



Office of Energy Efficiency  
National Energy Use Database

# 1995 Home Energy Retrofit Survey — Statistical Report

January 2000



Natural Resources  
Canada

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# **1995 Home Energy Retrofit Survey**

## **Statistical Report**



## FOREWORD

This report is the eighth in a series initiated by the Office of Energy Efficiency (OEE) to present the results of surveys on energy end-use in the residential sector. These surveys were developed as a part of the National Energy Use Database (NEUD) initiative.

In 1993, Statistics Canada, on behalf of NRCan, conducted the first Canadian survey on household energy use. The survey was repeated in 1998 and the results will soon be published. Since the first Statistics Canada survey, OEE has carried out small-scale annual surveys or complementary studies. The information thus gathered is used to follow trends in energy-consuming equipment, new house construction and the renovation of existing houses. The following page contains a list of the statistical reports and analyses of these surveys which have been produced, to date, by the NEUD.

This report reviews the results of the *1995 Home Energy Retrofit Survey*. It is a supplement to Statistics Canada's *Homeowner Repair and Renovation Survey*, and has permitted the collection of information on improvements and additions to the thermal envelope.

This statistical report was produced with the collaboration of Victor Tremblay of the firm STATPLUS.

The following people contributed, at one time or another, to the completion of the project: Jacqueline Courtemanche, Jean-François Bilodeau, Maryse Courchesne, Pascal Tanguay, Vadim Belotserkovski, Michel Francoeur, Skip Hayden, Cristobal Miller, Jean-Pierre Moisan and Mark Pearson.

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## List of Reports

### National Energy Use Database Initiative (NEUD)

These reports will be available on our new Web site at: <http://oee.nrcan.gc.ca/dpa/> in April 2000.

- ◆ *1993 Survey of Household Energy Use – National Results*; Catalogue No. M92-85/1994E; ISBN 0-662-22793-X.
- ◆ *1993 Survey of Household Energy Use – Provincial Results*; Catalogue No. M92-96/1995; ISBN 0-662-61978-1.
- ◆ *Survey of Canadian New Household Equipment Purchases, 1994 & 1995 – Statistical Report*; Catalogue No. M92-133/1997; ISBN 0-662-62902-7.
- ◆ *The Household Equipment of Canadians – Features of the 1993 Stock & the 1994 & 1995 Purchases – Analysis Report*; Catalogue No. M92-131/1997; ISBN 0-662-62806-3.
- ◆ *Survey of Houses Built in Canada in 1994 – Statistical Report*; Catalogue No. M92-136/1994; ISBN 0-662-62970-1.
- ◆ *Trends in Energy Characteristics of Homes in Canada – Analysis Report*; Catalogue No. M92-85/1-1997; ISBN 0-662-63165-X .
- ◆ *The 1994 Home Energy Retrofit Survey – Statistical Report*; Catalogue No. M92-135/1994; ISBN 0-662-62969-8.
- ◆ *The 1995 Home Energy Retrofit Survey – Statistical Report*; Catalogue No. M92-135/1995; ISBN 0-662-64000-4.
- ◆ *Energy Consumption of Major Household Appliances Shipped in Canada – Trends from 1990 to 1997*; Catalogue No. M92-176/1999; ISBN 0-662-64615-0.
- ◆ *National Private Vehicle Use Survey - October-December 1994, Statistical Report; Technical Paper prepared for the NEUD, Office of Energy Efficiency.*
- ◆ *Commercial Building Energy Use Survey – Pilot Study, Summary; Technical Paper prepared for the NEUD, Office of Energy Efficiency.*
- ◆ *Total Energy Consumption of Homes Built in 1994; An Estimation Procedure; Technical Paper prepared for the NEUD, Office of Energy Efficiency.*

To obtain a copy of any of these reports, contact:

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## HIGHLIGHTS

- In 1995, approximately one Canadian homeowner in twenty undertook major repairs and renovations to improve residential energy efficiency. The major improvements were insulation upgrades (4.1%), improvements to windows (6.6%) and to doors (5.3%).
- In 1995, 292 000 households (4.1%) carried out improvements to insulation, primarily in exterior walls (1.3%), basement walls (1.2%) and attics (1.1%).
- In 1995, almost half a million Canadian homeowners (6.6%) upgraded the windows of their residences.
- Most frequently, window upgrades involved replacing only some windows: single-paned glass with double-paned (2.0%), same type of pane (1.8%) or, even less frequently, double-paned to triple-paned (0.7%).
- Almost 400 000 Canadian homeowners (5.3%) undertook improvements to their exterior doors.
- Exterior door improvements consisted of replacing wooden doors with metal doors (2.3%), improvements to caulking or weatherstripping (1.2%) or the addition of storm doors (0.9%).
- Approximately, 300 000 homeowners made improvements, additions, or replacements to heating systems (2.9%), system conversions (0.9%) or change of energy source (0.9%).
- In 1995, 2% of owners added a fireplace to their dwelling; while 0.7% of owners improved their existing fireplaces.
- The majority of homeowners (61.8%) indicated that they undertook insulation, door or window repairs and renovations to save energy: maintenance (40.1%), comfort (31.4%), appearance (21.5%) and resale value of the home (7.1%) were the other reasons that were given most often.
- Energy saving is still the most frequently cited reason (57.9%) for changes, additions or upgrades to heating or ventilation equipment, followed by comfort (38.9%), maintenance (27.5%) and improvement of air quality (18.2%).
- The age of the building played an important role in deciding whether or not to undertake energy-saving repairs or renovations. A pattern was observed in which the older the building, the more frequently insulation, window and door projects were undertaken. The same pattern held true for the replacement or improvement of heating equipment.



- In 1995, approximately one homeowner in five (19.3%) installed energy-saving features. The most common items were low-flow shower heads (9.7%), fluorescent units to replace light bulbs (5.8%), programmable thermostats (4.7%), aerators on hot water taps (3.5%), insulating sleeves on hot water pipes (3.0%) or insulating blankets on hot water tanks (2.6%).
- The addition of cost-saving equipment is positively affected by total household income and negatively affected by the age of the head of the household.
- For homeowners who repaired or renovated insulation, doors or windows, the two main sources of information which influenced their choice of materials were personal acquaintances (34.4%) and retail stores and renovation centres (32.6%).
- Four out of ten times (39.0%) the work was carried out by an accredited general contractor.

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**CONTENTS**

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<b>FOREWORD</b>	<b>I</b>
<b>LIST OF REPORTS – NATIONAL ENERGY USE DATABASE INITIATIVE</b>	<b>II</b>
<b>HIGHLIGHTS</b>	<b>IV</b>
<b>INTRODUCTION</b>	<b>1</b>
<b>1. HOMEOWNERS WHO HAVE CARRIED OUT ENERGY SAVING REPAIRS AND RENOVATIONS</b>	<b>2</b>
<b>2. DETAILS OF REPAIRS AND RENOVATIONS UNDERTAKEN BY HOMEOWNERS</b>	<b>8</b>
2.1 Insulation Improvements	8
2.2 Basements	10
2.3 Windows	16
2.4 Exterior Doors	18
2.5 The Main Heating or Ventilation System	20
2.6 Changes to Fireplaces	24
2.7 The Addition of Energy-Saving Features	26
<b>3. MOTIVATION AND SOURCES OF INFORMATION</b>	<b>33</b>
3.1 Reasons Why Homeowners Undertake Repairs and Renovations	33
3.2 Sources of Information Influencing Choice of Materials	40
<b>4. COMPARISON OF 1994 AND 1995 SURVEY RESULTS</b>	<b>43</b>
<b>APPENDIX 1: NOTES ON METHODOLOGY</b>	<b>46</b>
<b>APPENDIX 2: QUESTIONNAIRE</b>	<b>48</b>

---

**LIST OF TABLES**


---

Table 1.1	Number and Percentage of Homeowners Undertaking Energy-Saving Repairs and Renovations	3
Table 1.2	Homeowners Undertaking Energy-Saving Repairs and Renovations by Date of House Construction and Type of Dwelling	6
Table 1.3	Homeowners Undertaking Energy-Saving Repairs and Renovations by Age of the Head of the Household and by Household Income	7
Table 2.2.1	Basements: Heating and Insulation Quality	12
Table 2.2.2	Basements: Heating and Quality of Insulation by Date of Construction	14
Table 2.2.3	Basements: Heating and Quality of Insulation by Type of Dwelling	15
Table 2.5.1	Conversion of Heating Energy Source	22
Table 2.5.2	Conversion of Primary Heating System	23
Table 2.7.1	Number and Percentage of Homeowners Adding Energy-Saving Features	29
Table 2.7.2	Homeowners Adding Energy-Saving Features by Date of Construction and Type of Dwelling	31
Table 2.7.3	Homeowners Adding Energy-Saving Features by Age of Head of Household and Household Income	32
Table 3.1.1	Reasons Why Homeowners Undertake Insulation, Door or Window Repairs and Renovations or Make Changes, Additions and Improvements to Heating and Ventilating Equipment	34
Table 3.1.2	Reasons Why Homeowners Undertake Insulation, Door or Window Repairs and Renovations by Date of Construction and Type of Dwelling	36

Table 3.1.3	Reasons Why Homeowners Undertake Insulation, Door or Window Repairs and Renovations by Age of Head of Household and Household Income	37
Table 3.1.4	Reasons Why Homeowners Make Changes, Additions and Improvements to Heating and Ventilating Equipment by Date of Construction and Type of Dwelling	38
Table 3.1.5	Reasons Why Homeowners Make Changes, Additions and Improvements to Heating and Ventilating Equipment by Age of Head of Household and Household Income	39
Table 3.2.1	Information Sources Influencing Choice of Materials for Homeowners Undertaking Insulation, Door or Window Repairs and Renovations and How the Work Was Completed	41
Table 4.1	Energy-Saving Repairs and Renovations Completed by Homeowners on their Residences in 1994 and in 1995	44
Table 4.2	Reasons Why Homeowners Undertook Energy-Saving Repairs and Renovations on their Homes in 1994 and 1995	45

## LIST OF GRAPHS

---

Graph 1	Repairs and Renovations Undertaken by Date of House Construction, Canada	5
Graph 2.7	Proportion of Homeowners Adding Energy-Saving Features	27

**LIST OF DIAGRAMS**

---

Diagram 2.1	Homeowners Undertaking Repairs and Renovations to Improve Insulation	9
Diagram 2.2	Basements: Heating and Insulation Quality	11
Diagram 2.3	Homeowners Undertaking Window Improvements	17
Diagram 2.4	Homeowners Undertaking Improvements to Exterior Doors	19
Diagram 2.5.1	Homeowners Undertaking Improvements to, or Replacement of, their Principal Heating and Ventilation System	21
Diagram 2.6	Homeowners Undertaking Fireplace Modifications	25
Diagram 2.7.1	Homeowners Adding Energy-Saving Features	28



## INTRODUCTION

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The *Home Energy Retrofit Survey* is an initiative of the Office of Energy Efficiency (OEE) and represents a supplement to the *1995 Homeowner Repair and Renovations Survey* (HRRS). This latter survey was completed as a supplement to the *March 1996 Labour Force Survey*.

The purpose of the Home Energy Retrofit Survey is to measure improvements affecting the energy efficiency of Canadian homes.

This report's first chapter gives a broad picture of the repairs and renovations undertaken by owner-occupants to make their residences more energy-efficient. The second chapter gives the details of these improvements. The Appendices outline the methodology employed by Statistics Canada and provide a copy of the questionnaire used for the survey.

## 1. HOMEOWNERS WHO HAVE CARRIED OUT ENERGY SAVING REPAIRS AND RENOVATIONS

---

In 1995, one homeowner in twenty undertook significant work to improve the energy efficiency of his or her residence. The major improvements were insulation upgrades (4.1%), improvements to windows (6.6%) or to doors (5.3%).

Only 1-3% of homeowners undertook heating-system repairs, upgrades, additions or replacements: the addition of a fireplace, or upgrading an existing fireplace (2.7%), the upgrading or replacement of heating equipment (2.9%), system conversions (0.9%) or change of energy source (0.9%).

Only 0.6% of households replaced their hot-water system with a high-efficiency unit.

In 1995, about one household in five (19.3%) added energy-saving features. These included low-flow showerheads (9.7%) or the replacement of lightbulbs with fluorescent units (5.8%).

These national trends are reflected relatively consistently in the provinces, though some atypical results were observed. For example, energy-saving features are used less frequently in New Brunswick (11.8%) and in Saskatchewan (12.2%). On the other hand, more windows are upgraded in Nova Scotia (10.3%) and Newfoundland (10.9%), than in other provinces. In the latter province 11.0% of homeowners also undertook exterior door improvements. East of Ontario, the replacement of hot water tanks with high-efficiency units was non-existent.

Clearly, the age of the building plays an important role in the decision whether or not to undertake energy-saving work. An increase in the frequency of projects designed to improve insulation, windows, and doors was systematically observed (see graph) as a function of building age. Similarly, although to a lesser extent, this trend was observed in the improvement or replacement of heating equipment.

Finally, the age of the head of the household and total household income have a noticeable effect on the proportion of households undertaking energy-efficiency-related work. This effect is very apparent concerning the addition of energy-saving features: the percentage drops from 25.1% when the head of the household is younger than 35, to 12.9% when he or she is 65 or older. When household income is below \$30 000, only 14.7% of households added energy-saving equipment, versus over 20% in other households.



