CRFC

CANADIAN RECREATION FACILITIES COUNCIL

National Arena Census
May 2005 – December 2005

In Partnership With:

Natural Resources Canada
CANMET Energy Technology Centre - Varennes

Ressources naturelles Canada
Centre de la technologie de l'énergie de CANMET - Varennes

CANADA

Table of Contents

Introduction

1.1 Executive Summary

Preamble:
The Canadian Recreation Facilities Council (CRFC) is a not for profit, nationally recognized volunteer council who's member associations and associates have a common interest in providing sustainable sport and recreation facilities in Canada. The membership of the CRFC consists of Provincial/Territorial associations, and nationally recognized not for profit and government affiliated organizations who have interests similar to the CRFC.

Hockey Canada is the sole governing body for amateur hockey in Canada following the merger in July 1994 of the Canadian Amateur Hockey Association and Hockey Canada. Hockey Canada operates national programming in cooperation with 13 Branch Associations, the Canadian Hockey League and the Canadian Inter-University Sports. Hockey Canada oversees the management of hockey programming in Canada from the entry level of the game to participation in international competition, including World Championships, the World Cup of Hockey and Olympic Games.

Through the officers, branch presidents and council directors, Hockey Canada provides leadership to its members by establishing the by-laws and regulations, rules of the game and direction of its development programs.

The CANMET Energy Technology Centre - Varennes (CETC–Varennes) is one of three research and innovation centres, managed by the CANMET Energy Technology Branch of Natural Resources Canada (NRCan). Established in 1992 under the name of *CANMET Energy Diversification Research Laboratory (CEDRL)*, CETC-Varennes' mission is to encourage targeted sectors of the Canadian economy to reduce their greenhouse gas (GHG) emissions, use energy more sustainably, and improve their innovation capabilities. CETC-Varennes designs and implements technological solutions and as well gathers and disseminates knowledge in order to produce and use energy in ways that are more efficient and sustainable, which in turn aids in stimulating the health of the Canadian economy.

In 2002 Hockey Canada (HC) and provincial/territorial member associations of CRFC saw a need to create a database which contained information specific to hockey arenas in Canada.

The purpose of the 2005 ***National Arena Census*** is to update the existing database, identify a more accurate number of arenas and to bring to the forefront data to help identify issues and challenges facing owner/operators of arenas across Canada. One of these challenges is the escalating energy costs and the reduction of green house gas emissions. Natural Resources Canada, CETC Varennes identified that hockey arena refrigeration processes represent over 50% of the energy bills in these facilities.

In addition, the intensive integration of new heating, ventilation, air-conditioning and refrigeration (HVAC&R) technologies in an arena can result in energy savings of up to 60% compared to a standard arena setup. The introduction of new refrigeration practices and technologies can help reduce this consumption by up to 40%.

A majority of the arenas in the census are reaching the age of 30 to 35 years. The life expectancy of an ice arena is 32 years based on a study done by Manitoba Culture, Heritage Recreation and Citizenship, 1995/6. With increasing utility costs, the operating costs of these arenas have risen to the point where they are no longer sustainable without retrofits or replacement to provide energy efficiencies to assist in reducing overall operating costs. Canadian Recreation Facilities Council joined forces with Hockey Canada with financial assistance from Natural Resources Canada, CTEC Varennes to conduct a ***National Arena Census***. The Census is a 16-question survey distributed to arenas across Canada. The census was also

advertised by the 13 provincial/territorial member associations and other national partners from June to December of 2005 and was circulated to over 5000 practitioners in the recreation facility operation field. The information collected provides information on the state and needs of each facility while updating the existing arena information in the National Arena Database that was created in 2002.

Communications:
There were four major communication channels used to collect the data from across Canada. The survey was mailed out initially as a paper document to 2841 rinks across Canada and was also available on the web in an electronic format. Surveys were also sent by e-mail and fax with the majority of responses received by fax. Identified duplications were deleted from the database, and new or missing ice arenas were added, resulting in a final total of 2,486 ice arenas.

Survey Responses:
The overall response rate for this survey was 48.11%. Interestingly through follow up phone calls it was determined that some owner/operators of ice arenas chose to partially reply to the survey and only filled out basic information. They felt that they did not want the cost of operating their arenas made public because if the information was used for individual comparison of ice arenas they felt their arena would not measure up to what the national standard may be. They felt they could be scrutinized for this. 7% of arenas responding provided only partial information. 1% of arenas responding refused to provide any information. 51.89% chose not to respond at all for other reasons such as a lack of time, a lack of resources and inaccessibility to the information that was asked in the survey.

Analysis and Generalizations based on surveys received:

- The largest construction boom in Canada occurred throughout the 1970's with 756 arenas built in the early 1970's. Of 1,857 arenas that supplied construction dates 1,350 arenas were constructed before 1980; this translates to 47% of arenas being over 26 years of age. 594 arenas were constructed before 1960; this translates into 32% of arenas being over 36 years old. The oldest arena was constructed in 1921.
- 86% of ice arenas in Canada are municipally owned and operated.
- Only 886 surveys were completed that included complete energy costs. Of those the combined energy costs varied from a low of $42,130 for a 20,000 sq ft single sheet ice arena to a high of $310,929 for a 100,000 sq ft complex.
- 65% of ice arenas use ammonia as the primary refrigerant, 25% use freon as the primary refrigerant and 10% have natural ice. Primary heating fuels are natural gas with electricity being the second largest.
- Energy efficiencies that are already in place in some ice arenas include low emissive ceilings, hot water heat recovery, space heat recovery, brine pump scheduling and brine ice temperature scheduling.
- 134 respondents indicated they had planned major renovations to their refrigeration system of $50,000 or more. 74% plan renovations between 2006 and 2008, 14% plan renovations between 2009 and 2012, 5% plan renovations between 2013 and 2015 and 7% plan renovations after 2015. The value of these renovations nationally is in excess of $335,000,000.
- 169 respondents indicated they had planned major renovations to the building of $100,000 to in excess of several million dollars. 48% plan renovations in 2006, 21% plan renovations in 2007, 15% plan renovations in 2008, 4% plan renovations in 2009 and 12% plan renovations beyond 2010. The value of these planned renovations nationally is in excess of $530,000,000.
- Even though in excess of $835,000,000 in renovations are planned over the next 10 years this only applies to 303 respondents which represents only 12% of the 2,486 arenas nationally. If this number is applied to 1,350 of the 2486 arenas listed which are reaching 26 to 36 years of age that renovation value is in excess of $3.7 billion.

Conclusions:
Although the National Arena Census fell short of the anticipated 80% return rate, the 48.11% received provides a very usable cross section of information. This information shows that Arena infrastructure is at a point in its lifecycle where within the next few years massive amounts of funding will be required both to maintain and sustain this infrastructure. The burden of this funding will lay with municipal governments, as they are the owners of 86% of the infrastructure.

1.2 Overview of the Project

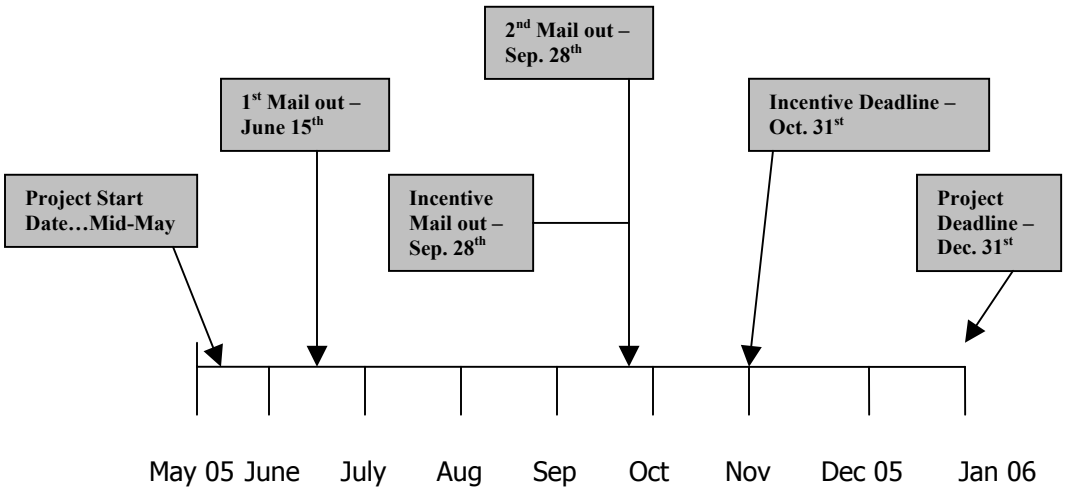
Hockey Canada joined forces with the Canadian Recreation Facilities Council and Natural Resources Canada to conduct a *National Arena Census*. The Census is a 16 question survey that was distributed to every arena across Canada. The information collected will shed light on the state and needs of each facility while updating the existing arena information in the National Arena Database that was created in 2002.

