  
1765 St. Laurent Blvd.  
Ottawa, Ont  
521-4052

Transport 2000-B.C.  
P.O. Box 4842  
Bentall Centre  
Vancouver, B.C.  
682-8200

Truck Loggers Association  
837 W. Hastings  
684-4291

Andy Zielinski (writer)  
105-120 Silver Creek Close  
Calgary, Alta  
T3B 4N8

\*Mr Zielinski is a writer for different trucking magazines and he indicated that he would write some articles on weather related topics if AES contacted him further. He also was sent a copy of the report.

Rud Kendal  
Editor-Western Trucking  
984-4491

Trucking companies contacted-out of town

Arch Transfer Ltd.  
Pentiction  
493-3974

Arrowsmith\*  
Parksville  
248-5021

City Transfer  
Powell River  
485-2811

ERA Transport  
Victoria  
478-6477

Far West Bus Lines\*  
Kitimat  
632-3333

Beaver Trucking  
Kamloops  
374-1466

DCT Chambers Trucking  
Vernon  
549-2157

Osoyoos Transfer Company\*  
Osoyoos  
495-6036

Peace Moving and Storage  
Fort S. John  
785-2647

MacCasham Van Lines  
Dawson Creek  
782-8216

Motorways Direct  
Kelowna  
762-2928

Mobile Equipment Services  
Williams Lake  
392-4754

Pactow Transport  
Nanaimo  
758-7688

Smithers Transport  
Smithers  
847-2057

Southern Interior Express  
Creston  
428-5307

Target Transport Services\*  
Prince George  
561-1200

\*companies worth contacting further

Truck companies contacted- in town

Associated Crane Trucks  
Coquitlam  
939-3711

Alltrans Express  
Burnaby  
291-6211

Bekins Moving and Storage\*  
Richmond  
270-1120  
Mr. McNeil

CIL Inc\*  
Vancouver  
685-1411  
Malcolm Ellis

Clark Reefer Lines  
Burnaby  
299-7526



Dolphin Delivery  
Burnaby  
434-0962

Fraser Valley Transport\*  
Mission  
462-8558

Hi-Ball Trucking\*  
New Westminister  
520-3387

Johnson Moving and Storage  
Burnaby  
430-2102

Len's Lift Truck Delivery  
Burnaby  
294-1336

Mercury Express  
Coquitlam  
525-4621

MacDonald's Consolidated  
Vancouver  
522-8667

Mission Freightlines  
Burnaby  
430-2933  
Jack Philips

Motorways Direct  
Coquitlam  
525-7611

Perry Trucking  
Vancouver  
324-4117  
Andy Perry

Port Coquitlam Transfer Company  
Port Coquitlam  
942-7282

Public Freightways  
Burnaby  
435-6621

Reimer Express Lines  
Burnaby  
291-1431

Shular Transportation Systems\*  
Langley  
888-4338

\*This company does most of its business in the United States and gets its weather information from the US weather service.

Squamish Freightways  
Burnaby  
291-7384

Wells Cartage  
Richmond  
277-1611

CP Express and Transport\*  
520-8603  
Charley Derdan

Trimac\*  
Vancouver  
888-2002

\*companies worth contacting further

Rail companies contacted

CP Rail  
200 Granville St.  
643-3519

Canadian National  
649 Industrial  
665-4349

B.C. Rail  
1311 W. 1st  
North Vancouver  
984-5224

\*All the rail companies should be contacted further to get more detailed information from the field rather than head office material.

Bus companies contacted

Greyhound  
150 Dunsmuir  
662-3222  
Mr. Kozniuk

Grayline  
900 W. Georgia  
682-2877  
Karien

Maverick Coach Lines  
1375 Vernon  
255-1171.  
Don Rosner

Pacific Coach Lines\*  
681-1161

Horizon Coach Lines  
320 Industrial  
669-3866

Black Velvet Coach Lines\*  
10666 King George Hwy  
588-2184

International Stage Lines  
4171 Vanguard Rd.  
271-6135  
Bob McMinn

\*indicates companies worth contacting further.

## Appendix D

### Cost, time and resource breakdown

#### 1.0 Understand AES and "the product".

This stage depends on the person doing the marketing research. If an outsider is brought in to do the research, some time must be taken to understand what AES does and what products and services AES offers. This can take anywhere from 2-3 weeks.

#### Sources of information:

~policy reports

~quarterly weather office reports

~interview/talking with staff

~tours

~AES pamphlets and information sheets.

#### 2.0 Industry Analysis.

Depending on the size of the industry and the number of participants, this stage can take 2-3 weeks. Costs at this stage include transportation to different libraries and photocopying charges, approximately \$10.00.

Sources of information:

- 1) Recent magazine and trade journal articles indexed in the Canadian Periodicals Index
- 2) Books on the subject
- 3) Stats Can to get growth trends and sales figures for the industry
- 4) Interviews with industry associations
- 5) Writers and/or editors of magazine and trade journals.

3.0 Choosing the survey sample.

This stage, at the longest, will take one week.

Sources of information:

- 1) Canadian Key Business Directory
- 2) Directory of Canadian Associations
- 3) Association membership rosters
- 4) Yellow pages.

#### 4.0 Survey

Using a telephone survey took approximately 3 weeks. The costs at this stage included long distance phone charges.

#### 5.0 Analyzing the results.

This stage took approximately one week with no other resources or costs being used.

#### 6.0 Writing the report.

This procedure took 3 weeks.