**Table 1.1**  
**Number and Percentage of Homeowners**  
**Undertaking Energy-Saving Repairs and Renovations**

***Canada and Provinces***

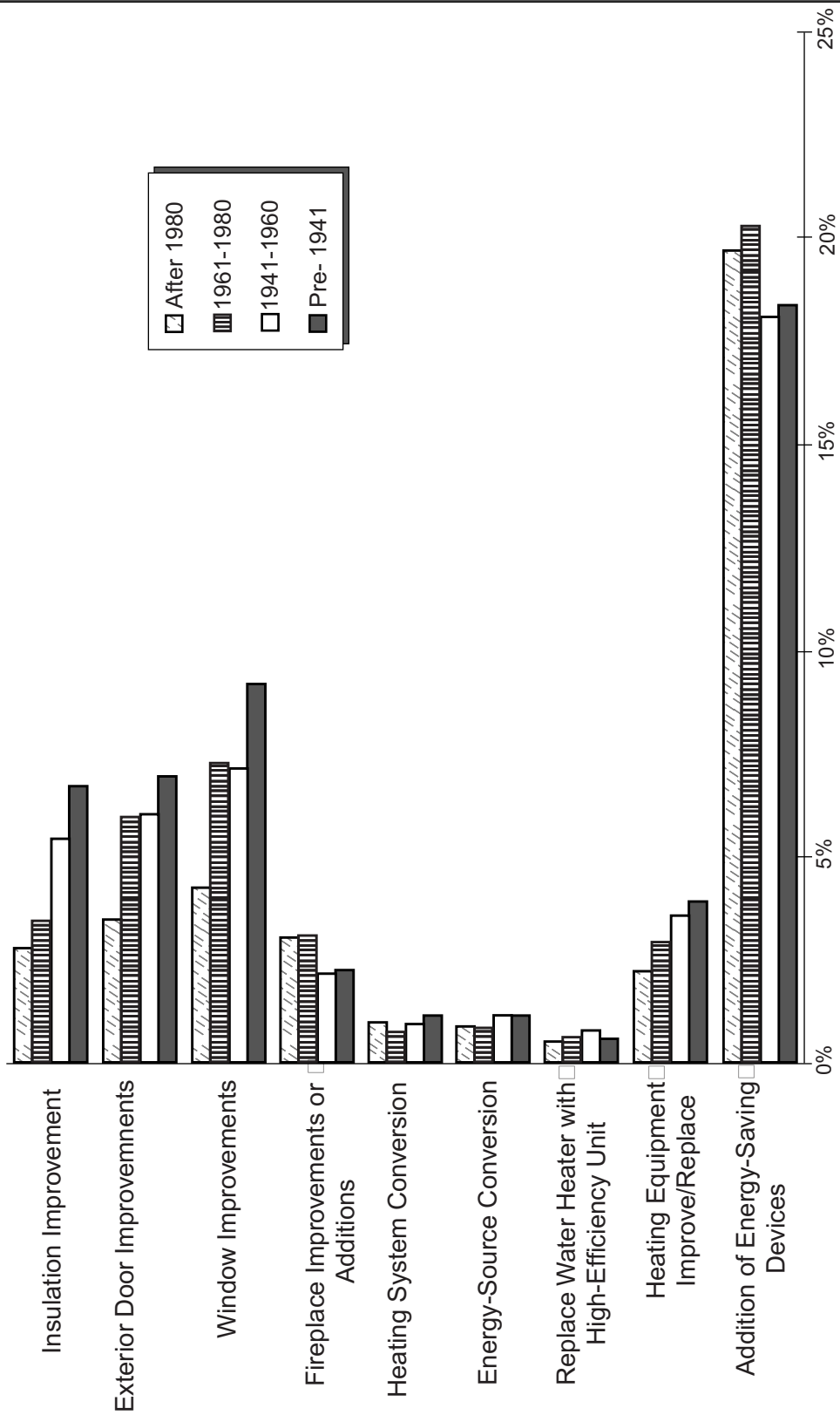
	Canada	New-found-land	Prince Edward Island	Nova Scotia
<b>Number of Owners (000's)</b>	<b>7 206</b>	<b>153</b>	<b>36</b>	<b>251</b>
<b>Type</b>				
Insulation Improvements	292	7	2	14
Exterior Door Improvements	384	17	2	18
Window Improvements	475	17	3	26
Fireplace Improvements or Additions	194	3	0	9
Heating System:				
System Conversion	63	2	1	4
Energy Source Conversion	64	1	0	6
Equipment Improvement/Replacement	210	3	1	11
Addition of Energy-Saving Features	1 391	24	6	53
Replacement of Domestic Hot Water System with a High-Efficiency Unit	41	0	0	0
<b>Total Owners</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Type</b>				
Insulation Improvements	4.1%	4.7%	4.9%	5.6%
Exterior Door Improvements	5.3%	11.0%	4.2%	7.3%
Window Improvements	6.6%	10.9%	7.1%	10.3%
Fireplace Improvements or Additions	2.7%	2.1%	0.7%	3.6%
Heating System:				
System Conversion	0.9%	1.6%	1.5%	1.7%
Energy Source Conversion	0.9%	0.9%	0.8%	2.2%
Equipment Improvement/Replacement	2.9%	2.1%	3.2%	4.3%
Addition of Energy-Saving Features	19.3%	15.6%	15.9%	21.1%
Replacement of Domestic Hot Water System with a High-Efficiency Unit	0.6%	0.0%	0.0%	0.0%

**Table 1.1**  
**Number and Percentage of Homeowners**  
**Undertaking Energy-Saving Repairs and Renovations**

***Canada and Provinces***

New Brunswick	Québec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
<b>211</b>	<b>1 656</b>	<b>2 672</b>	<b>290</b>	<b>271</b>	<b>699</b>	<b>967</b>
9	63	115	11	10	30	29
10	83	137	17	16	38	41
12	92	201	15	14	43	49
4	24	95	2	6	12	36
2	8	32	1	1	2	8
1	7	37	1	2	0	9
4	37	94	8	7	15	26
25	291	563	48	33	130	212
0	1	29	2	1	6	2
100%	100%	100%	100%	100%	100%	100%
4.3%	3.8%	4.3%	3.6%	3.7%	4.3%	3.0%
4.7%	5.0%	5.1%	5.8%	6.0%	5.5%	4.2%
5.9%	5.5%	7.5%	5.0%	5.2%	6.1%	5.1%
2.0%	1.4%	3.5%	0.7%	2.1%	1.7%	3.7%
0.9%	0.5%	1.2%	0.4%	0.4%	0.3%	0.9%
0.3%	0.4%	1.4%	0.2%	0.6%	0.0%	0.9%
2.0%	2.2%	3.5%	2.8%	2.6%	2.1%	2.7%
11.8%	17.6%	21.1%	16.6%	12.2%	18.6%	22.0%
0.1%	0.1%	1.1%	0.9%	0.3%	0.8%	0.3%

**Graph 1 : Repairs and Renovations Undertaken  
by Date of House Construction**  
Canada



**Table 1.2**  
**Homeowners Undertaking Energy-Saving**  
**Repairs and Renovations by Date of House Construction**  
**and Type of Dwelling**

**Canada**

<b>Date of House Construction</b>	Total	Before 1941	1941 - 1960	1961 - 1980	After 1980
<b>Number of Owners (000's)</b>	7 206	1 062	1 375	2 723	2 046
Insulation Improvements	4.1%	6.6%	5.4%	3.4%	2.7%
Exterior Door Improvements	5.3%	6.8%	5.9%	5.9%	3.4%
Window Improvements	6.6%	9.1%	7.1%	7.2%	4.2%
Improvements or Additions to Fireplaces	2.7%	2.2%	2.1%	3.0%	2.9%
Heating System:					
System Conversion	0.9%	1.1%	0.9%	0.7%	0.9%
Energy Source Conversion	0.9%	0.9%	1.1%	0.8%	0.9%
Equipment Improvement/Replacement	2.9%	3.8%	3.5%	2.9%	2.2%
Addition of Energy Saving Features	19.3%	18.3%	18.1%	20.1%	19.6%
Replacement of Domestic Hot Water System with a High-Efficiency Unit	0.6%	0.5%	0.7%	0.6%	0.5%
<b>Type of Dwelling</b>	Total	Single-Family House	Attached Houses*	Duplex*	Apartment*
<b>Numbers of Owners (000's)</b>	7 206	6 042	632	133	399
Insulation Improvements	4.1%	4.2%	2.4%	8.9%	2.3%
Exterior Door Improvements	5.3%	5.4%	5.9%	8.6%	2.8%
Window Improvements	6.6%	6.7%	7.0%	8.0%	4.1%
Improvements or Additions to Fireplaces	2.7%	2.9%	1.6%	3.0%	1.2%
Heating System:					
System Conversion	0.9%	1.0%	0.4%	1.5%	0.1%
Energy Source Conversion	0.9%	0.9%	0.8%	1.6%	0.1%
Equipment Improvement/Replacement	2.9%	3.1%	2.1%	5.8%	1.0%
Addition of Energy-Saving Features	19.3%	19.3%	21.6%	22.4%	14.1%
Replacement of Domestic Hot Water System with a High-Efficiency Unit	0.6%	0.6%	0.4%	0.3%	0.0%

\*For these categories, estimates below 2% have high coefficients of variation (CV) and must be used with care.

**Table 1.3**  
**Homeowners Undertaking Energy-Saving Repairs and**  
**Renovations by Age of the Head of the Household**  
**and by Household Income**

**Canada**

<b>Age of Head of Household</b>	Total	Under 35 yrs.	35 to 49 yrs.	50 to 64 yrs.	65 yrs. and over
<b>Number of Owners (000's)</b>	7 206	1 124	2 661	1 853	1 568
Insulation Improvements	4.1%	7.3%	4.8%	3.0%	1.7%
Exterior Door Improvements	5.3%	7.1%	5.9%	4.7%	3.9%
Window Improvements	6.6%	7.8%	7.2%	6.0%	5.3%
Fireplace Improvements or Additions	2.7%	3.2%	2.6%	3.1%	2.0%
Heating System:					
System Conversion	0.9%	1.6%	0.8%	0.8%	0.4%
Energy Source Conversion	0.9%	1.5%	0.9%	0.7%	0.8%
Equipment Improvement/Replacement	2.9%	3.1%	3.1%	2.9%	2.4%
Addition of Energy-Saving Features	19.3%	25.1%	21.5%	18.1%	12.9%
Replacement of Domestic Hot Water System with a High-Efficiency Unit	0.6%	0.9%	0.7%	0.5%	0.2%
<b>Household Income</b>	Total	Less Than \$30 000	\$30 000 to \$50 000	\$50 000 to \$80 000	\$80 000 and Over
<b>Number of Owners (000's)</b>	7 206	1 813	1 920	2 126	1 347
Insulation Improvements	4.1%	2.7%	4.0%	5.2%	4.2%
Exterior Door Improvements	5.3%	4.9%	5.3%	6.3%	4.9%
Window Improvements	6.6%	5.9%	5.9%	7.6%	7.5%
Fireplace Improvements or Additions	2.7%	1.6%	1.9%	3.1%	4.7%
Heating System:					
System Conversion	0.9%	0.7%	0.9%	0.9%	1.0%
Energy Source Conversion	0.9%	0.8%	0.9%	0.9%	1.0%
Equipment Improvement/Replacement	2.9%	2.5%	3.2%	2.9%	3.2%
Addition of Energy-Saving Features	19.3%	14.7%	20.5%	21.9%	21.3%
Replacement of Domestic Hot Water System with a High-Efficiency Unit	0.6%	0.3%	0.5%	0.6%	1.0%

## **2. DETAILS OF REPAIRS AND RENOVATIONS UNDERTAKEN BY HOMEOWNERS**

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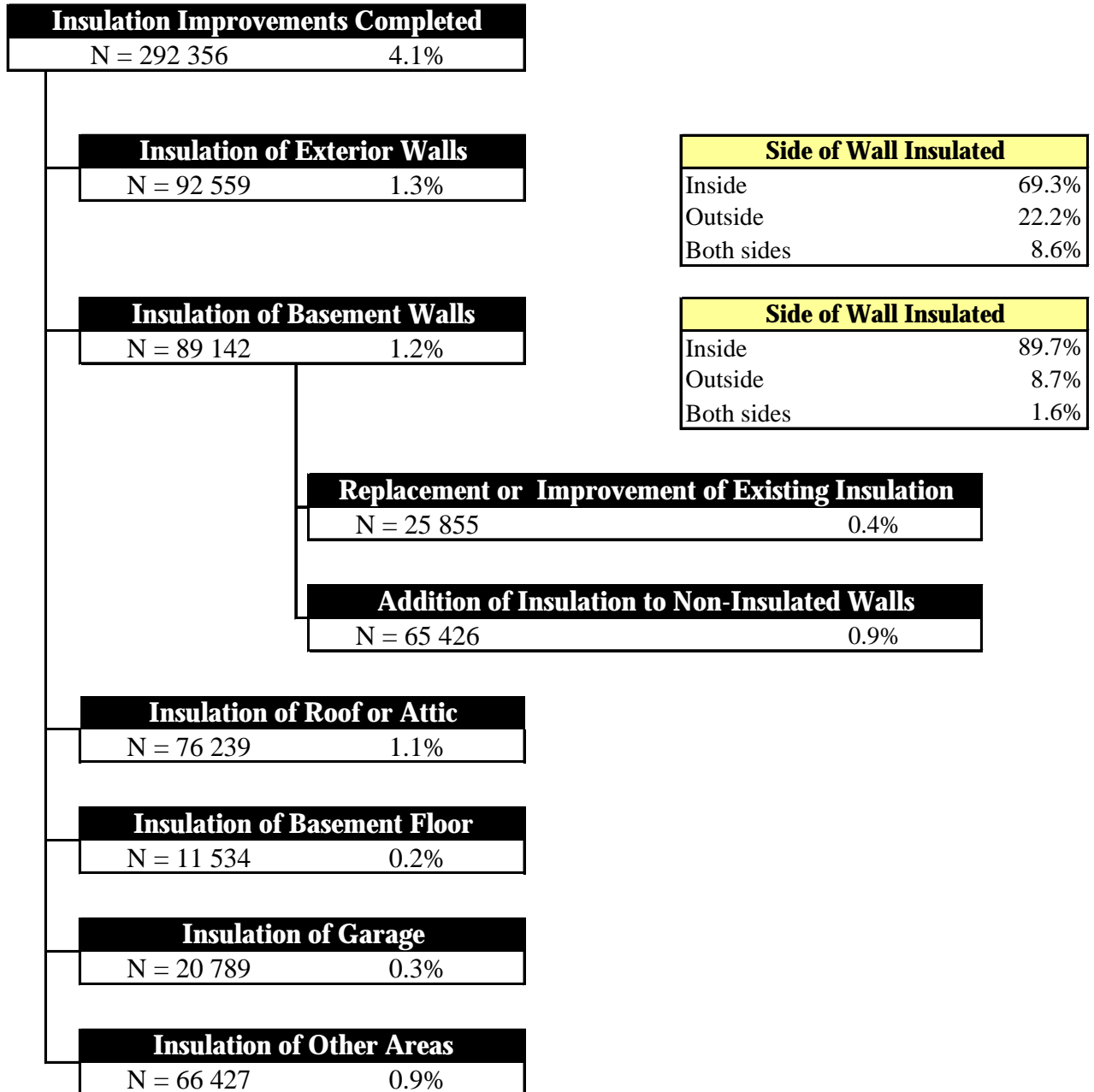
### **2.1. Insulation Improvements**

Of the 292 000 households (4.1%) that undertook insulation improvements in 1995, almost all insulated exterior walls (1.3%), basement walls (1.2%), and attics (1.1%).