The project began in the middle of May 2005 and the deadline for completion was set for December 31st, 2005 and included 3 contract employees. The first few weeks of the project were spent collecting contact information until June 15th when the first mail out was sent out to each arena (2873 arenas listed in the Hockey Canada database). From that date, until the completion of the project, arena managers were contacted by Hockey Canada to confirm the reception of the survey and encourage their participation in the project. The slow response rate from the first half of the project required that a new mail out be sent, which acted as an incentive to encourage participation and awareness regarding the survey.

As arenas responded and duplicates were found, facilities were taken off the mailing list before our second mail out on September 28th (2569 arenas). The incentive, included in that mail out (found in Appendix 6.3), required that the survey be completed by October 30th 2005.

1.3 Timeline

Figure 1



Data Collection Process

2.1 Actions Undertaken

As with any survey, the main difficulty is making sure the participants have received and will answer the document sent. The main strategy used to ensure a high response rate was to contact each arena manager one by one and make sure the survey had been received while reinforcing the importance of providing us with as much information as possible. Each arena was contacted a minimum of 3 times by phone and 606 surveys were re-sent via fax.

Along with contacting the arenas or town offices by phone, an extensive search for e-mail addresses was conducted in order to find other ways to reach town recreation officers. That strategy proved out to be helpful since reaching town offices was usually easier than reaching arena managers, especially during the summer time.

As previously mentioned, an incentive was sent during the month of September as part of an annual arena mail out. The purpose of the incentive was to encourage the participation in the survey and reach arena managers that did not receive the survey during the summer time. The incentive promoted a draw for a Team Canada hockey jersey autographed by the under-20 team that played in the 2006 World Junior Championships in British Columbia. The survey had to be completed and returned before October 30th 2005 in order to be eligible for the draw.

The same incentive was sent to all directors of the Provincial/Territorial Recreation Associations to encourage them to actively participate in the promotion of the survey and collaboration of the project. A jersey was to be given to the provincial/territorial association with the best response rate at the end of October (a copy of both incentives is provided in the Appendices). Overall we could say that these two incentives provided some results and increased our participation rate, but not at the expected level.

Finally, there were steps taken to reach the large cities in each province/territory and have the recreation department officers collect the arena survey for their entire city. The following is a more extensive description of the main actions taken by each province/territory.

2.2 Provincial/Territorial Descriptions

Alberta - Alberta Recreation Facility Personnel (RFP) helped encourage the facility managers to complete the survey by putting a reminder in a leisure line that was sent in September. All 13 zone representatives were contacted by email and encouraged to distribute and collect the survey. A contact list was given to Hockey Canada for the entire city of Calgary and the survey was emailed to those rinks in the month of September. A city officer from Edmonton was contacted and took on the responsibility of completing the survey in November for all 19 municipality owned rinks.

British Columbia - The Recreation Facilities Association of British Columbia (RFABC) was contacted and included a reminder for the National Arena Census in a general meeting with all its members. Hockey Canada was able to get in contact with recreation officers for large cities like Kelowna, Burnaby and Vancouver but only Burnaby managed to collect and send us the information for all the rinks in their area.

Manitoba - Recreation Connections Manitoba was contacted and asked to help generate more response to the survey. They emailed a copy of the survey along with the incentive to all municipalities and recreation directors which helped increase the response. The city of Winnipeg was able to provide Hockey Canada with information on 15 of its municipally owned arenas. Sport Manitoba was called to help provide contact information for approximately 40 facilities that Hockey Canada had no information for. However, they were unable to supply this information due to their survey not being complete at the time

of our report. The data will be forwarded once they have been able to collect and confirm all the required data.

New Brunswick - With the help of the Recreation and Parks Association of New Brunswick (RPANB), and their arena survey, Hockey Canada was able to update its arena database with close to 84% response rate for the province. Along with other information, the provincial survey provided contact information for 77/87 rinks, with many email addresses.

Newfoundland & Labrador - Facilities in Newfoundland were all contacted one by one. St. John's is one of the larger centres but they did not respond to the survey. The Newfoundland/Labrador Parks and Recreation Association (N/LPRA) helped as much as they could in the project.

Northwest Territories - Northwest Territories Recreation and Parks Association (NWTPRA) was contacted to help distribute the survey to their facilities. The survey along with the incentive was given to all recreation directors at a NWTPRA meeting. Even with this distribution, and each arena being phoned 4 times, the response did not increase.

Nova Scotia - We were fortunate to have both Halifax and Sydney collaborate with the project and send all the surveys from their cities. Many other small communities responded successfully to the survey. The Recreation Facility Association of Nova Scotia (RFANS) distributed many surveys and talked about the importance of the census during meetings with its members.

Nunavut - The Government of Nunavut was contacted to help with the dissemination of the survey to their facilities. Along with Hockey Canada, they called each arena individually which helped produce some positive results.

Ontario - The Ontario Recreation Facilities Association (O.R.F.A.) was contacted and they included a reminder about the National Arena Census in a newsletter that was sent to all its members. They were also able to get in contact with large cities like Ottawa and Kitchener who collected and sent the information for all the rinks in their area. The same was done for the cities of Toronto and Hamilton, but did not generate any tangible results.

Prince Edward Island - The Prince Edward Island Recreation and Facilities Association (PEIRFA) was contacted by Hockey Canada and offered to remind its members of the importance of completing the survey. Each arena was contacted by phone but Hockey Canada failed to reach recreation officers of large towns who could fill out the survey for all the rinks in their region.

Quebec - Along with a total of 205 surveys received for the province of Quebec, all 434 facilities contact information and addresses were updated with the help of the Association des Arénas du Québec (AAQ), who had a complete list of all the rinks in the province. Many of these arena contacts had electronic addresses and were contacted by email to collect the survey. A mass email was performed in September and a second in November which generated great results. The AAQ also gave Hockey Canada the results of a previous survey conducted by the provincial association, with much information pertinent to the National Arena Census. A total of 77 AAQ surveys were received with 9 facilities being completed and another 46 being partially completed.

Saskatchewan - The Saskatchewan Parks and Recreation Association (S.P.R.A.) helped send the survey to each of their facilities and also sent Hockey Canada municipality information for the province. They also sent Hockey Canada a copy of a survey they were conducting provincially which had information needed in our survey. This information was added to help partially complete 76 arenas along with completing another 25. The S.P.R.A. was extremely helpful in creating awareness of the census. The

cities of Saskatoon, Moose Jaw and Regina were all able to send in the surveys for each of the arenas in their respective city.

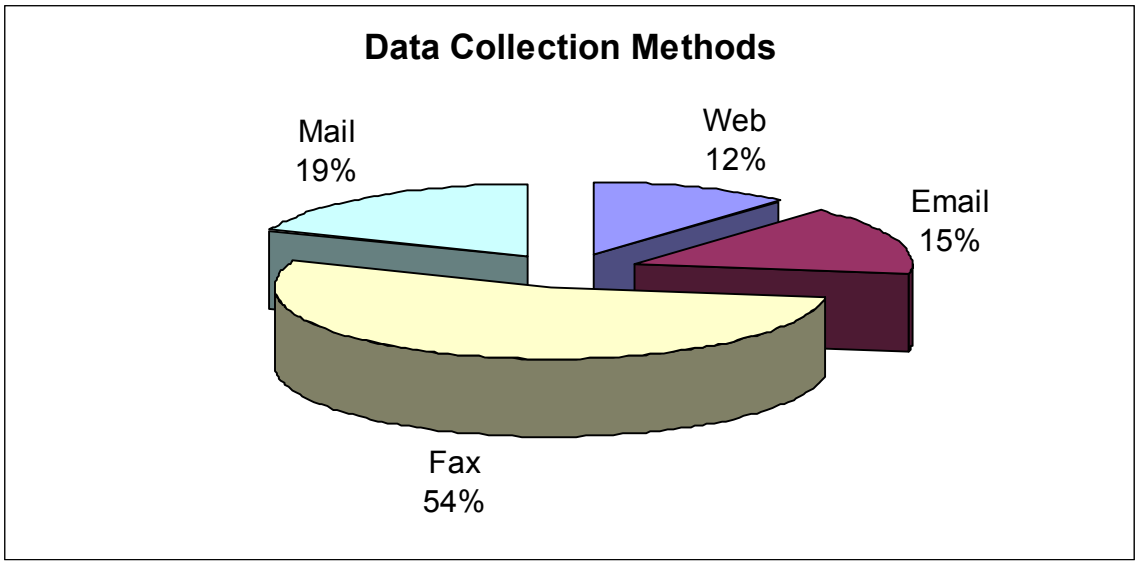
Yukon - The Recreation and Parks Association of the Yukon (RPAY) was asked to help generate more response to the survey. They sent out the survey, along with the incentive, to each facility as well as sent Hockey Canada updated contact information for many of their Recreation Directors. This enabled the response from the Yukon to increase.

Canadian Parks and Recreation Association - It is also important to note that the Canadian Parks and Recreation Association assisted the Canadian Recreation Facilities Council by including information in its fall E-news letter that was sent to their general membership.

2.3 Methods of Completion

The survey was sent as a paper document and participants were encouraged to complete the survey by hand, and return it to Hockey Canada either by mail or by fax. On the other hand, the survey was also available for completion on the web where participants could enter their facility identification number and password. This method was quick in that we would get the results as soon as they were submitted while preventing us from having to enter the data. However it proved to be challenging, especially due to the format of the online survey, which was not as user-friendly as expected and experienced some server difficulty. Finally, a certain amount of surveys were sent by e-mail, and returned as an electronic document. These were the four major communication channels used to collect the data from across Canada. *Figure 2* illustrates how surveys were returned to Hockey Canada:

Figure 2



Response Rate

3.1 Responses

The survey was sent in mid June and by the end of December the total number of arena surveys received reached 1196. The database originally contained 2841 rinks all across Canada, but with some research and as surveys were received, the list of arenas was updated and a total of 355 no longer existing or duplicated rinks were deleted from the database. **Including all the completed and partially done surveys, the overall response rate for this survey has reached 48.11%.** Almost all provinces/territories reached a response rate of at least 30% which provides a good representation of the state of arenas across Canada. The following is a breakdown of the response rate per province/territory, with the number of surveys totally and partially completed:

Table 1

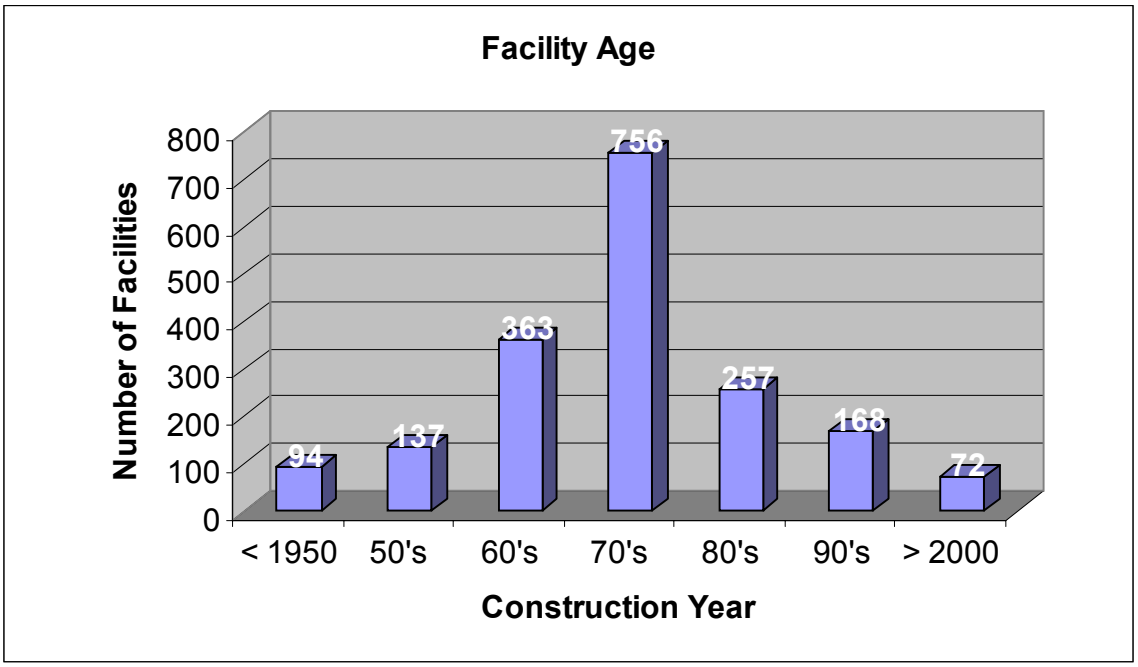
Provincial/Territorial Response Rate						
Province/Territory	**Partially**	**Completed**	**Would Not Participate**	**Received**	**Total**	**%**
Alberta	3	111	3	117	308	37.99%
B.C.	4	110	5	119	183	65.03%
Manitoba	0	74	1	75	196	38.27%
New Brunswick	41	32	0	73	87	83.91%
Newfoundland	1	24	0	25	62	40.32%
NWT	0	4	0	4	20	20.00%
Nova Scotia	2	38	0	40	81	49.38%
Nunavut	0	9	1	10	23	43.48%
Ontario	14	271	1	286	724	39.50%
PEI	0	17	0	17	27	62.96%
Quebec	34	190	6	230	434	53.00%
Saskatchewan	76	116	2	194	327	59.33%
Yukon	0	6	0	6	14	42.86%
Total	**175**	**1002**	**19**	**1196**	**2486**	**48.11%**

Data Analysis

4.1 Construction Year

The original database contained construction year for some arenas, but the new census provides a greater representation of the age of most rinks across Canada, as is shown in *Figure 3*.

Figure 3



4.2 Type of Facility

The majority of rinks in small towns also include a community centre, a gym or other sporting venues. The survey tried to collect more data on the type of facility, multiplex or ice rink, the majority of arenas are (*Figure 4a*). When the respondent answered "Multiplex", they were asked to specify if the facility included a community hall, swimming pool or fitness facility (*Figure 4b*).

Figure 4a

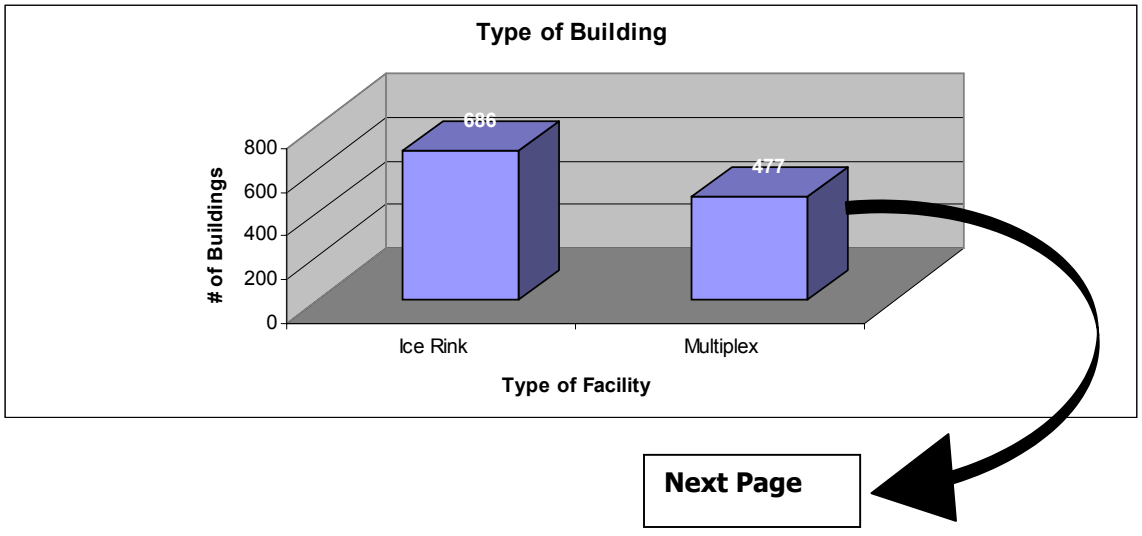
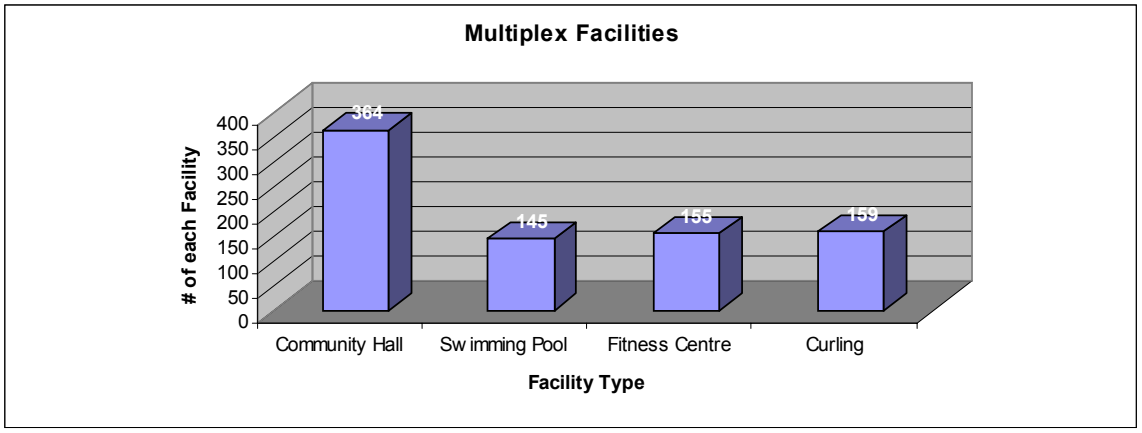