Seven times out of ten (69.3%) the owner insulated exterior walls from the interior. Of the remainder, 22.2% insulated from the outside and 8.6% insulated both sides of the wall.

Basement walls were most often improved by adding insulation to uninsulated walls (0.9%) or by replacing existing insulation (0.4%). Nine times out of ten, the insulation was applied from the inside.

**Diagram 2.1**  
**Homeowners Undertaking Repairs and Renovations to Improve Insulation**  
**- Canada -**



## 2.2. Basements

In 1995, eight out of ten (79.4%) owner-occupied dwellings had basements, and a little more than seven in ten (71.2%) had heated basements. Of the heated basements, 62.5% were fully insulated. However, almost one heated basement in five (18.8%) had no, or very limited insulation.

In the same year, 1.3% of owner-occupied households undertook insulation work in their basements. In most cases (1.2%) this consisted of wall insulation with the work usually being done from the inside (89.7%) and generally involving a new installation of insulation (67.0%), as compared to a replacement (26.5%).

The frequency of basement insulation work carried out in 1995 was quite consistent from one province to another. By comparison, the proportion of fully-insulated heated basements, in 1995, varied from a little more than one out of two in Ontario (52.1%) and in Prince Edward Island (54.4%) to seven in ten in Quebec (70.6%), in Manitoba (70.5%) and in Alberta (71.4%).

In 1995, the proportion of fully-insulated heated basements varied from 39.0% for dwellings built before 1941, to 70.2% for those built after 1980. Just less than one heated basement in two (45.3%) in dwellings built before 1941 had even very limited insulation.



**Diagram 2.2  
Basements:  
Heating and Insulation Quality  
- Canada -**

<b>Total Homeowners</b>	
N = 7 206 444	100.0%

<b>Dwellings with Basements</b>	
N = 5 722 477	79.4%

<b>Heated Basements Pre-1995</b>	
N = 5 354 225	74.3%

<b>Heated Basements in 1995</b>	
N = 5 131 889	71.2%

<b>Unheated Basements in 1995</b>	
N = 597 835	8.3%

<b>Basement Insulation Projects</b>	
N = 94 039	1.3%

<b>Wall Insulation</b>	
N = 89 166	1.2%

<b>Floor Insulation</b>	
N = 11 537	0.2%

<b>Insulation Quality</b>	
Very Limited or None	18.8%
Upper Portion of Walls	18.7%
Full Insulation	62.5%

<b>Insulation Quality</b>	
Very Limited or None	70.1%
Upper Portion of Walls	14.3%
Full Insulation	15.6%

<b>Side of Wall Insulated</b>	
Inside	89.7%
Outside	8.7%
Both Sides	1.6%
<b>Replacement or addition</b>	
Replacement	26.5%
New Installation	67.0%

**Table 2.2.1**  
**Basements:**  
**Heating and Insulation Quality**

***Canada and Provinces***

	Canada	New-found-land	Prince Edward Island	Nova Scotia
<b>Number of Dwellings With Basements (000's)</b>	<b>5 722</b>	<b>110</b>	<b>31</b>	<b>195</b>
<b>Basement Characteristics</b>				
Basements Heated Pre-1995	93.6%	92.7%	98.0%	95.9%
Basements Heated in 1995	89.7%	80.9%	53.4%	74.2%
Basements Unheated in 1995	10.3%	19.1%	46.6%	25.8%
Basement Insulation Projects	1.6%	2.5%	1.8%	2.2%
<b>Insulation Quality</b>				
<b>Basements Heated in 1995</b>				
Very Limited or Non-Existant	18.8%	16.3%	27.0%	27.6%
Upper Portion of Walls	18.7%	14.4%	18.6%	15.7%
Fully Insulated	62.5%	69.2%	54.4%	56.7%
<b>Basements Unheated in 1995</b>				
Very Limited or Non-Existant	70.1%	78.2%	77.5%	82.0%
Upper Portion of Walls	14.3%	8.2%	16.4%	9.5%
Fully Insulated	15.6%	13.7%	6.1%	8.5%

**Table 2.2.1**  
**Basements:**  
**Heating and Insulation Quality**

***Canada and Provinces***

New Brunswick	Québec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
<b>161</b>	<b>1 353</b>	<b>2 332</b>	<b>250</b>	<b>241</b>	<b>583</b>	<b>466</b>
89.6%	89.4%	95.4%	95.3%	96.0%	95.0%	93.9%
76.8%	94.5%	87.4%	94.1%	92.1%	95.3%	91.5%
23.2%	5.5%	12.6%	5.9%	7.9%	4.7%	8.5%
2.2%	1.3%	1.8%	1.7%	1.6%	1.1%	1.2%
24.1%	12.1%	22.8%	17.5%	24.8%	17.8%	14.4%
13.8%	17.3%	25.1%	12.0%	6.8%	10.8%	17.4%
62.1%	70.6%	52.1%	70.5%	68.4%	71.4%	68.2%
75.9%	44.0%	75.9%	58.2%	75.7%	75.9%	41.1%
11.6%	24.3%	12.9%	8.7%	5.6%	4.1%	31.5%
12.4%	31.7%	11.2%	33.1%	18.7%	19.9%	27.4%

**Table 2.2.2**  
**Basements: Heating and Quality of Insulation**  
**by Date of Construction**

**Canada**

<b>Date of House Construction</b>	<b>Total</b>	<b>Before 1941</b>	<b>1941 - 1960</b>	<b>1961 - 1980</b>	<b>After 1980</b>
<b>Number of Dwellings with Basements (000's)</b>	5 722	848	1 175	2 175	1 524
Basements Heated Pre-1995	93.6%	94.4%	93.4%	93.6%	93.2%
Basements Heated in 1995	89.7%	71.3%	88.2%	94.0%	94.8%
Basements Unheated in 1995	10.3%	28.7%	11.8%	6.0%	5.2%
Basement Insulation Projects	1.6%	2.1%	2.1%	1.3%	1.5%
<b>Insulation Quality</b>					
<b>Basements Heated in 1995</b>					
Very Limited or Non-Existent	18.8%	45.3%	30.0%	14.0%	6.4%
Upper Portion of Walls	18.7%	15.6%	17.0%	17.2%	23.3%
Fully Insulated	62.5%	39.0%	53.0%	68.8%	70.2%
<b>Basements Unheated in 1995</b>					
Very Limited or Non-Existent	70.1%	87.4%	72.8%	56.6%	34.3%
Upper Portion of Walls	14.3%	7.7%	12.7%	16.5%	33.7%
Fully Insulated	15.6%	4.9%	14.6%	26.9%	32.0%

**Table 2.2.3**  
**Basements: Heating and Quality of Insulation**  
**by Type of Dwelling**

**Canada**

	Total	Single- Family House	Attached Houses	Duplex	Apartment
<b>Number of Dwellings with Basements (000's)</b>	5 722	4 997	510	102	113
Basements Heated Pre-1995	93.6%	93.9%	92.3%	91.1%	88.3%
Basements Heated in 1995	89.7%	89.4%	91.2%	90.9%	93.2%
Basements Unheated in 1995	10.3%	10.6%	8.8%	9.1%	6.8%
Basement Insulation Projects	1.6%	1.7%	0.8%	4.2%	2.1%
<b>Insulation Quality</b>					
<b>Basements Heated in 1995</b>					
Very Limited or Non-Existent	18.8%	18.8%	19.0%	15.3%	20.6%
Upper Portion of Walls	18.7%	18.5%	23.9%	14.0%	10.0%
Fully Insulated	62.5%	62.7%	57.2%	70.7%	69.4%
<b>Basements Unheated in 1995</b>					
Very Limited or Non-Existent	70.1%	71.4%	52.3%	71.2%	79.9%
Upper Portion of Walls	14.3%	14.0%	18.5%	9.4%	20.1%
Fully Insulated	15.6%	14.6%	29.2%	19.4%	0.0%

## 2.3. Windows

In 1995 almost a half million Canadian homeowners (6.6%) undertook window improvements in their homes.

The work generally involved replacing single-paned windows with double-paned ones (2.0%), replacing windows with others having the same type of pane (1.8%), or improving weatherstripping or caulking (2.3%).

Note that window replacement usually involves only a portion of the windows. Of those owners who replaced windows with others having the same type of pane, 56% replaced less than half of their windows. Half (50%) replaced single-paned windows with double-paned units.

Only a small minority of homeowners (0.7%) are replacing double-paned windows with triple-paned units.

Few homeowners (0.2%) added storm windows to single-paned windows in 1995.

**Diagram 2.3**  
**Homeowners Undertaking**  
**Window Improvements**  
**- Canada -**

**Window Improvements Undertaken**  
 N = 474 766 6.6%

**Replace: Single Panes with Double**  
 N = 147 064 2.0%

Number of Windows	
Only One	19%
Less than Half	31%
Half	13%
Most	13%
All	26%

**Replace: Double Panes with Triple**  
 N = 52 127 0.7%

Number of Windows	
Only One	26%
Less than Half	32%
Half	12%
Most	11%
All	19%

**Replace: Same Type of Panes**  
 N = 131 704 1.8%

Number of Windows	
Only One	29%
Less than Half	27%
Half	11%
Most	9%
All	24%

**Improve: Caulking or Weatherstripping**  
 N = 167 404 2.3%

Number of Windows	
Only One	8%
Less than Half	25%
Half	12%
Most	15%
All	39%

**Installation of Storm Windows**  
 N = 17 128 0.2%

Number of Windows	
Only One	21%
Less than Half	27%
Half	17%
Most	10%
All	26%

**Other Window Improvements**  
 N = 55 987 0.8%

## 2.4. Exterior Doors

Almost 400 000 Canadian homeowners (5.3%) made improvements to the exterior doors of their houses in 1995.

The work included replacing wooden doors with metal doors (2.3%), replacing other types of doors (0.8%), improving caulking and weatherstripping (1.2%), adding a storm door (0.9%) or other kinds of improvements not specified in the survey (0.6%).

In most cases the work involved just one exterior door: in 69% of cases, a wood door was replaced by a metal door, and in 70%, a storm door was added.



**Diagram 2.4**  
**Homeowners Undertaking**  
**Improvements to Exterior Doors**  
**- Canada -**

<b>Improvements to Exterior Doors</b>	
N = 383 570	5.3%

<b>Replace: Wood Doors with Metal</b>	
N = 167 581	2.3%

<b>Replace: Other Types of Doors</b>	
N = 59 883	0.8%

<b>Improve: Caulking or Weatherstripping</b>	
N = 86 436	1.2%

<b>Installation of Storm Doors</b>	
N = 61 272	0.9%

<b>Other Improvements to Doors</b>	
N = 43 483	0.6%

<b>Number of Doors</b>	
One	69%
All	19%
Other	12%

<b>Number of Doors</b>	
One	38%
All	51%
Other	10%

<b>Number of Doors</b>	
One	70%
All	22%
Other	8%

## 2.5. The Main Heating or Ventilation System

Approximately 200 000 homeowners (2.9%) upgraded or replaced their heating systems in 1995.

Most installed a new furnace (45.9%), most often a new medium- or high-efficiency gas furnace (31.9%).

The installation of a heat pump still remains relatively rare (0.3%). This is also the case for the installation of central ventilation systems (0.3%). Two out of three installations of central ventilation systems included a heat-recovery system (65%).

In 1995, 0.9% of homeowners changed the energy source of their principal heating system. The most common original energy source was electricity (39.2%), or oil (28.5%). Among those who changed fuel or energy source, 54.3% opted for natural gas while 20.2% chose oil. Wood (8.0%) and electricity (8.6%) were chosen less often. Among those who had used oil, and changed their energy source, four out of five (80.3%) opted for natural gas.

A comparable number (0.9%) of homeowners changed their heating system. Most often the old system consisted of baseboard heaters (39.9%) or a central (gravity) hot-air system (28.1%). Almost two out of three who undertook a conversion chose a new forced hot-air system (62.7%).

**Diagram 2.5.1**  
**Homeowners Undertaking Improvements**  
**to, or Replacement of, their Principal**  
**Heating and Ventilation System**  
**- Canada -**

<b>Replacement/Improvement of Heating System</b>	
N = 209 737	2.9%

<b>Installations Undertaken</b>	
Burner Replacement	6.1%
Installation of a New Furnace (High- or Medium-Efficiency Gas)	45.9%
Addition of Electric Baseboard Heaters	5.8%

<b>Addition of a Heat Pump</b>	
N = 19 299	0.3%

<b>Installation of a Central Ventilating System</b>	
N = 19 518	0.3%

<b>With Heat Recovery</b>
65%

**Table 2.5.1**  
**Conversion of Heating Energy Source**

**Canada**

	<b>Current Principle Energy Source</b>				
	Total	Electricity	Gas	Oil	Other**
<b>Number of Owners (000's)</b>	7 173	1 943	3 559	1 116	555
<b>Changed Energy Source in 1995?</b>					
Yes	0.9%	0.3%	1.0%	1.2%	1.9%
No	99.1%	99.7%	99.0%	98.8%	98.1%
<b>Dwellings with a Change of Energy Source (000's)</b>	64	5	35	13	11
<b>Former Energy Source*</b>					
Electricity	39.2%	***	41.4%	42.2%	48.5%
Natural Gas	2.0%	***	0.0%	2.1%	5.5%
Oil	28.5%	***	42.1%	0.0%	23.1%
Wood	14.6%	***	3.2%	24.5%	14.1%
Other**	15.8%	***	13.3%	31.2%	8.8%

	<b>Former Principle Energy Source</b>				
	Total	Electricity	Wood	Oil	Other**
<b>Number of Owners (000's)</b>	7 173	1 963	380	1 121	3 709
<b>Changed Energy Source in 1995?</b>					
Yes	0.9%	1.3%	2.5%	1.6%	0.3%
No	99.1%	98.7%	97.6%	98.4%	99.7%
<b>Dwellings with a Change of Source (000's)</b>	64	25	9	18	12
<b>New Energy Source*</b>					
Electricity	8.6%	0.0%	38.0%	6.0%	7.8%
Natural Gas	54.3%	57.4%	12.0%	80.3%	40.8%
Oil	20.2%	21.7%	33.8%	0.0%	37.8%
Wood	8.0%	13.3%	0.0%	9.7%	0.0%
Other**	8.9%	7.6%	16.3%	4.0%	13.6%

\*For these cross tabulations, estimates under 15% have high coefficients of variation (CV) and must be used with care.

\*\*Includes mixed sources.

\*\*\*Insufficient sample size

**Table 2.5.2**  
**Conversion of Primary Heating System**

**Canada**

	<b>Current Primary System</b>				
	Total	Electricity	Hot Air	Hot Water	Other
<b>Number of Owners (000's)</b>	7 175	1 618	4 676	576	305
<b>Changed Energy Source in 1995?</b>					
Yes	0.9%	0.6%	0.8%	1.3%	2.3%
No	99.1%	99.4%	99.2%	98.7%	97.7%
<b>Dwellings with a Change of Energy System (000's)</b>	62	9	39	7	7
<b>Former Primary System*</b>					
Hot Water	5.0%	***	7.1%	***	***
Hot Air	28.1%	***	22.0%	***	***
Stove Heater (incl. Wood)	11.5%	***	11.6%	***	***
Electric Baseboard Heaters	39.9%	***	43.2%	***	***
Other	15.6%	***	16.2%	***	***
	<b>Former Primary System</b>				
	Total	Electricity	Hot Air	Stove	Other
<b>Number of Owners (000's)</b>	7 175	1 634	4 654	264	623
<b>Changed System in 1995?</b>					
Yes	0.9%	1.5%	0.4%	2.7%	2.1%
No	99.1%	98.5%	99.6%	97.3%	97.9%
<b>Dwellings with a Change of System (000's)</b>	62	25	17	7	13
<b>Current Primary System*</b>					
Hot Water	11.7%	11.0%	19.2%	***	4.7%
Hot Air	62.7%	67.9%	49.2%	***	70.8%
Stove Heater (incl. Wood)	6.6%	13.3%	4.6%	***	0.0%
Electric Baseboard Heaters	14.5%	0.0%	24.1%	***	24.5%
Other	4.6%	7.9%	3.0%	***	0.0%

\*For these cross tabulations, estimates under 15% have high coefficients of variation (CV) and must be used with care.

\*\*\*Insufficient sample size.

## 2.6. Changes to Fireplaces

In 1995, 2% of owners added a fireplace to their dwelling. The new fireplace used wood (1.2%) a little more often than natural gas or propane (0.8%).

Wood-burning fireplaces were predominantly of masonry construction (62.6%). A few of these were high-efficiency units, (12.0%), some with glass doors (26.8%).

New natural gas or propane fireplaces were more often energy-efficient: 28.9% had natural draft and glass doors, 11.9% were power vented with glass doors, and 43.0% had a high-efficiency direct vent.

Some owners (0.8%) improved or added to their existing fireplaces. Of these, 44.0% converted their old wood-burning fireplace to a gas fireplace, 13% installed an insert in their wood-burning fireplace and, 7.7% installed glass doors on their wood-burning unit.

## Diagram 2.6 Homeowners Undertaking Fireplace Modifications - Canada -

<b>Addition of a Fireplace</b>	
N = 141 674	2.0%

<b>Wood-Burning Fireplace</b>	
N = 84 360	1.2%

<b>Propane or Natural-Gas Fireplace</b>	
N = 57 314	0.8%

<b>Improve or Add-On to a Fireplace</b>	
N = 55 063	0.8%

<b>Characteristics</b>	
Masonry	62.6%
Metal Prefab Unit	22.6%
With Glass Doors	26.8%
High-Efficiency Model	12.0%

<b>Characteristics</b>	
With Cast, Artificial Logs	18.9%
Natural Draft with Glass Doors	28.9%
Mechanical Draft with Glass Doors	11.9%
High-Efficiency Direct-Vent Fireplace	43.0%

<b>Description</b>	
Insert in a Wood-Burning Fireplace	13.0%
Glass Doors on a Wood-Burning Fireplace	7.7%
Conversion: from Wood to Gas	44.0%
Other Improvements or Add-Ons	37.5%

## 2.7. The Addition of Energy-Saving Features

One homeowner in five (19.3%) purchased energy-saving features in 1995.

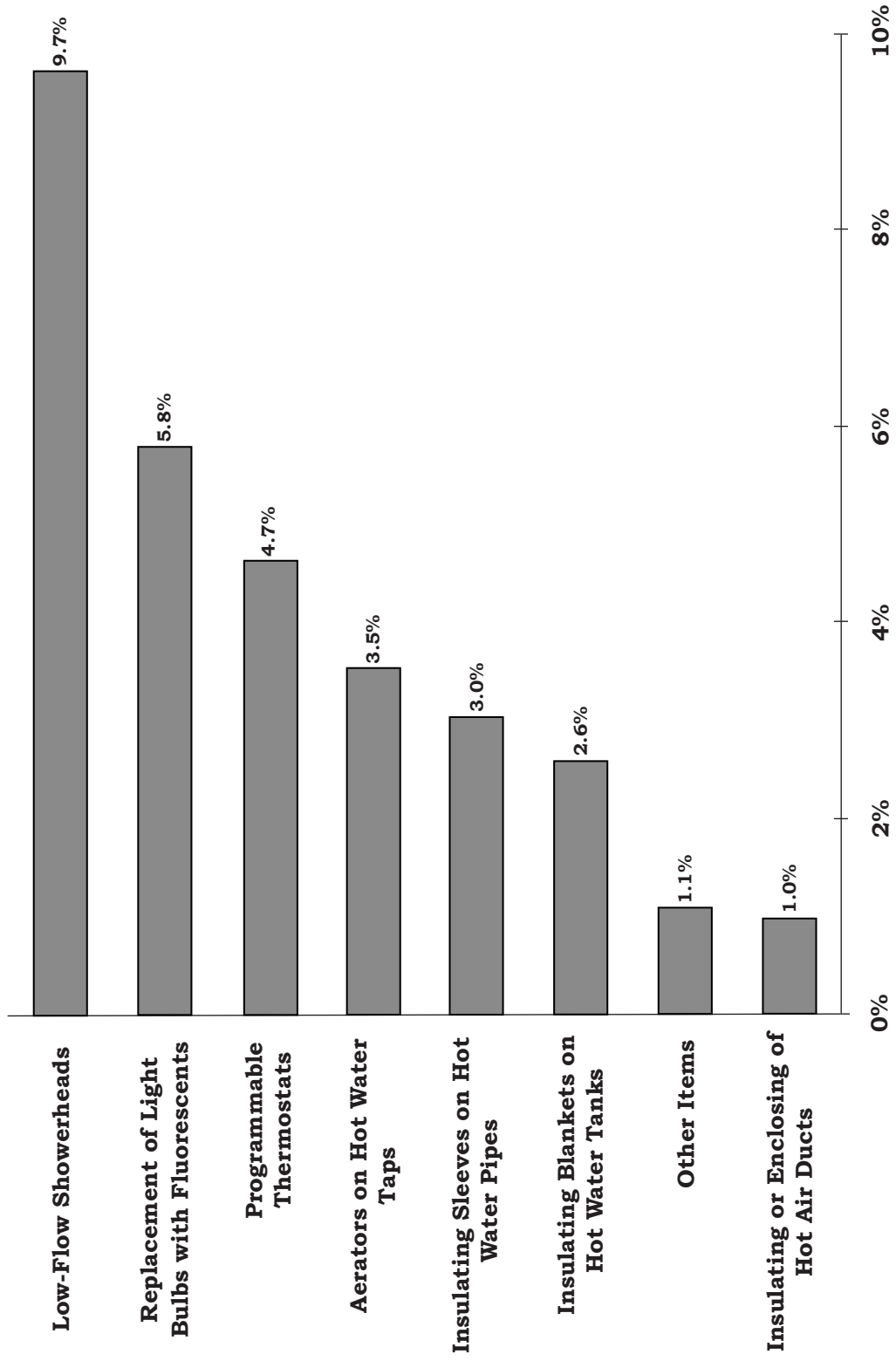
Among the most common items were low-flow shower heads (9.7%), fluorescent units to replace light bulbs (5.8%), programmable thermostats (4.7%), aerators on hot water taps (3.5%), insulating sleeves on hot water pipes (3.0%) or insulating blankets on hot water tanks (2.6%).

Fewer energy-saving features were added in New Brunswick (11.8%) and in Saskatchewan (12.2%) than in other Canadian provinces. These two provinces regularly posted incidences lower than the national average for all items included in the survey. By comparison, British Columbia had the highest frequency of low-flow showerhead installation in Canada (12.8%), of aerators on hot water taps (7.7%) and of insulating wraps on hot water tanks (6.9%). The substitution of fluorescent units for regular light bulbs was seen most often in Prince Edward Island (8.6%).

Although there was no link between the year in which the dwelling was built and the purchase of energy-saving features, the age of the head of the household and total household income had some effect on this behaviour. The percentages of those undertaking these improvements ranged from 25.1%, where the head of the household was less than 35 years old, to 12.9% where he or she was 65 years old or older. In households with a total annual income less than \$30 000, only 14.7% added energy-saving equipment, while the percentage was over 20% in all other households.



**Graph 2.7 Proportion of Homowners Adding Energy Saving Features**



**Diagram 2.7.1**  
**Homeowners Adding**  
**Energy-Saving Features**  
**- Canada -**

<b>Additions of Energy-Saving Features</b>	
N = 1 390 891	19.3%
<b>Programmable Thermostat</b>	
N = 335 132	4.7%
<b>Insulating Blankets on Hot Water Tanks</b>	
N = 184 771	2.6%
<b>Insulating Sleeves on Hot Water Pipes</b>	
N = 217 219	3.0%
<b>Insulation or Enclosing of Hot Air Ducts</b>	
N = 69 093	1.0%
<b>Low-Flow Showerheads</b>	
N = 696 837	9.7%
<b>Aerators on Hot Water Taps</b>	
N = 254 156	3.5%
<b>Replacement of Light Bulbs with Fluorescents</b>	
N = 419 524	5.8%
<b>Other Energy-Saving Features</b>	
N = 76 424	1.1%

**Table 2.7.1**  
**Number and Percentage of**  
**Homeowners Adding**  
**Energy-Saving Features**  
**Canada and Provinces**

	Canada	New-found-land	Prince Edward Island	Nova Scotia
<b>Number of Owners (000s)</b>	<b>7 206</b>	<b>153</b>	<b>36</b>	<b>251</b>
<b>Energy-Saving Features:</b>				
Low-Flow Showerheads	697	9	2	25
Replacement of Light Bulbs with Fluorescents	420	2	3	14
Programmable Thermostats	335	9	0	10
Aerators on Hot Water Taps	254	2	1	7
Insulating Sleeves on Hot Water Pipes	217	6	0	10
Insulating Blankets on Hot Water Tanks	185	2	0	8
Other Energy-Saving Features	76	0	0	3
Insulation or Enclosing of Hot Air Ducts	69	0	0	3
Addition of at Least One Feature	1391	24	6	53
<b>Total Owners</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Energy Saving Features:</b>				
Low-Flow Showerheads	9.7%	6.1%	6.8%	9.8%
Replacement of Light Bulbs with Fluorescents	5.8%	1.5%	8.6%	5.4%
Programmable Thermostats	4.7%	6.1%	1.2%	4.2%
Aerators on Hot Water Taps	3.5%	1.1%	2.4%	2.7%
Insulating Sleeves on Hot Water Pipes	3.0%	3.8%	0.5%	4.1%
Insulating Blankets on Hot Water Tanks	2.6%	1.2%	0.8%	3.3%
Other Energy-Saving Features	1.1%	0.2%	0.2%	1.0%
Insulation or Enclosing of Hot Air Ducts	1.0%	0.3%	0.4%	1.1%
Addition of at Least One Feature	19.3%	15.6%	15.9%	21.1%

**Table 2.7.1**  
**Number and Percentage of**  
**Homeowners Adding**  
**Energy-Saving Features**

***Canada and Provinces***

New Brunswick	Québec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
<b>211</b>	<b>1 656</b>	<b>2 672</b>	<b>290</b>	<b>271</b>	<b>699</b>	<b>967</b>
12	158	265	24	12	62	124
6	65	193	16	11	47	59
4	66	148	12	7	32	44
2	52	91	6	4	15	74
5	42	98	5	3	15	29
2	32	56	2	2	14	67
1	14	30	2	2	14	11
1	8	30	1	1	15	7
25	291	563	48	33	130	212
100%	100%	100%	100%	100%	100%	100%
5.7%	9.5%	9.9%	8.3%	4.5%	8.9%	12.8%
2.7%	3.9%	7.2%	5.6%	3.9%	6.7%	6.1%
2.0%	4.0%	5.5%	4.2%	2.5%	4.6%	4.6%
1.1%	3.1%	3.4%	2.1%	1.5%	2.1%	7.7%
2.3%	2.5%	3.7%	1.9%	1.3%	2.2%	3.0%
0.8%	1.9%	2.1%	0.8%	0.8%	2.0%	6.9%
0.6%	0.8%	1.1%	0.7%	0.9%	2.0%	1.1%
0.7%	0.5%	1.1%	0.5%	0.4%	2.2%	0.7%
11.8%	17.6%	21.1%	16.6%	12.2%	18.6%	22.0%