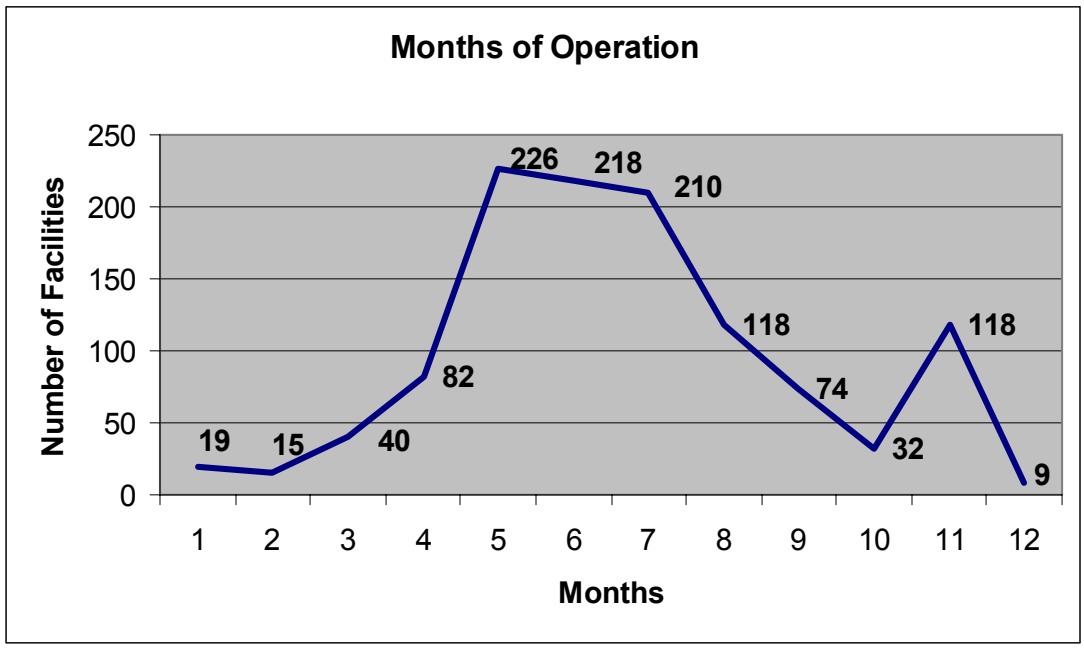
Figure 4b



4.3 Months of Operation

The majority of the rinks surveyed are not operating all year long due mostly to many of them having natural ice. A more extensive representation of the number of months of operation is shown in *Figure 5*.

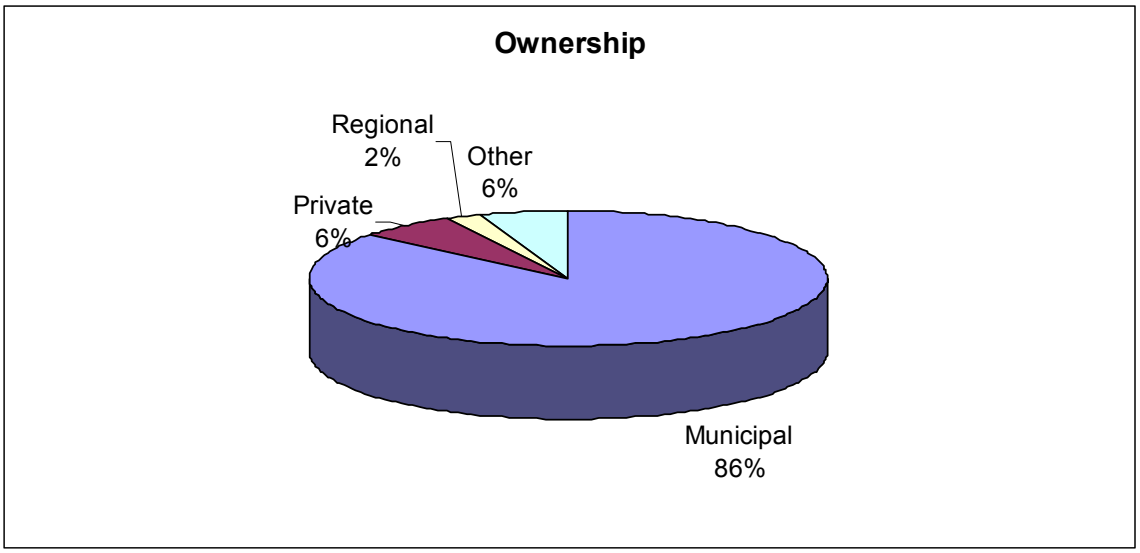
Figure 5



4.4 Facility Ownership

The majority of the facilities are owned by the municipality. The remaining percentage is comprised of private, regional and other (university owned, non-profit or situated on a military base). See *Figure 6*

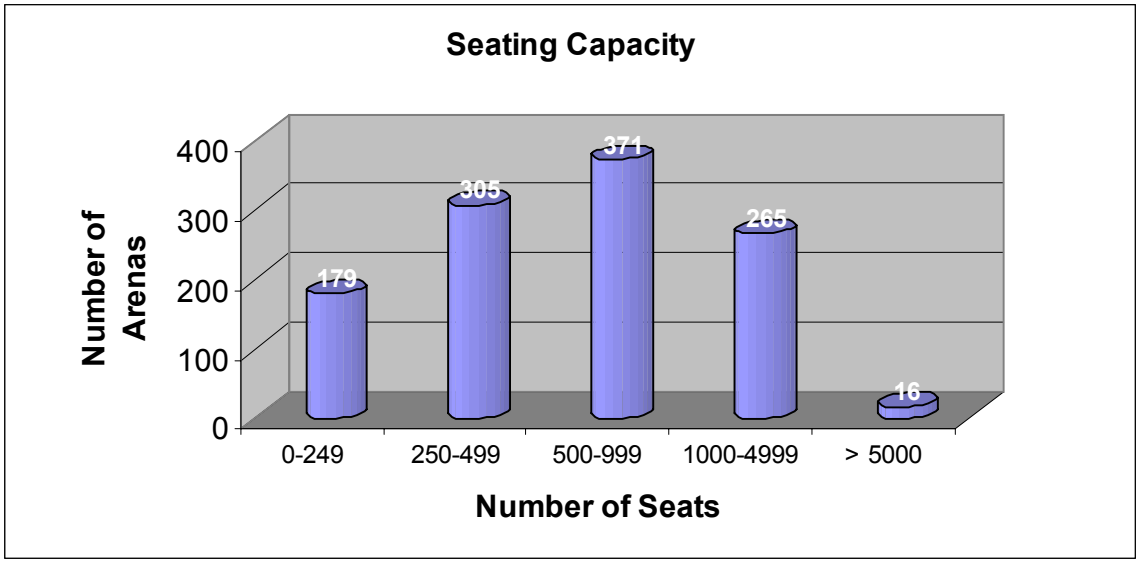
Figure 6



4.5 Seating Capacity

Figure 7 illustrates the number of seats available in each rink across Canada that responded to the survey:

Figure 7



4.6 Energy Costs

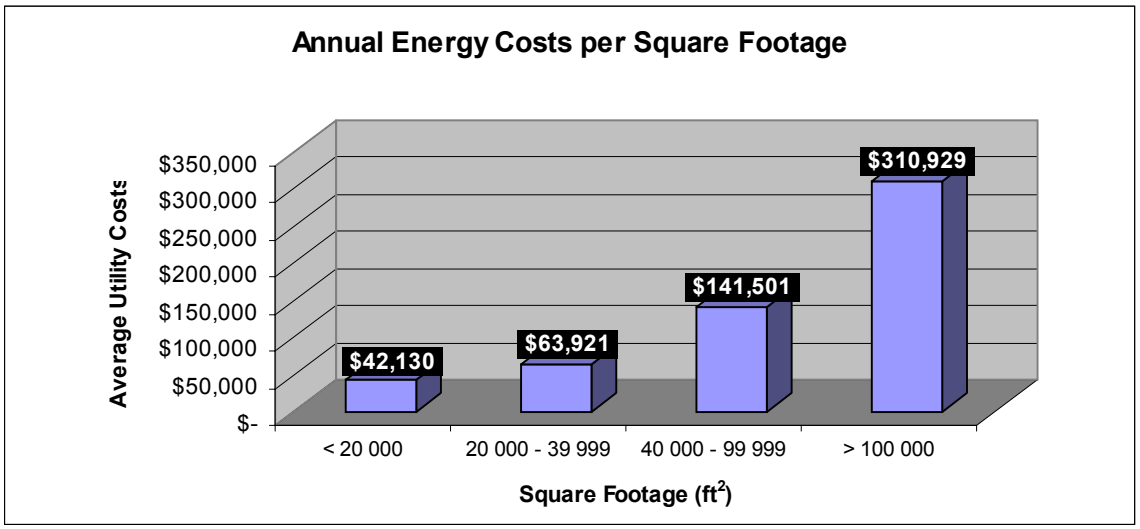
We received a number of surveys where the arena manager would not or could not provide the annual energy costs for the facility. *Table 2* shows the number of surveys that where completed but did not have annual energy costs:

Table 2

Total Surveys Completed	Total without Energy Costs
1002	163

The average energy cost is directly linked to the size of the facility. *Figure 8* shows the annual utility costs in correlation with the facility square footage. Only the surveys with both questions answered have been used to create this chart:

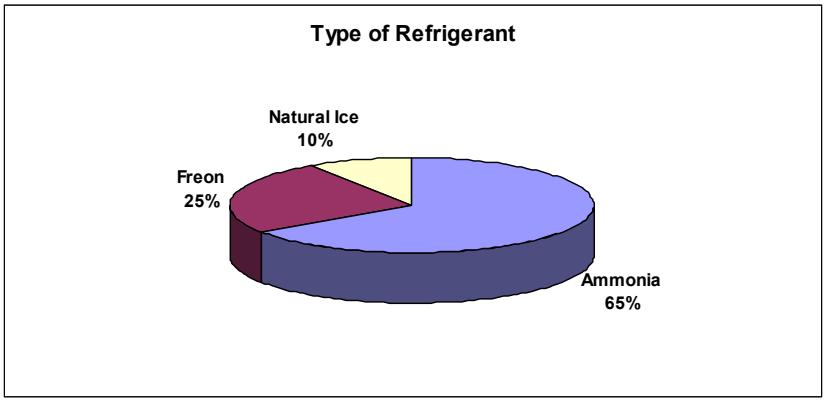
Figure 8



4.7 Refrigeration Process

Some of the arenas surveyed have natural ice surfaces, but the majority of the rinks have artificial ice and use either Ammonia or Freon refrigerant. It should be noted that some facilities that responded, and have artificial ice, are using a geo-thermal refrigeration process. However this total does not even apply to .5% of the surveys received. *Figure 9* represents the refrigerant type used across Canada:

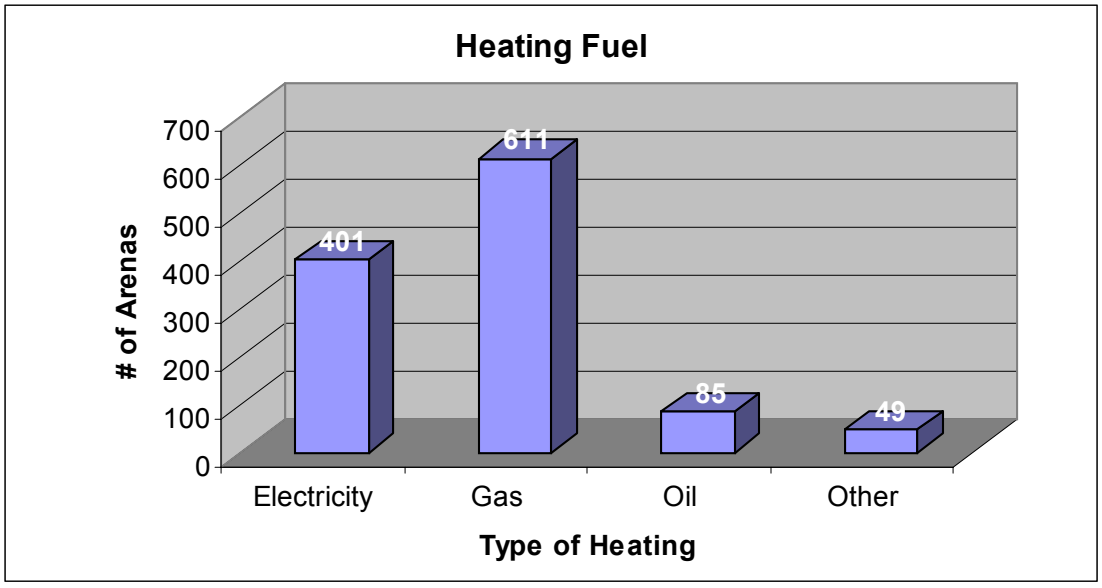
Figure 9



4.8 Primary Space Heating

Respondents were asked which heating fuel they used for their facility. More specific data on percentage of the facility is also available, but that information was difficult to obtain from arena managers since it is complicated to evaluate the area that is being heated. *Figure 10* shows which fuel is the most common amongst Canadian skating facilities:

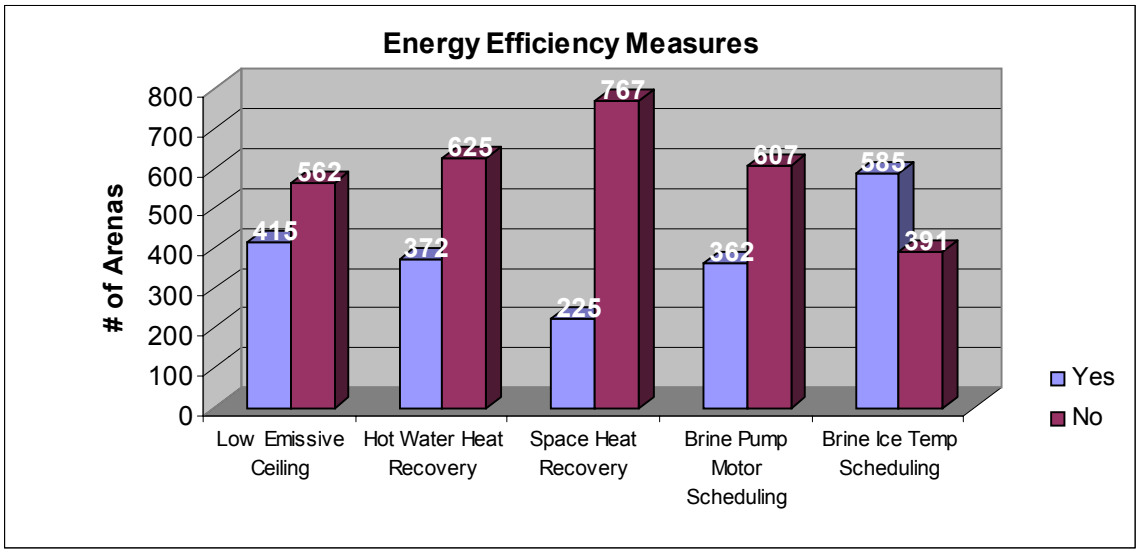
Figure 10



4.9 Energy Efficient Measures

A closer look was aimed at discovering what energy efficient measures are the most commonly installed in facilities, if any. Many arena managers did not seem aware of the existence of some of these efficiency measures as they did not answer some of the questions. *Figure 11* is a description of how many rinks have modified their facility with some energy efficient measures:

Figure 11



4.10 Refrigeration Plant Renovations

The survey inquired about when and how much money facilities allocated to plant renovations. *Figure 12a* illustrates the expected renovation year while the expected cost is shown in *Figure 12b*:

Figure 12a

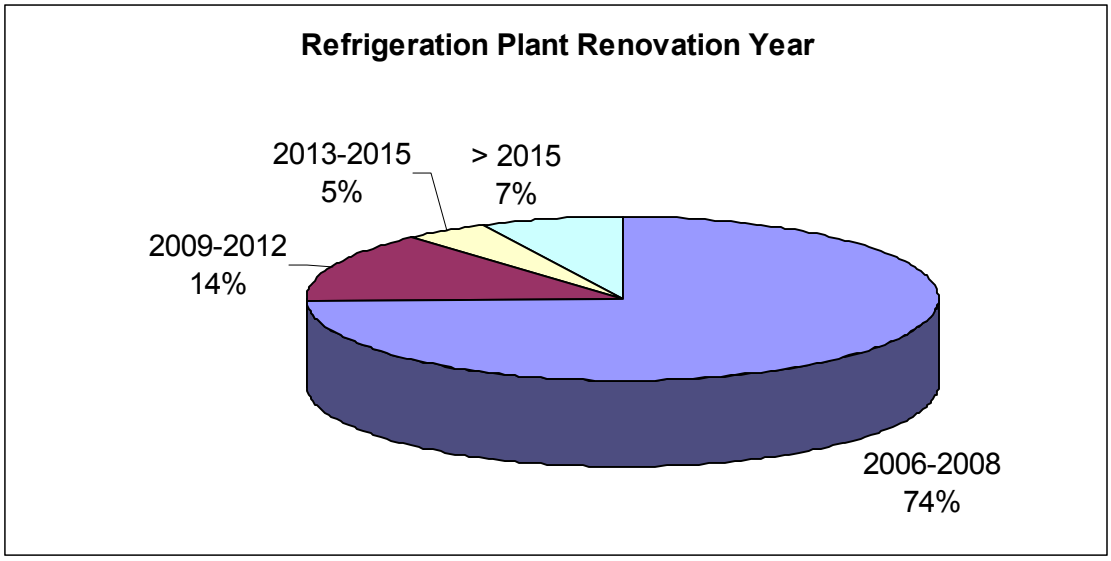
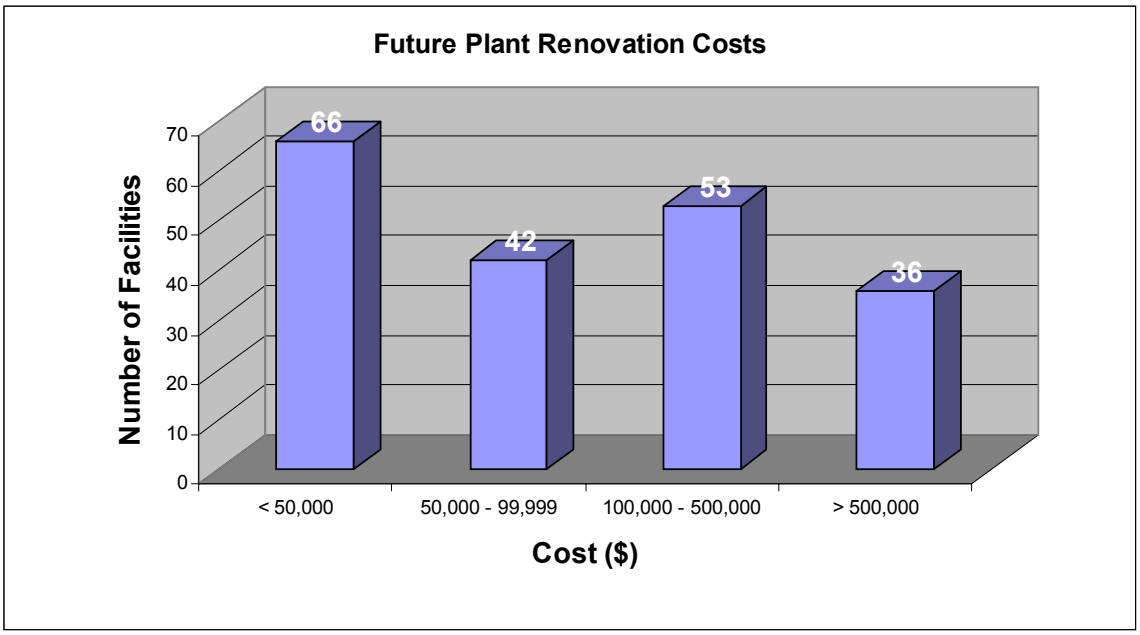


Figure 12b



4.11 Facility Renovations

The survey also looked at future facility renovations. Managers were asked to provide Hockey Canada with the expected year and cost of renovations. *Figure 13a* illustrates the expected renovation year while the expected cost is shown in *Figure 13b*:

Figure 13a

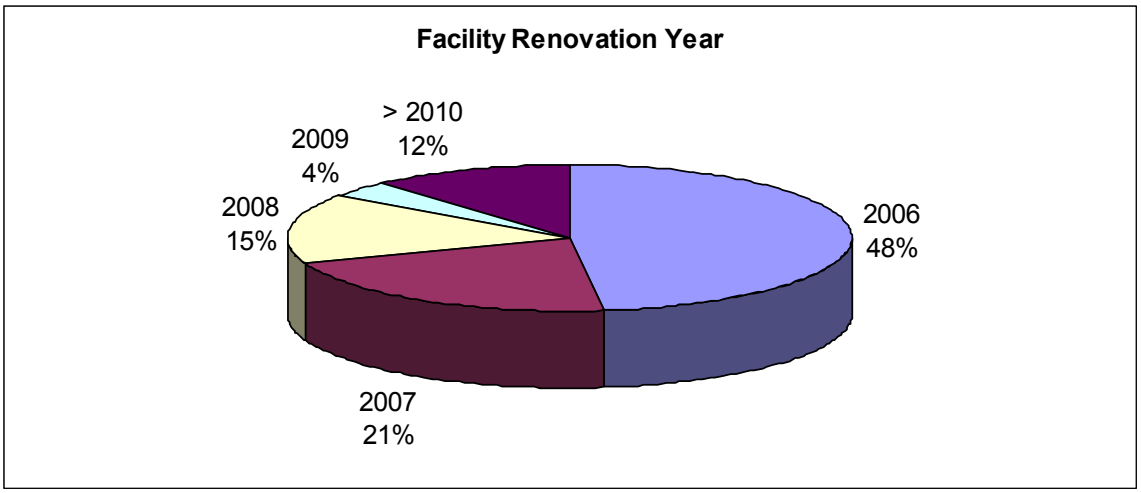
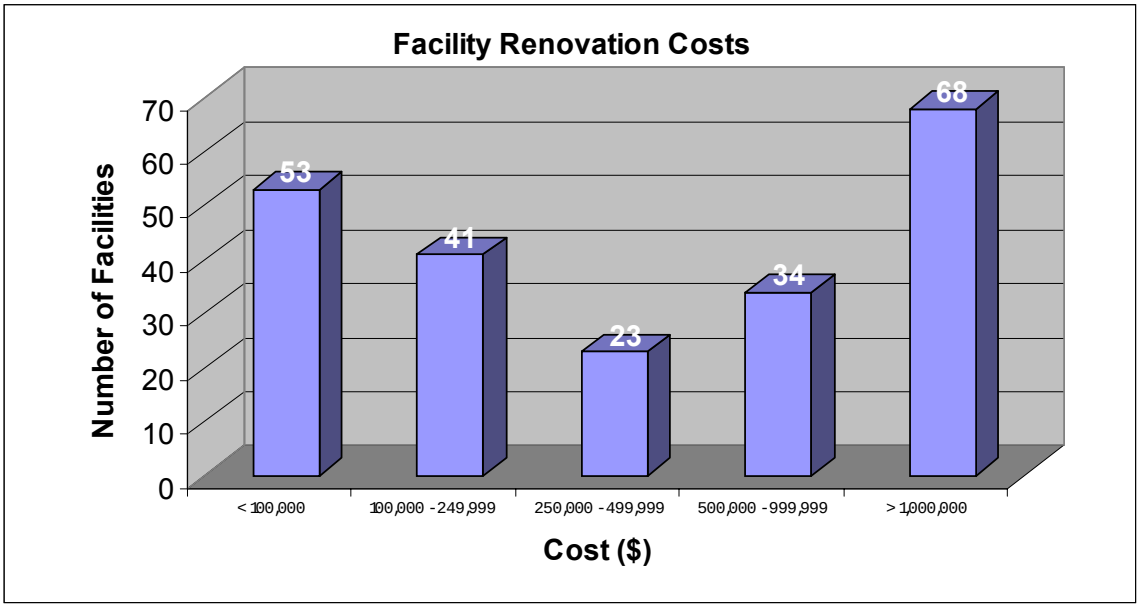