**Table 2.7.2**  
**Homeowners Adding**  
**Energy-Saving Features**  
**by Date of Construction and Type of Dwelling**

**Canada**

<b>Date of House Construction</b>	<b>Total</b>	<b>Before 1941</b>	<b>1941 - 1960</b>	<b>1961 - 1980</b>	<b>After 1980</b>
<b>Number of Owners (000s)</b>	7 206	1 062	1 375	2 723	2 046
Low-Flow Showerheads	9.7%	7.7%	9.2%	10.6%	9.7%
Replacement of Light Bulbs with Fluorescents	5.8%	6.1%	5.1%	5.6%	6.4%
Programmable Thermostats	4.7%	4.1%	4.0%	4.6%	5.5%
Aerators on Hot Water Taps	3.5%	3.3%	3.2%	3.8%	3.5%
Insulating Sleeves on Hot Water Pipes	3.0%	4.3%	2.7%	2.9%	2.8%
Insulating Blankets on Hot Water Tanks	2.6%	3.1%	2.1%	2.7%	2.5%
Other Energy-Saving Features	1.1%	1.3%	1.0%	1.1%	0.9%
Insulation or Enclosing of Hot Air Ducts	1.0%	1.3%	0.7%	0.8%	1.2%
Addition of at Least One Feature	19.3%	18.3%	18.1%	20.1%	19.6%
<b>Type of Dwelling</b>	<b>Total</b>	<b>Single-family House</b>	<b>Attached Houses</b>	<b>Duplex</b>	<b>Apartment</b>
<b>Number of Owners (000s)</b>	7 206	6 042	632	133	399
Low-Flow Shower Heads	9.7%	9.8%	9.2%	13.0%	7.4%
Replacement of Light Bulbs with Fluorescents	5.8%	5.8%	6.8%	6.4%	4.3%
Programmable Thermostats	4.7%	4.6%	6.7%	3.7%	2.7%
Aerators on Hot Water Taps	3.5%	3.4%	4.1%	5.5%	3.2%
Insulating Sleeves on Hot Water Pipes	3.0%	3.2%	2.4%	5.7%	0.0%
Insulating Blankets on Hot Water Tanks	2.6%	2.5%	3.4%	4.2%	1.0%
Other Energy-Saving Features	1.1%	1.0%	1.6%	1.4%	0.7%
Insulation or Enclosing of Hot Air Ducts	1.0%	1.0%	1.2%	2.1%	0.3%
Addition of at Least One Feature	19.3%	19.3%	21.6%	22.4%	14.1%

**Table 2.7.3**  
**Homeowners Adding**  
**Energy-Saving Features**  
**by Age of Head of Household and Household Income**

**Canada**

<b>Age of Head of Household</b>	Total	Under 35 yrs.	35 to 49 yrs.	50 to 64 yrs.	65 yrs. and over
<b>Number of Owners (000s)</b>	7 206	1 124	2 661	1 853	1 568
Low-Flow Shower Heads	9.70%	11.8%	11.4%	9.3%	5.8%
Replace Light Bulbs with Fluorescents	5.80%	7.7%	6.4%	5.7%	3.6%
Programmable Thermostats	4.70%	6.9%	5.1%	4.0%	3.1%
Aerators on Hot Water Taps	3.50%	4.4%	4.1%	3.4%	2.0%
Insulating Sleeves on Hot Water Pipes	3.00%	4.8%	3.1%	3.0%	1.6%
Insulating Blankets on Hot Water Tanks	2.60%	3.4%	2.1%	3.0%	2.3%
Other Energy-Saving Features	1.10%	1.4%	1.3%	0.7%	0.8%
Insulation or Enclosing of Hot Air Ducts	1.00%	1.9%	0.9%	1.0%	0.3%
Addition of at Least One Feature	19.30%	25.1%	21.5%	18.1%	12.9%
<b>Household Income</b>	Total	Less Than \$30 000	\$30 000 to \$50 000	\$50 000 to \$80 000	\$80 000 and Over
<b>Number of Owners (000s)</b>	7 206	1 813	1 920	2 126	1 347
Low-flow Shower Heads	9.70%	6.6%	10.3%	11.4%	10.9%
Replace Light Bulbs with Fluorescents	5.80%	4.0%	6.1%	7.0%	6.6%
Programmable Thermostats	4.70%	3.3%	4.7%	5.3%	5.6%
Aerators on Hot Water Taps	3.50%	2.5%	4.1%	4.0%	3.7%
Insulating Sleeves on Hot Water Pipes	3.00%	2.5%	3.0%	3.8%	3.1%
Insulating Blankets on Hot Water Tanks	2.60%	2.1%	2.7%	2.9%	2.5%
Other Energy-Saving Features	1.10%	0.8%	1.2%	1.3%	0.9%
Insulation or Enclosing of Hot Air Ducts	1.00%	0.6%	0.8%	1.2%	1.5%
Addition of at Least One Feature	19.30%	14.7%	20.5%	21.9%	21.3%

### 3. MOTIVATION AND SOURCES OF INFORMATION

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#### 3.1. Reasons Why Homeowners Undertake Repairs and Renovations

The main reason homeowners undertake insulation, door or window projects is to save energy. This reason was given by 61.8% of households, while maintenance (40.1%), comfort (31.4%), and appearance (21.5%) followed in descending order of priority. The resale value of the home (7.1%), the addition of living space (2.9%), air quality (1.4%) and environmental concerns (1.1%) were secondary considerations. One household in twenty (4.9%) indicated that they were prompted to undertake this work as part of a renovation project.

This trend was consistent throughout all ten provinces. In British Columbia, however, saving energy (67.0%) was decidedly more important than maintenance (27.3%). The distinction is much smaller in Alberta (48.1% for energy-saving and 43.3% for maintenance). In Ontario, the appearance of the property (26.2%) and its resale value (9.4%) were of much more importance than in the other provinces. These two reasons were mentioned much less often in Nova Scotia. There, maintenance (61.8%) was paramount. New Brunswick households were unique in that almost one in seven (13.7%) indicated that a renovation project was the principal instigating factor.

Whether the motivation is considered to be a function of the year of construction, the type of dwelling, the age of the head of the household or the household income, very little variation is observable from one to the other. At best, it can be noted that 7.6% of renovation projects were carried out on buildings constructed prior to 1941, and only 1.9% on those built after 1980. Energy saving concerns were more often mentioned by young heads of household (66.4%) than by those 65 year of age or older (51.8%).

For heating or ventilation equipment replacement, additions or improvements, energy saving is the reason most often mentioned (57.9%). Following that, in order, are comfort (38.9%), maintenance (27.5%), and air quality/a healthy environment (18.2%). Less often mentioned are the resale value of the home (9.4%), the addition of living space (4.1%) or concern about environment (2.7%). In about one out of twenty cases (4.5%) a renovation project was indicated as the motivating factor.

The above general trend was noted in every province where the sample size allowed for analysis. Nevertheless, in Ontario much more emphasis was placed on energy saving (68.4%) than on comfort (33.9%). In Quebec, comfort was given almost as much importance (49.0%) as energy saving (53.3%). There, more than one third of households (37.5%) that changed their heating or ventilation equipment cited the ambient air quality as the deciding factor.

The quality of the ambient air and a healthy environment are mentioned more often as factors by the owners of houses built after 1960 (22.5%) than by owners of houses built before then (10.9%). For houses built before 1941, maintenance is cited by more than one owner in three (36.2%). Lastly, young heads of households place more emphasis on energy saving (66.3%) than do those 50 years of age and older (51.1%).

**Table 3.1.1**  
**Reasons Why Homeowners Undertake Insulation,**  
**Door or Window Repairs and Renovations**  
**or Make Changes, Additions and Improvements to**  
**Heating and Ventilating Equipment**

***Canada and Provinces***

	Canada	New- found- land	Prince Edward Island	Nova Scotia
<b><i>A) Insulation, Door or Window Projects</i></b>				
<b>Number of Owners (000s)</b>	<b>906</b>	<b>32</b>	<b>5</b>	<b>44</b>
Energy Saving	61.8%	56.3%	51.4%	64.3%
Maintenance	40.1%	48.9%	52.2%	61.8%
Comfort	31.4%	36.2%	40.5%	34.4%
Appearance	21.5%	17.5%	27.2%	12.6%
Resale Value of Home	7.1%	2.2%	7.3%	4.7%
Part of a Renovation Project	4.9%	2.9%	9.2%	3.5%
Additional Living Space	2.9%	1.6%	10.0%	3.9%
Air Quality and Healthy Surroundings	1.4%	0.0%	0.0%	2.6%
Concern for the Environment	1.1%	0.0%	0.0%	2.0%
Other	3.4%	1.9%	0.0%	0.6%
<b><i>B) Changes of, Additions to and Improvement of Heating or Ventilation Equipment</i></b>				
<b>Number of Owners (000s)</b>	<b>150</b>	<b>4</b>	<b>1</b>	<b>10</b>
Energy Saving	57.9%	***	***	45.2%
Comfort	38.9%	***	***	46.8%
Maintenance	27.5%	***	***	48.1%
Air Quality and Healthy Surroundings	18.2%	***	***	23.0%
Resale Value of Home	9.4%	***	***	***
Part of a Renovation Project	4.5%	***	***	***
Additional Living Space	4.1%	***	***	***
Concern for the Environment	2.7%	***	***	***
Other	7.9%	***	***	***

\*\*\*Insufficient sample size



**Table 3.1.1**  
**Reasons Why Homeowners Undertake Insulation,**  
**Door or Window Repairs and Renovations**  
**or Make Changes, Additions and Improvements to**  
**Heating and Ventilating Equipment**

***Canada and Provinces***

New Brunswick	Québec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
<b>25</b>	<b>178</b>	<b>369</b>	<b>34</b>	<b>33</b>	<b>89</b>	<b>97</b>
68.4%	58.2%	65.5%	56.8%	62.2%	48.1%	67.0%
32.8%	39.1%	40.1%	37.4%	43.6%	43.3%	27.3%
24.7%	33.9%	28.9%	32.2%	28.1%	31.3%	35.1%
21.6%	16.8%	26.2%	19.2%	24.9%	18.0%	19.1%
6.9%	5.4%	9.4%	7.4%	5.0%	5.4%	6.1%
13.7%	5.4%	3.8%	2.4%	6.4%	5.5%	6.5%
2.9%	2.3%	2.8%	4.5%	5.2%	3.6%	1.5%
0.8%	0.2%	1.2%	2.3%	0.7%	2.6%	3.1%
0.0%	0.4%	1.0%	1.3%	1.2%	0.8%	2.5%
1.4%	5.5%	3.0%	2.0%	3.6%	3.3%	3.1%
<b>4</b>	<b>26</b>	<b>65</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>21</b>
***	53.3%	68.4%	***	***	***	60.3%
***	49.0%	33.9%	***	***	***	45.8%
***	20.3%	24.1%	***	***	***	32.2%
***	37.5%	10.4%	***	***	***	***
***	***	10.7%	***	***	***	***
***	***	4.3%	***	***	***	***
***	***	6.6%	***	***	***	***
***	***	2.6%	***	***	***	***
***	***	8.1%	***	***	***	***

\*\*\*Insufficient sample size

**Table 3.1.2**  
**Reasons Why Homeowners Undertake Insulation,**  
**Door or Window Repairs and Renovations**  
**by Date of Construction and Type of Dwelling**

**Canada**

<b>Date of House Construction</b>	<b>Total</b>	<b>Before 1941</b>	<b>1941 - 1960</b>	<b>1961 - 1980</b>	<b>After 1980</b>
<b>Number of Owners (000s)</b>	906	176	199	357	174
Energy Saving	61.8%	65.9%	62.5%	61.7%	56.8%
Maintenance	40.1%	38.3%	40.6%	42.2%	36.9%
Comfort	31.4%	35.6%	31.3%	28.3%	33.8%
Appearance	21.5%	22.1%	24.5%	19.9%	20.6%
Resale Value of Home	7.1%	8.8%	8.0%	6.6%	5.7%
Part of a Renovation Project	4.9%	7.6%	4.5%	5.3%	1.9%
Additional Living Space	2.9%	2.3%	3.9%	1.9%	4.1%
Air Quality and Healthy Surroundings	1.4%	1.2%	1.7%	0.9%	2.5%
Concern for the Environment	1.1%	0.5%	1.1%	1.1%	1.5%
Other	3.4%	2.3%	3.4%	4.6%	1.9%
<b>Type of Dwelling</b>	<b>Total</b>	<b>Single-family House</b>	<b>Attached Houses*</b>	<b>Duplex*</b>	<b>Apartment*</b>
<b>Number of Owners (000s)</b>	906	780	76	21	29
Energy Saving	61.8%	62.0%	62.3%	67.6%	50.5%
Maintenance	40.1%	40.0%	41.8%	42.8%	36.5%
Comfort	31.4%	32.2%	29.4%	18.8%	23.5%
Appearance	21.5%	22.0%	21.0%	21.1%	***
Resale Value of Home	7.1%	7.3%	***	***	***
Part of a Renovation Project	4.9%	4.9%	***	***	***
Additional Living Space	2.9%	3.0%	***	***	***
Air Quality and Healthy Surroundings	1.4%	1.3%	***	***	***
Concern for the Environment	1.1%	1.1%	***	***	***
Other	3.4%	2.9%	***	***	***

\*\*\*Insufficient sample size

**Table 3.1.3**  
**Reasons Why Homeowners Undertake Insulation,**  
**Door or Window Repairs and Renovations**  
**by Age of Head of Household and Household Income**

**Canada**

<b>Age of Head of Household</b>	<b>Total</b>	<b>Under 35 yrs</b>	<b>35 to 49 yrs</b>	<b>50 to 64 yrs</b>	<b>65 yrs and over</b>
<b>Number of Owners (000s)</b>	906	191	366	207	142
Energy Saving	61.8%	66.4%	63.1%	61.9%	51.8%
Maintenance	40.1%	35.2%	40.7%	38.5%	47.4%
Comfort	31.4%	32.7%	32.2%	29.8%	30.0%
Appearance	21.5%	20.6%	23.5%	18.4%	22.1%
Resale Value of Home	7.1%	9.5%	6.7%	6.7%	5.6%
Part or a Renovation Project	4.9%	6.6%	5.3%	3.5%	3.7%
Additional Living Space	2.9%	3.8%	3.5%	1.8%	1.3%
Air Quality and Healthy Surroundings	1.4%	1.3%	1.6%	0.9%	2.0%
Concern for the Environment	1.1%	1.6%	1.3%	0.8%	0.2%
Other	3.4%	4.2%	2.4%	3.7%	4.3%
<b>Household Income</b>	<b>Total</b>	<b>Less Than \$30 000</b>	<b>\$30 000 to \$50 000</b>	<b>\$50 000 to \$80 000</b>	<b>\$80 000 and Over</b>
<b>Number of Owners (000s)</b>	906	194	226	312	176
Energy Saving	61.8%	57.3%	63.4%	64.7%	61.8%
Maintenance	40.1%	46.6%	40.3%	36.7%	38.5%
Comfort	31.4%	33.4%	32.3%	30.2%	28.8%
Appearance	21.5%	16.6%	22.7%	22.3%	25.7%
Resale Value of Home	7.1%	7.0%	6.8%	8.0%	6.9%
Part or a Renovation Project	4.9%	4.6%	4.2%	5.9%	5.2%
Additional Living Space	2.9%	1.6%	2.9%	3.4%	3.8%
Air Quality and Healthy Surroundings	1.4%	1.0%	1.7%	1.5%	1.6%
Concern for the Environment	1.1%	1.0%	0.7%	1.4%	0.7%
Other	3.4%	3.5%	3.5%	2.9%	4.5%

**Table 3.1.4**  
**Reasons Why Homeowners Make**  
**Changes, Additions and Improvements**  
**to Heating and Ventilating Equipment**  
**by Date of Construction and Type of Dwelling**

**Canada**

Date of House Construction	Total	Before	1941	1961	After
		1941	- 1960	- 1980	1980
<b>Number of Owners (000s)</b>	150	22	30	53	45
Energy Saving	57.9%	57.7%	59.9%	54.0%	61.3%
Comfort	38.9%	43.2%	45.2%	35.9%	36.0%
Maintenance	27.5%	36.2%	26.2%	30.8%	20.2%
Air Quality and Healthy Surroundings	18.2%	***	14.6%	22.8%	21.1%
Resale Value of Home	9.4%	11.1%	9.1%	8.3%	9.9%
Part of a Renovation Project	4.5%	***	0.0%	7.4%	5.5%
Additional Living Space	4.1%	***	2.4%	2.8%	5.6%
Concern for the Environment	2.7%	***	3.3%	2.3%	4.2%
Other	7.9%	***	10.9%	9.8%	4.7%
Type of Dwelling	Total	Single-	Attached		Apartment*
		family House	Houses*	Duplex*	
<b>Number of Owners (000s)</b>	150	135	8	5	2
Energy Saving	57.9%	57.1%	***	***	***
Comfort	38.9%	38.9%	***	***	***
Maintenance	27.5%	26.8%	***	***	***
Air Quality and Healthy Surroundings	18.2%	17.6%	***	***	***
Resale Value of Home	9.4%	10.0%	***	***	***
Part of a Renovation Project	4.5%	5.0%	***	***	***
Additional Living Space	4.1%	4.5%	***	***	***
Concern for the Environment	2.7%	3.0%	***	***	***
Other	7.9%	8.5%	***	***	***

\*\*\*Insufficient sample size

**Table 3.1.5**  
**Reasons Why Homeowners Make**  
**Changes, Additions and Improvements**  
**to Heating and Ventilating Equipment**  
**by Age of Head of Household and Household Income**

**Canada**

<b>Age of Head of Household</b>	<b>Total</b>	<b>Under 35 yrs</b>	<b>35 to 49 yrs</b>	<b>50 to 64 yrs</b>	<b>65 yrs and over</b>
<b>Number of Owners (000s)</b>	150	37	58	35	20
Energy Saving	57.9%	66.3%	59.2%	51.1%	51.1%
Comfort	38.9%	40.4%	41.8%	31.4%	40.5%
Maintenance	27.5%	22.2%	28.3%	27.1%	35.5%
Air Quality and Healthy Surroundings	18.2%	17.4%	19.4%	14.7%	22.0%
Resale Value of Home	9.4%	13.4%	10.2%	4.3%	***
Part of a Renovation Project	4.5%	2.7%	7.6%	1.2%	***
Additional Living Space	4.1%	2.9%	4.9%	3.4%	***
Concern for the Environment	2.7%	3.5%	3.6%	1.5%	***
Other	7.9%	4.8%	6.7%	14.6%	***
<b>Household Income</b>	<b>Total</b>	<b>Less Than \$30 000</b>	<b>\$30 000 to \$50 000</b>	<b>\$50 000 to \$80 000</b>	<b>\$80 000 and Over</b>
<b>Number of Owners (000s)</b>	150	25	40	53	32
Energy Saving	57.9%	56.7%	54.7%	59.7%	56.7%
Comfort	38.9%	32.8%	40.8%	38.1%	37.7%
Maintenance	27.5%	29.1%	26.7%	27.1%	24.5%
Air Quality and Healthy Surroundings	18.2%	21.4%	15.0%	18.2%	15.4%
Resale Value of Home	9.4%	***	8.3%	9.8%	10.8%
Part of a Renovation Project	4.5%	***	4.6%	5.4%	3.5%
Additional Living Space	4.1%	***	2.6%	4.2%	1.5%
Concern for the Environment	2.7%	***	5.1%	1.5%	0.7%
Other	7.9%	***	5.9%	9.7%	8.5%

\*\*\*Insufficient sample size

### **3.2. Sources of Information Influencing Choice of Materials**

For homeowners who repaired or renovated insulation, doors or windows, the two main sources of information which influenced their choice of materials were personal acquaintances (34.4%) and retail stores and renovation centres (32.6%). Less often they relied on the advice of the contractor (21.4%), parents or friends (15.8%) or on newspaper and magazines (6.9%).

Four times out of ten (39.0%) the work was carried out by certified general contractor. This percentage was lower in Newfoundland (18.5%) and in Saskatchewan (26.5%), but higher in Ontario (45.1%).

**Table 3.2.1**  
**Information Sources Influencing Choice**  
**of Materials for Homeowners Undertaking Insulation,**  
**Door or Window Repairs and Renovations**  
**and How the Work Was Completed**

***Canada and Provinces***

	Canada	New- found- land	Prince Edward Island	Nova Scotia
<b>Number of Owners (000s)</b>	<b>906</b>	<b>32</b>	<b>5</b>	<b>44</b>
<b><i>A) Sources of information*</i></b>				
Personal Acquaintances	34.4%	49.7%	46.3%	43.7%
Retail Stores and Renovation Centres	32.6%	28.8%	32.3%	29.5%
Contractor	21.4%	5.9%	17.4%	22.1%
Friends or Relations	15.8%	15.4%	14.7%	16.8%
Newspapers and Magazines	6.9%	2.5%	1.2%	5.5%
Other Sources of Information	5.7%	4.7%	0.0%	1.9%
<b><i>B) How Work Was Completed</i></b>				
By an Accredited General Contractor	39.0%	18.5%	41.0%	38.1%
Other	60.5%	81.5%	59.0%	61.8%

\*Provincial estimates below 10% have high coefficients of variation (CV), and must be used with care.

**Table 3.2.1  
Information Sources Influencing Choice  
of Materials for Homeowners Undertaking Insulation,  
Door or Window Repairs and Renovations  
How the Work Was Completed**

***Canada and Provinces***

New Brunswick	Québec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
<b>25</b>	<b>178</b>	<b>369</b>	<b>34</b>	<b>33</b>	<b>89</b>	<b>97</b>
39.4%	26.9%	32.6%	45.5%	45.0%	34.1%	35.6%
39.1%	34.7%	33.3%	24.7%	25.5%	37.9%	26.4%
12.9%	26.3%	23.6%	15.0%	16.3%	19.1%	17.7%
12.6%	12.7%	18.2%	18.5%	10.8%	10.1%	18.7%
6.6%	5.5%	7.8%	5.8%	9.8%	7.2%	6.8%
4.5%	6.6%	4.4%	4.5%	6.7%	6.1%	12.4%
31.1%	39.9%	45.1%	38.7%	26.5%	34.7%	31.5%
68.9%	59.2%	54.3%	60.7%	72.8%	65.3%	68.5%

\*Provincial estimates below 10% have high coefficients of variation (CV), and must be used with care.



## 4. COMPARISON OF 1994 AND 1995 SURVEY RESULTS

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A review of the profile of projects undertaken by owners to improve the energy efficiency of their homes reveals little difference between the pictures in 1994 and 1995.

There are some slight differences that the large sample sizes make statistically significant. For example, the percentage of owners who improved the insulation in their dwellings decreased from 4.9% in 1994 to 4.1% in 1995. Similarly, the percentage of cases involving improvements to exterior doors dropped slightly from 5.9% in 1994 to 5.3% in 1995. The proportion of homeowners who undertook energy-saving improvements to their windows remained at one in fifteen. By comparison, in 1995 a few more owners (2.9%) than in 1994 (2.0%) replaced or improved their heating equipment.

In 1994, as in 1995, one homeowner in five added energy-saving features. There are minor variations in the details of the features installed. In 1995 programmable thermostats were installed a little more often than in 1994 (4.7% vs. 3.4%), as were insulating blankets for hot water tanks (2.6% vs. 1.9%). Conversely, ordinary light bulbs were replaced by fluorescents more often (7.0% vs. 5.8%) in 1994.

The variations noted between the two years were greater in terms of the reasons given by owners for improving the energy-efficient status of their homes. In 1994 more owners than in 1995 mentioned energy saving (70.8% vs. 61.8%), comfort (44.3% vs. 31.4%), appearance (29.3% vs. 21.5%) and home resale value (13.5% vs. 7.1%). The opposite was the case for maintenance (40.1% in 1995 vs. 37.0% in 1994), which is now the in second most frequent reason given.

In 1994, "air quality, a healthy environment" did not exist as a specific reply category, though it did in 1995. As a result, it is difficult to make comparisons with the related category "environmental concerns" between the two years. This problem applies as much to insulation, door and window projects as it does to additions and improvements to heating and ventilation equipment.

The prime motivation for additions and improvements to heating and ventilation equipment remains energy saving (57.9% in 1995 vs. 61.0% in 1994). But, in 1995 more emphasis was placed on comfort (38.9% in 1995 vs. 30.9% in 1994) than on maintenance (27.5% in 1995 vs. 31.3% in 1994).

**Table 4.1**  
**Energy-Saving Repairs and Renovations**  
**Completed by Homeowners on their Residences**  
**in 1994 and in 1995**

**Canada**

	1994	1995
<b>Insulation Improvements to:</b>	4.9%	4.1%
Exterior Walls	1.6%	1.3%
Basement Walls	1.5%	1.2%
Roof or Attic	1.4%	1.1%
Basement Floor	0.2%	0.2%
Garage	0.3%	0.3%
Other Areas	1.0%	0.9%
<b>Improvements to Exterior Doors</b>	5.9%	5.3%
Replacement of Wood Doors with Metal Doors	2.9%	2.3%
Improvement to Caulking and Weatherstripping	1.5%	1.2%
Addition of a Storm Door	1.1%	0.9%
Other Improvements to Doors	1.1%	0.6%
<b>Window Improvements</b>	6.7%	6.6%
Replace Single-Paned Windows with Double-Paned	2.4%	2.0%
Replace Double-Paned Windows with Triple-Paned	0.6%	0.7%
Replace Windows with Same Type of Panes	2.0%	1.8%
Improve Caulking or Weatherstripping	2.0%	2.3%
Installation of Storm Windows	0.9%	0.2%
Other Window Improvements	1.1%	0.8%
<b>Fireplace Improvements or Additions</b>	2.4%	2.7%
Addition of a Wood-Burning Fireplace	0.8%	1.2%
Addition of a Propane or Natural Gas Fireplace	0.7%	0.8%
Improvement or Add-On to an Existing Fireplace	0.9%	0.8%
<b>Heating and Ventilation of Dwelling</b>		
System Conversion	1.0%	0.9%
Source Conversion	1.2%	0.9%
Improvement or Replacement of Heating Equipment	2.0%	2.9%
Addition of a Heat Pump	0.3%	0.3%
Installation of a Central Ventilation System	0.8%	0.3%
<b>Addition of Energy-Saving Equipment</b>	19.0%	19.3%
Low-Flow Showerhead	10.0%	9.7%
Replacement of Light Bulbs with Fluorescents	7.0%	5.8%
Programmable Thermostat	3.4%	4.7%
Aerator for Hot Water Taps	3.7%	3.5%
Insulating Sleeves for Hot Water Pipes	3.4%	3.0%
Insulating Blankets for Hot Water Heaters	1.9%	2.6%
Insulation or Hiding of Hot Air Ducts	0.7%	1.0%

**Table 4.2**  
**Reasons Why Homeowners Undertook Energy Saving**  
**Repairs and Renovations on their Homes**  
**in 1994 and in 1995**

***Canada***

	1994	1995
<b>Insulation, Door or Window</b>		
Energy Saving	70.8%	61.8%
Maintenance	37.0%	40.1%
Comfort	44.3%	31.4%
Appearance	29.3%	21.5%
Resale Value of Home	13.5%	7.1%
Additional Living Space	5.3%	2.9%
Air Quality and a Healthy Environment		1.4%
Concern for the Environment	6.5%	1.1%
<b>Additions and Improvements to Heating and Ventilation Equipment</b>		
Energy Saving	61.0%	57.9%
Comfort	30.9%	38.9%
Maintenance	31.3%	27.5%
Air Quality and a Healthy Environment		18.2%
Resale Value of Home	6.8%	9.4%
Additional Living Space	3.2%	4.1%
Concern for the Environment	10.0%	2.7%

**Appendix 1**  
**Notes on Methodology**

## Notes on Methodology

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The *Home Energy Retrofit Survey* represents a broadening of Statistics Canada's 1995 *Homeowner Repair and Renovations Survey* (HRRS), which was undertaken as a supplement to the March 1996 *Labour Force Survey* (LFS).