Figure 13b



Summary

5.1 Problems Encountered

The original goal of the survey was to have a response rate of 80% of the arenas completing 80% of the survey, which would represent close to 2000 surveys received. However, a number of difficulties prevented Hockey Canada from reaching that objective. The main obstacle Hockey Canada had to face was getting the survey completed by arena managers during the summer time. Starting the project in the middle of June impacted on the effectiveness of the first mail-out. Fortunately, the months of October and November were more proficient in terms of managers reached by phone or email. In addition Hockey Canada will be extending their efforts into December and January to receive as much information as possible.

The online form was a great tool for allowing rink representatives to fill the survey electronically. However the complexity of the survey prevented some surveys from being completed because arena managers became frustrated with the online form. The website was improved during the course of the project.

Along with the normal obstacles of every survey, these were the two main issues which limited the number of responses.

5.2 Recommendations

Considering the increase in the response rate to the survey during the months of October and November, it would be beneficial to perform a future arena survey during the course of the hockey season, when practically all rinks are open and it is easier to get in contact with arena representatives.

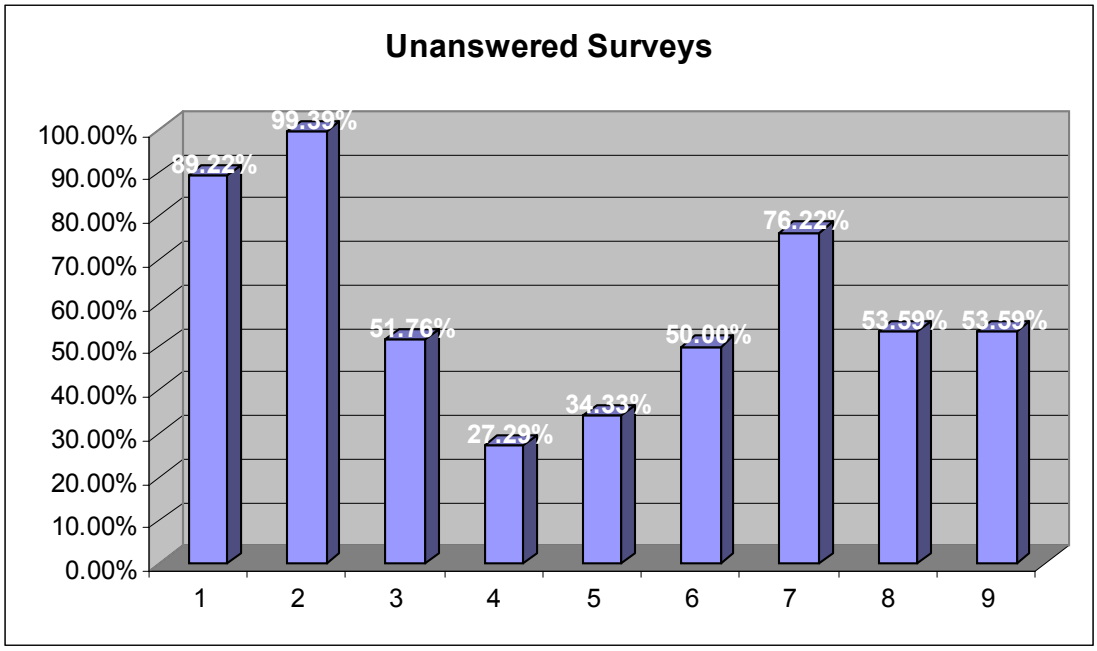
Another recommendation that we would make is to have multiple choice questions rather than asking for a precise number. Many arena managers were discouraged by the amount of information required in the *National Arena Census* and simply did not want to take the time to fill it out. Having categories as choices for answers could facilitate response and increase the data collection process.

Appendices

6.1 Additional Database Information

Figure 14 illustrates the information previously contained in the arena database for the 1309 facilities that **did not** answer the survey. This information originates from a survey conducted by Hockey Canada in 2001. The percentage for each column represents the number of facilities with accurate information for the corresponding field in the National Arena Census.

Figure 14



1-Phone Number
2-Mailing Address
3-Ice Surface – Number and Size
4-Dressing Rooms – Number
5-Seating Capacity
6-Hockey Level Played – Minor/Junior/Senior/Semi-Pro/Pro/Old Timer
7-Ownership – Municipal/Private/Regional
8-Services – Proshop/First Aid/Laundry/Press Box/Parking/Integrated Team
9-Operation – Seasonal/All Year

6.2 National Arena Survey

Canadian Recreation Facilities Council's Provincial/Territorial member associations, Hockey Canada and Natural Resources Canada are in the process of updating the ***National Arena Database*** created in 2002.

The information gathered in this questionnaire will not only enable us to update the existing database but will also be used to develop statistics on the state of arenas across Canada. The research will provide a general overview of the type and condition of arenas in Canada and if any plans of renovation are in the near future.

Your participation in this project is extremely important to ensure that information collected is both accurate and reflective of the needs of Arenas and that Owners and Operators are heard at the national level.

You may complete the Facility information questionnaire either by using the attached form and faxing it to Hockey Canada at 613-562-5676 or by filling in the information online at www.crfc.ca

FACILITY ID	
PASSCODE	

Please note that on the enclosed form there may be information in some of the fields. This reflects information that currently exists on the database and we ask that you verify that this information is correct. If corrections are needed please cross the information out and write the new information in the box provided.

If you have any questions or concerns about any of the fields please feel free to contact Adam Crockatt at Hockey Canada by phone at 613-562-5677 ext: 2317 or by email at arenas@hockeycanada.ca

CRFC CANADIAN RECREATION FACILITIES COUNCIL

Natural Resources Canada
CANMET Energy Technology Centre - Varennes

Ressources naturelles Canada
Centre de la technologie de l'énergie de CANMET - Varennes

CANADA

	Information on file	Please correct if different from information on file
Facility name		

Physical Address (Street Address of Facility)

Address		
City		
Province		
Postal Code		

Contact information (Arena Operator or Spokesperson)

Phone		( ) _____- _____
Fax		( ) _____- _____
First Name		
Last Name		
Business email		
Website		

Mailing address

If same as physical address, check here. □ If different please fill out:

Address		
City		
Province		
Postal Code		

1. Facility information

Ownership (check one only)

- □ Municipal
- □ Regional
- □ Private
- □ Other, please specify _____

Operation (check one only)

- □ Seasonal
- □ All year
- □ Other, please specify _____

Constructed (year facility was built) _____

2. Surface (Please indicate the length and width, in feet, of each individual ice surface

	Length (in feet)	Width (in feet)	Number of seats available		Length (in feet)	Width (in feet)	Number of seats available
Surface 1				Surface 5			
Surface 2				Surface 6			
Surface 3				Surface 7			
Surface 4				Surface 8			

**if insufficient space continue on p.7*

3. Dressing rooms (Please indicate the length and width, in feet, of each individual dressing room located at your facility)