The HRRS sample was initially set up with a rotation of four of six groups from the LFS. Among these households, only those considered owner-occupants in the February 1996 LFS were invited to participate in the HRRS and to reply to all questions that specifically dealt with the survey of home retrofit activities.

The results presented in this report are based on the replies of 18 616 households. The breakdown of the run file sample is:

Newfoundland	836
Prince Edward Island	543
Nova Scotia	1 360
New Brunswick	1 224
Quebec	3 404
Ontario	5 399
Manitoba	1 334
Saskatchewan	1 255
Alberta	1 366
British Columbia	1 573

In addition, the run file included 322 respondents whose province of residence was concealed to ensure confidentiality.

For more information on this survey, please consult Statistics Canada's publication *Homeowner Repairs and Renovations Expenditure in Canada, 1995* (Cat. No. 62-201-XPB).

**Appendix 2**  
**Questionnaire**

**1995 Homeowner Repair and Renovation Survey Specifications - Entire Questionnaire February 15th, 1996**

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HRRS-11 **THE 1995 HOMEOWNER REPAIR AND RENOVATION SURVEY COLLECTS INFORMATION FROM HOMEOWNERS ABOUT THEIR EXPENDITURES FOR REPAIRS, MAINTENANCE AND RENOVATIONS.**

---

HRRS-Q1 HOW MANY MONTHS WAS THIS DWELLING OWNED AND OCCUPIED BY A MEMBER OF THIS HOUSEHOLD IN 1995?

---

HRRS-Q2 IN 1995, DID ANYONE IN THIS HOUSEHOLD OCCUPY ANY OTHER DWELLINGS THAT THEY OWNED? EXCLUDE VACATION HOMES.

- 1 Yes  
2 No
- 

HRRS-Q2a HOW MANY OTHER DWELLINGS?

---

HRRS-Q2aa THE OTHER DWELLING WAS OCCUPIED FOR HOW MANY MONTHS IN 1995?

---

HRRS-Q2bb WAS THIS...

(Read list and mark one only)

- 1 A SINGLE FAMILY DWELLING?  
2 AN APARTMENT?  
3 ANOTHER TYPE OF DWELLING?
- 

HRRS-Q2b THE FIRST DWELLING WAS OCCUPIED FOR HOW MANY MONTHS IN 1995?

---

HRRS-Q2c WAS THIS...

(Read list and mark one only)

- 1 A SINGLE FAMILY DWELLING?  
2 AN APARTMENT?  
3 ANOTHER TYPE OF DWELLING?
- 

HRRS-Q2d THE SECOND DWELLING WAS OCCUPIED FOR HOW MANY MONTHS IN 1995?

---

hRRS-Q2e WAS THIS....

(Read list and mark one only)

- 1 A SINGLE FAMILY DWELLING?  
2 AN APARTMENT?  
3 ANOTHER TYPE OF DWELLING?
- 

HRRS-Q2f THE THIRD DWELLING WAS OCCUPIED FOR HOW MANY MONTHS IN 1995?

HRRS-Q2g

WAS THIS...

(Read list and mark one only)

- 1 A SINGLE FAMILY DWELLING?
- 2 AN APARTMENT?
- 3 ANOTHER TYPE OF DWELLING?

HRRS-I2  
THE

**WHEN ANSWERING THE FOLLOWING QUESTIONS, KEEP IN MIND THAT THEY APPLY TO MONTH(S) IN THE DWELLING(S) YOU HAVE JUST REPORTED.**

ADDN-I1

THE FOLLOWING QUESTIONS CONCERN ADDITIONS TO YOUR DWELLING(S) AND PROPERTY IN 1995. PLEASE REPORT AN EXPENDITURE ONLY ONCE.

ADDN-Q1

WERE THERE ANY EXPENDITURES IN 1995 FOR THE ADDITION OF...  
A GARAGE OR CAR PORT?

- 1 Yes
- 2 No

ADDN-Q1a

DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?

- 1 Yes
- 2 No

ADDN-Q1b

DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?

- 1 Yes
- 2 No

ADDN-Q1c

WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (EXCLUDE THE COST OF ANY MATERIALS THAT YOU PURCHASED SEPARATELY)

ADDN-Q1d

WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?

ADDN-Q2

Were there any expenditures in 1995 for the addition of...  
OTHER STRUCTURAL EXTENSIONS SUCH AS ROOMS, DECKS OR GARDEN SHEDS?

- 1 Yes
- 2 No

ADDN-Q2a

DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?

- 1 Yes
- 2 No

ADDN-Q2b

DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?

- 1 Yes
- 2 No

ADDN-Q2c

WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)



ADDN-Q2d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
ADDN-Q2e	<p>DID THESE STRUCTURAL EXTENSIONS INVOLVE A:</p> <p>(Read and mark all that apply)</p> <p>1      BEDROOM</p> <p>2      BATHROOM</p> <p>3      PORCH, DECK OR BALCONY</p> <p>4      GREENHOUSE OR GARDEN SHED</p> <p>5      SUNROOM</p> <p>6      SOME OTHER AREA</p>
ADDN-Q3	<p>Were there any expenditures in 1995 for the addition of...</p> <p>AN INGROUND SWIMMING POOL?</p> <p>1      Yes</p> <p>2      No</p>
ADDN-Q3a	<p>DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?</p> <p>1      Yes</p> <p>2      No</p>
ADDN-Q3b	<p>DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?</p> <p>1      Yes</p> <p>2      No</p>
ADDN-Q3c	<p>WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)</p>
ADDN-Q3d	<p>WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?</p>
ADDN-Q4	<p>Were there any expenditures in 1995 for the addition of...</p> <p>FENCES, PATIOS OR DRIVEWAYS?</p> <p>1      Yes</p> <p>2      No</p>
ADDN-Q4a	<p>DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?</p> <p>1      Yes</p> <p>2      No</p>
ADDN-Q4b	<p>DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?</p> <p>1      Yes</p> <p>2      No</p>
ADDN-Q4c	<p>WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)</p>

ADDN-Q4d WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?

---

ADDN-Q5 Were there any expenditures in 1995 for the addition of...  
LANDSCAPING?

- 1 Yes  
2 No

---

ADDN-Q5a DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?

- 1 Yes  
2 No

---

ADDN-Q5b DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?

- 1 Yes  
2 No

---

ADDN-Q5c WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)

---

ADDN-Q5d WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?

---

ADDN-Q5e WHAT PERCENTAGE OF THE TOTAL COST OF ALL REPORTED ADDITIONS WOULD YOU EXPECT TO GET BACK IF YOU SOLD YOUR DWELLING TODAY?

---

RENO-11 **THE FOLLOWING QUESTIONS DEAL WITH EXPENDITURES FOR RENOVATIONS AND ALTERATIONS IN 1995.**

**PLEASE DO NOT REPEAT ANY EXPENDITURES THAT YOU HAVE ALREADY MENTIONED.**

---

RENO-11a **THESE INCLUDE JOBS SUCH AS REMODELLING ROOMS, ADDING OR REPLACING DOORS AND WINDOWS, RENOVATING EXTERIOR WALLS, UPGRADING INSULATION AND ADDING EAVESTROUGHING. INCLUDE ANY FINISHING IN NEW HOMES, AND THE COST OF ANY EQUIPMENT AND BUILT-IN APPLIANCES THAT WERE PART OF THE RENOVATION PROJECT.**

---

RENO-Q1 WERE THERE ANY EXPENDITURES FOR RENOVATIONS AND ALTERATIONS IN 1995?

- 1 Yes  
2 No

---

RENO-Q2 DID THE RENOVATIONS OR ALTERATIONS INVOLVE A COMBINATION OF INTERIOR AND EXTERIOR WORK?

(Examples: a family room renovation that involved installing a fireplace and chimney; moving an interior wall and installing wall-to-wall carpeting)

- 1 Yes  
2 No

---

RENO-Q2a DID THIS INCLUDE EXPENDITURES FOR WORK CONTRACTED OUT?

- 1 Yes  
2 No

RENO-Q2b DID THIS INCLUDE EXPENDITURES FOR MATERIALS THAT YOU PURCHASED SEPARATELY?

- 1 Yes
- 2 No

RENO-Q2c WHAT WAS THE TOTAL COST FOR WORK CONTRACTED OUT? (EXCLUDE THE COST OF ANY MATERIALS THAT YOU PURCHASED SEPARATELY)

RENO-Q2d WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?

RENO-Q2e DID THIS WORK INVOLVE A:

(Read list and mark all that apply)

- 1 BATHROOM
- 2 KITCHEN
- 3 BASEMENT OR ATTIC
- 4 SOME OTHER AREA

RENO-Q3 DID THE RENOVATIONS OR ALTERATIONS INVOLVE EXTERIOR WORK ONLY?  
(Examples: remodelled porch and replaced front door; replaced living and dining room windows)

- 1 Yes
- 2 No

RENO-Q3a DID THIS INCLUDE EXPENDITURES FOR WORK CONTRACTED OUT?

- 1 Yes
- 2 No

RENO-Q3b DID THIS INCLUDE EXPENDITURES FOR MATERIALS THAT YOU PURCHASED SEPARATELY?

- 1 Yes
- 2 No

RENO-Q3c WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)

RENO-Q3d WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?

RENO-Q3e DID THIS WORK INVOLVE A:

(Read list and mark all that apply)

- 1 WINDOW
- 2 DOOR
- 3 SIDING
- 4 ROOF OR EAVESTROUGHING
- 5 PORCH, DECK OR BALCONY
- 6 SOME OTHER AREA

RENO-Q4	<p>DID THE RENOVATIONS OR ALTERATIONS INVOLVE INTERIOR WORK ONLY? (Examples: remodelled kitchen, insulated basement walls and partitioned off laundry room; added a powder room)</p> <p>1      Yes 2      No</p>
RENO-Q4a	<hr/> <p>DID THIS INCLUDE EXPENDITURES FOR WORK CONTRACTED OUT?</p> <p>1      Yes 2      No</p>
RENO-Q4b	<hr/> <p>DID THIS INCLUDE EXPENDITURES FOR MATERIALS THAT YOU PURCHASED SEPARATELY?</p> <p>1      Yes 2      No</p>
RENO-Q4c	<hr/> <p>WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)</p>
RENO-Q4d	<hr/> <p>WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?</p>
RENO-Q4e	<hr/> <p>DID THIS WORK INVOLVE A:</p> <p>(Read list and mark all that apply)</p> <p>1      BATHROOM 2      KITCHEN 3      BASEMENT OR ATTIC 4      SOME OTHER AREA</p>
RENO-Q4f	<hr/> <p>WHAT PERCENTAGE OF THE TOTAL COST OF ALL REPORTED RENOVATIONS WOULD YOU EXPECT TO GET BACK IF YOU SOLD YOUR DWELLING TODAY?</p>
REPL-I1	<hr/> <p><b>THE FOLLOWING QUESTIONS CONCERN REPLACEMENTS AND NEW INSTALLATIONS OF EQUIPMENT OR FIXTURES IN 1995.</b></p>
REPL-I1a	<hr/> <p><b>A REPLACEMENT REFERS TO THE INSTALLATION OF EQUIPMENT OR FIXTURES THAT REPLACED AN EXISTING UNIT. (EXAMPLE: REPLACING AN ELECTRIC WATER HEATER WITH A GAS MODEL.)</b></p>
REPL-I1b	<hr/> <p><b>A NEW INSTALLATION REFERS TO THE INSTALLATION OF EQUIPMENT OR FIXTURES THAT DID NOT PREVIOUSLY EXIST ON THE PROPERTY, OR THAT WERE INSTALLED IN ADDITION TO THE EQUIPMENT OR FIXTURES ON THE PROPERTY. (EXAMPLE: INSTALLING A SHOWER STALL IN WHAT HAD BEEN A HALF-BATHROOM.)</b></p>
REPL-Q1	<hr/> <p>WERE THERE ANY EXPENDITURES IN 1995 FOR PLUMBING FIXTURES SUCH AS A SINK, BATHTUB, TOILET, SHOWER STALL, LAUNDRY TUB, HOT WATER TANK OR WATER SOFTENER?</p> <p>1      Yes 2      No</p>
REPL-Q1a	<hr/> <p>WERE THESE EXPENDITURES FOR...</p> <p>(Read list and mark all that apply)</p> <p>1      A REPLACEMENT? 2      A NEW INSTALLATION?</p>

- REPL-Q1b DID THE REPLACEMENT OF PLUMBING FIXTURES INCLUDE WORK CONTRACTED OUT?
- 1 Yes  
2 No
- 
- REPL-Q1c DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
- 1 Yes  
2 No
- 
- REPL-Q1d WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (EXCLUDE THE COST OF ANY MATERIALS THAT YOU PURCHASED SEPARATELY)
- 
- REPL-Q1e WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
- 
- REPL-Q1f DID THE NEW INSTALLATION OF PLUMBING FIXTURES INCLUDE WORK CONTRACTED OUT?
- 1 Yes  
2 No
- 
- REPL-Q1g DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
- 1 Yes  
2 No
- 
- REPL-Q1h WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
- 
- REPL-Q1i WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
- 
- REPL-Q2 Were there any expenditures in 1995 for...  
HEATING OR AIR CONDITIONING EQUIPMENT SUCH AS FURNACE, FIREPLACE, WOODSTOVE,  
CENTRAL AIR CONDITIONING, HEAT PUMP, AIR EXCHANGER?
- 1 Yes  
2 No
- 
- REPL-Q2a WERE THESE EXPENDITURES FOR...
- (Read list and mark all that apply)
- 1 A REPLACEMENT?  
2 A NEW INSTALLATION?
- 
- REPL-Q2b DID THE REPLACEMENT OF HEATING OR AIR CONDITIONING EQUIPMENT INCLUDE WORK CONTRACTED OUT?
- 1 Yes  
2 No