	Length (in feet)	Width (in feet)		Length (in feet)	Width (in feet)
Dressing room 1			Dressing room 6		
Dressing room 2			Dressing room 7		
Dressing room 3			Dressing room 8		
Dressing room 4			Dressing room 9		
Dressing room 5			Dressing room 10		

**if insufficient space continue on p.7*

Availability of separate change rooms for co-ed teams	□ Yes □ No

(Information on file)

Office/Meeting Rooms available for public use		

4. Level (please select all the levels of hockey that are played within your facility)

- □ Minor
- □ Tier II
- □ Junior
- □ Senior
- □ Semi-pro
- □ Pro
- □ Old timer
- □ Other, please specify _____

5. Services (please select all the services that are available within your facility)

- □ Pro shop
- □ First Aid
- □ Laundry
- □ Press Box
- □ Parking
- □ Integrated Team
- □ Other, please specify _____

Accessibility – for persons with disabilities □ Yes □ No	□ Users □ Spectators	□ Poor □ Good □ Very Good

Number of months of ice operation per year	

Weekly Hours of ice rental	

Number of resurfacings weekly	

6. Type of facility (please select one)

- □ Ice rink
- □ Multiplex
- □ Other, please specify _____

7. Multiplex; if your facility is a multiplex, what else does it include:

- □ Community Hall
- □ Swimming Pool
- □ Fitness Facilities
- □ Other, please specify _____

Total facility square footage	Sq. ft.

Does your facility have a Curling Rink? (check one)	□ Yes □ No
Number of Curling Sheets (if answer to previous question was yes)	

8. Refrigeration process / Ice plant

Type of refrigerant (please select type of refrigerant used within your facility)

- □ Ammonia
- □ Freon
- □ Other, please specify _____

Please fill in

Total compressor Horse Power	HP
Total annual Compressors Hours	hours
Nominal Refrigeration Capacity Tons	tons
Operating Brine Pump Horse Power	HP

9. Refrigeration units date of construction

- ☐ Same as year of construction of the facility
- ☐ If retrofitted or replaced, date of construction _____

Name of the manufacturer of the refrigeration system	

10. Refrigeration system maintenance

- ☐ Ice rinks permanent on site staff
- ☐ Municipal building maintenance staff
- ☐ Outsourced to contractor; name of the contractor _____

11. Heating / AC / Dehumidification

Primary space heating fuel (please select your primary space heating fuel within your facility)

- ☐ Electricity
- ☐ Gas
- ☐ Oil
- ☐ Other, please specify _____

Please fill in

Percentage Heated Surface	%
Tons of Dehumidification	tons
Tons of Air Conditioning	tons

12. Installed Energy Efficiency measures (please check one for each question as it applies to your facility)

Low Emissive Ceiling

- ☐ Yes
- ☐ No

Hot Water Heated with Heat Recovery

- ☐ Yes
- ☐ No

Space Heated with Heat Recovery

- ☐ Yes
- ☐ No

Brine Pump Motor Scheduling/Variable Speed

- ☐ Yes
- ☐ No

Brine Ice Temperature Scheduling

- ☐ Yes
- ☐ No

13. Annual Facility Utility Costs

Please fill in chart

Annual gas cost	$
Annual gas consumption in Cubic Metres	CM
Annual Electricity Consumption KWh	KWh
Annual Electricity Cost	$
Annual Oil Cost	$
Annual Heating Oil Consumption in Litres	L
Total Annual Energy Cost	$

14. Please describe any significant upgrades/renovations that have been done to your facility

Description of upgrades/renovations	Year of upgrade or renovation	Total cost

15. Refrigeration Plant Expected Renovation

Please fill in chart indicating any future planned refrigeration renovations

Refrigeration renovation year	
Refrigeration renovation value	

16. Building Expected Renovation

Please fill in chart indicating any future planned building renovations

Building renovation year	
Building renovation value	

Please fax the completed questionnaire to Hockey Canada at 613-562-5676 or;

Mail it to; Hockey Canada
801 King Edward Ave, Suite N204
Ottawa, Ontario, K1N 6N5

Or fill it online at www.crfc.ca

Annex

Surface (number and size of ice surfaces within your facility)

	Length (in feet)	Width (in feet)		Length (in feet)	Width (in feet)
Surface #			Surface #		
Surface #			Surface #		
Surface #			Surface #		
Surface #			Surface #		
Surface #			Surface #		
Surface #			Surface #		
Surface #			Surface #		
Surface #			Surface #		
Surface #			Surface #		
Surface #			Surface #		

Dressing rooms (number and size of dressing room within your facility)

	Length (in feet)	Width (in feet)		Length (in feet)	Width (in feet)
Dressing room #			Dressing room #		
Dressing room #			Dressing room #		
Dressing room #			Dressing room #		
Dressing room #			Dressing room #		
Dressing room #			Dressing room #		
Dressing room #			Dressing room #		
Dressing room #			Dressing room #		
Dressing room #			Dressing room #		
Dressing room #			Dressing room #		
Dressing room #			Dressing room #		

Please fax the completed questionnaire to Hockey Canada at 613-562-5676 or;

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Ottawa, Ontario, K1N 6N5

Or fill it online at www.crfc.ca

6.3 Arena Incentive

CANADIAN RECREATION FACILITIES COUNCIL

WIN AN AUTOGRAPHED
NATIONAL JUNIOR TEAM JERSEY

*Complete and return the National Arena Census to Hockey Canada by **October 30, 2005** and be entered in a draw to win a Team Canada jersey autographed by the 2006 Under-20 team who will play in the 2006 World Junior Championships in British Columbia.*
(Facilities which have already returned the survey will automatically be entered in the draw)

IIHF 06 WORLD JUNIOR CHAMPIONSHIP British Columbia Canada

CANADA

For more information please call (613) 562-5677 ext. 2317

6.4 Association Incentive

CRFC
CANADIAN RECREATION FACILITIES COUNCIL

WIN AN AUTOGRAPHED NATIONAL JUNIOR TEAM JERSEY

*The Provincial/Territorial Recreation Facilities Association with the highest percentage of National Arena Census surveys completed by **October 30, 2005** will win a Team Canada jersey autographed by the 2006 Under-20 team who will play in the 2006 World Junior Championships in British Columbia. The winning Province/Territory will be presented with the Team Canada jersey during the 2006 CRFC Annual Forum in Quebec.*

IIHF 06 WORLD JUNIOR CHAMPIONSHIP British Columbia Canada

CANADA

For more information please call (613) 562-5677 ext. 2317

6.5 Information on CRFC Website

The following information was posted on the CRFC website for the duration of the census. This allowed an additional avenue for facilities to complete the census in an on-line format.

Thank you for visiting the CRFC website and taking part in our National Arena Census. The information that you will provide us will be used to update the existing information that we have in our database and will also be used to develop statistics on the state of arenas across Canada. Your participation in this project is extremely important to ensure that the information collected is both accurate and reflective of the needs of Canada's arenas. Additional information will help to ensure that owners and operators are heard at the national level. On behalf of the CRFC and cooperating partners we thank you for taking the time to fill out the survey.

National Arena Census

http://members.hockeycanada.ca/Facility/public/

Canadian Recreation Facilities Council's Provincial/Territorial member associations, Hockey Canada and Natural Resources Canada are in the process of updating the National Arena Database created in 2002. Information gathered will be used to create a National Arena Census.

The information gathered in this questionnaire will enable us to update the existing information and will also be used to develop statistics on the state of arenas across Canada. The National Arena Census will provide a general overview of the type and condition of arenas in Canada and will identify any renovation plans you may have in the near future.

Your participation in this project is extremely important to ensure that information collected is both accurate and reflective of the needs of Canada's arenas. Further the information will help to ensure that owners and operators are heard at the national level.

If you would like to add your arena or update your arena information to assist us with the National Arena Census you can also do so by filling in the information online.

If your arena is listed on the original database you will see information in some of the fields. This reflects information that currently exists on the database and we ask that you verify that this information is correct and fill in any of the empty fields. If corrections are needed please cross the information out and write the new information in the box provided.

If you have any questions or concerns about any of the fields please feel free to contact: Kimberley Smith or Adam Crockatt at Hockey Canada by phone at 613-562-5677 ext: 2317 or by email at arenas@hockeycanada.ca.