REPL-Q2c	DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes 2 No
REPL-Q2d	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPL-Q2e	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPL-Q2f	DID THE NEW INSTALLATION OF HEATING OR AIR CONDITIONING EQUIPMENT INCLUDE WORK CONTRACTED OUT?
	1 Yes 2 No
REPL-Q2g	DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes 2 No
REPL-Q2h	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPL-Q2i	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPL-Q3	Were there any expenditures in 1995 for... ELECTRICAL FIXTURES OR EQUIPMENT SUCH AS WIRING, SECURITY EQUIPMENT, CEILING FAN, BUILT-IN VENTILATION FAN, LIGHT FIXTURE, GARAGE DOOR OPENER?
	1 Yes 2 No
REPL-Q3a	WERE THESE EXPENDITURES FOR...  (Read list and mark all that apply)
	1 A REPLACEMENT? 2 A NEW INSTALLATION?
REPL-Q3b CONTRACTED	DID THE REPLACEMENT OF ELECTRICAL FIXTURES OR EQUIPMENT INCLUDE WORK OUT?
	1 Yes 2 No
REPL-Q3c	DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes 2 No

REPL-Q3d	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPL-Q3e	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPL-Q3f	DID THE NEW INSTALLATION OF ELECTRICAL FIXTURES OR EQUIPMENT INCLUDE WORK CONTRACTED OUT?  1      Yes 2      No
REPL-Q3g	DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?  1      Yes 2      No
REPL-Q3h	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPL-Q3i	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPL-Q4	Were there any expenditures in 1995 for... BUILT-IN APPLIANCES SUCH AS AN OVEN, DISHWASHER, CENTRAL VACUUM, RANGEHOOD, OR COOK-TOP UNIT?  1      Yes 2      No
REPL-Q4a	WERE THESE EXPENDITURES FOR...  (Read list and mark all that apply)  1      A REPLACEMENT? 2      A NEW INSTALLATION?
REPL-Q4b	DID THE REPLACEMENT OF BUILT-IN APPLIANCES INCLUDE WORK CONTRACTED OUT?  1      Yes 2      No
REPL-Q4c	DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?  1      Yes 2      No
REPL-Q4d	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPL-Q4e	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?

REPL-Q4f	DID THE NEW INSTALLATION OF BUILT-IN APPLIANCES INCLUDE WORK CONTRACTED OUT?
	1 Yes 2 No
REPL-Q4g	DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes 2 No
REPL-Q4h	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPL-Q4i	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPL-Q5	Were there any expenditures in 1995 for... WALL-TO-WALL CARPETING? (INCLUDE UNDERPADDING)
	1 Yes 2 No
REPL-Q5a	WERE THESE EXPENDITURES FOR...  (Read list and mark all that apply)
	1 A REPLACEMENT? 2 A NEW INSTALLATION?
REPL-Q5b	DID THE REPLACEMENT OF WALL-TO-WALL CARPETING INCLUDE WORK CONTRACTED OUT?
	1 Yes 2 No
REPL-Q5c	DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes 2 No
REPL-Q5d	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPL-Q5e	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPL-Q5f	DID THE NEW INSTALLATION OF WALL-TO-WALL CARPETING INCLUDE WORK CONTRACTED OUT?
	1 Yes 2 No



REPL-Q5g	DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1      Yes 2      No
REPL-Q5h	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPL-Q5i	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPL-Q6	Were there any expenditures in 1995 for... OTHER FIXTURES OR BUILT-IN EQUIPMENT?
	1      Yes 2      No
REPL-Q6a	WERE THESE EXPENDITURES FOR...  (Read list and mark all that apply)
	1      A REPLACEMENT? 2      A NEW INSTALLATION?
REPL-Q6b	DID THE REPLACEMENT OF OTHER FIXTURES OR BUILT-IN EQUIPMENT INCLUDE WORK CONTRACTED OUT?
	1      Yes 2      No
REPL-Q6c	DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1      Yes 2      No
REPL-Q6d	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPL-Q6e	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPL-Q6f	PLEASE SPECIFY THE TYPE OF OTHER FIXTURES OR BUILT-IN EQUIPMENT REPLACED:  <i>VERBATIM:</i>
REPL-Q6g	DID THE NEW INSTALLATION OF OTHER FIXTURES OR BUILT-IN EQUIPMENT INCLUDE WORK CONTRACTED OUT?
	1      Yes 2      No
REPL-Q6h	DID IT INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1      Yes 2      No

REPL-Q6i	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPL-Q6j	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPL-Q6k	PLEASE SPECIFY THE TYPE OF OTHER FIXTURES OR BUILT-IN EQUIPMENT INSTALLED.  <i>VERBATIM:</i>
REPA-I1	<b>THE FOLLOWING QUESTIONS ARE ABOUT REPAIRS AND MAINTENANCE COSTS FOR THE DWELLING(S) IN 1995.</b>
REPA-Q1	WERE THERE ANY EXPENDITURES IN 1995 FOR... INTERIOR OR EXTERIOR PAINTING?  1      Yes 2      No
REPA-Q1a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?  1      Yes 2      No
REPA-Q1b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?  1      Yes 2      No
REPA-Q1c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (EXCLUDE THE COST OF ANY MATERIALS THAT YOU PURCHASED SEPARATELY)
REPA-Q1d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q2	Were there any expenditures in 1995 for... WALL PAPERING?  1      Yes 2      No
REPA-Q2a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?  1      Yes 2      No
REPA-Q2b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?  1      Yes 2      No
REPA-Q2c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPA-Q2d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?

REPA-Q3	Were there any expenditures in 1995 for... REPAIRS TO INTERIOR WALLS AND CEILINGS, PLASTERING, DRYWALL, PANELLING, TILING?
	1 Yes
	2 No
<hr/>	
REPA-Q3a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?
	1 Yes
	2 No
<hr/>	
REPA-Q3b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes
	2 No
<hr/>	
REPA-Q3c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
<hr/>	
REPA-Q3d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
<hr/>	
REPA-Q4	Were there any expenditures in 1995 for... REPAIRS TO HARD SURFACE FLOORING AND WALL-TO-WALL CARPETING? (EXCLUDING HARDWOOD FLOORING)
	1 Yes
	2 No
<hr/>	
REPA-Q4a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?
	1 Yes
	2 No
<hr/>	
REPA-Q4b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes
	2 No
<hr/>	
REPA-Q4c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
<hr/>	
REPA-Q4d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
<hr/>	
REPA-Q5	Were there any expenditures in 1995 for... COMPLETE RE-ROOFING?
	1 Yes
	2 No

REPA-Q5a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?
	1 Yes
	2 No
REPA-Q5b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes
	2 No
REPA-Q5c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPA-Q5d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q6	Were there any expenditures in 1995 for... EAVESTROUGHING AND OTHER ROOF REPAIRS?
	1 Yes
	2 No
REPA-Q6a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?
	1 Yes
	2 No
REPA-Q6b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes
	2 No
REPA-Q6c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPA-Q6d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q7	Were there any expenditures in 1995 for... REPAIRS TO EXTERIOR WALLS INCLUDING SOFFITS, FACIA, FOUNDATIONS, AND CHIMNEYS? (INCLUDE CHIMNEY CLEANING)
	1 Yes
	2 No
REPA-Q7a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?
	1 Yes
	2 No
REPA-Q7b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes
	2 No

REPA-Q7c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPA-Q7d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q8	Were there any expenditures in 1995 for... CAULKING AND WEATHER STRIPPING INCLUDING THE REPLACEMENT OF INSULATION, VAPOUR BARRIERS, ETC.?  1      Yes 2      No
REPA-Q8a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?  1      Yes 2      No
REPA-Q8b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?  1      Yes 2      No
REPA-Q8c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPA-Q8d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q9	Were there any expenditures in 1995 for... REPAIRS TO OUTDOOR PATIOS, FENCES AND DRIVEWAYS?  1      Yes 2      No
REPA-Q9a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?  1      Yes 2      No
REPA-Q9b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?  1      Yes 2      No
REPA-Q9c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPA-Q9d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q10	Were there any expenditures in 1995 for... HEATING AND AIR CONDITIONING SYSTEMS? (INCLUDE SERVICE CONTRACTS)  1      Yes 2      No

REPA-Q10a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?
	1 Yes 2 No
REPA-Q10b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes 2 No
REPA-Q10c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPA-Q10d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q11	Were there any expenditures in 1995 for... PLUMBING?
	1 Yes 2 No
REPA-Q11a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?
	1 Yes 2 No
REPA-Q11b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes 2 No
REPA-Q11c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPA-Q11d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q12	Were there any expenditures in 1995 for... ELECTRICAL?
	1 Yes 2 No
REPA-Q12a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?
	1 Yes 2 No
REPA-Q12b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes 2 No
REPA-Q12c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)

REPA-Q12d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q13	Were there any expenditures in 1995 for... CARPENTRY? (INCLUDE WOODEN FLOORING.)
	1 Yes 2 No
REPA-Q13a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?
	1 Yes 2 No
REPA-Q13b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes 2 No
REPA-Q13c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPA-Q13d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q14	Were there any expenditures in 1995 for... OTHER REPAIRS AND MAINTENANCE? (Exclude housekeeping maintenance work such as rug cleaning, window washing, groundskeeping, snow removal, garbage removal, etc.)
	1 Yes 2 No
REPA-Q14a	DID THESE EXPENDITURES INCLUDE WORK CONTRACTED OUT?
	1 Yes 2 No
REPA-Q14b	DID THESE EXPENDITURES INCLUDE MATERIALS THAT YOU PURCHASED SEPARATELY?
	1 Yes 2 No
REPA-Q14c	WHAT WAS THE TOTAL COST OF WORK CONTRACTED OUT? (Exclude the cost of any materials that you purchased separately)
REPA-Q14d	WHAT WAS THE TOTAL COST OF MATERIALS THAT YOU PURCHASED SEPARATELY?
REPA-Q14e	PLEASE SPECIFY WHAT OTHER REPAIRS AND MAINTENANCE THE EXPENDITURES WERE FOR.  <i>VERBATIM:</i>

HRRS-Q3 FOR WHAT REASONS DID YOU CONDUCT REPAIRS AND RENOVATIONS ON YOUR DWELLING IN 1995?

(Do not read list. Mark all that apply.)

- 1 Add value or make dwelling more saleable
- 2 Provide more space or add a room
- 3 Regular maintenance or repair a broken item
- 4 Make home more attractive or modern
- 5 Make home more energy efficient
- 6 Create or modify a rental unit
- 7 Create or modify an office for working at home
- 8 Other reasons (Specify in notes)

---

HRRS-Q4 DID YOU USE TECHNICAL INFORMATION TO HELP IN THE PLANNING OF YOUR REPAIRS AND RENOVATIONS OF 1995?

- 1 Yes
- 2 No

---

HRRS-Q4a WHERE DID YOU GET THIS INFORMATION?

(Do not read list. Mark all that apply.)

- 1 Consulted books, magazines or videos
- 2 Followed instructions from item
- 3 Sought advice from friends or neighbours
- 4 Sought advice from building supply store
- 5 Sought advice from contractor or home builders association
- 6 Sought advice from the Canada Mortgage and Housing Corporation
- 7 Other sources (Specify in notes)

---

HRRS-Q5 DID YOU BORROW TO PAY FOR YOUR REPAIRS AND RENOVATIONS OF 1995 (EXCLUDE CREDIT CARDS)?

- 1 Yes
- 2 No

---

HRRS-Q5a HOW MUCH DID YOU BORROW?

---

HRRS-Q6 WHY DID YOU NOT USE A CONTRACTOR OR HIRED HELP FOR YOUR REPAIRS AND RENOVATIONS IN 1995?

(Do not read list. Mark all that apply.)

- 1 Too expensive or can't afford it
- 2 Could not get a contractor to make a proposal
- 3 Did not like the proposal from contractor
- 4 Did not have enough confidence in contractor
- 5 Enjoy doing this type of work
- 6 Availability of free labour
- 7 Other reasons (Specify in notes)

---

END-11 THIS ENDS THE QUESTIONS RELATED TO HOMEOWNER REPAIR AND RENOVATION EXPENDITURES.



THE FOLLOWING SURVEY IS COMPLETED ONLY FOR HOUSEHOLDS WHO REPORTED 12 MONTHS IN HRRS-Q1.

HECS-I1 THE FOLLOWING QUESTIONS HAVE BEEN SPONSORED BY NATURAL RESOURCES CANADA TO STUDY THE CHANGE OF ENERGY CHARACTERISTICS OF CANADIAN HOMES.

---

HECS-I2 THESE QUESTIONS ARE ASKED REGARDLESS OF EXPENDITURES BECAUSE WORK MAY HAVE BEEN CONDUCTED AT NO COST (EXAMPLE: THE MATERIALS USED WERE BOUGHT BEFORE 1995, A FRIEND HELPED YOU AT NO COST, ETC.)

---

HECS-Q1 IN 1995, WERE ANY IMPROVEMENTS MADE TO THE INSULATION OF YOUR DWELLING?

- 1 Yes
  - 2 No
- 

HECS-Q2 WERE ANY IMPROVEMENTS MADE TO THE INSULATION OF...

(Read list and mark all that apply)

- 1 WALLS (EXCLUDE BASEMENT)?
  - 2 BASEMENT WALLS?
  - 3 THE ROOF OR ATTIC?
  - 4 BASEMENT FLOORS? (EXCLUDE CARPETING)
  - 5 THE GARAGE?
  - 6 OTHER AREAS?
- 

HECS-Q3 WAS THE WALL INSULATION (EXCLUDING BASEMENT) ADDED TO THE OUTSIDE (DEFINED AS THE EXTERIOR OF FRAME BEFORE SIDING) OR PUT INSIDE THE WALLS ?

(Read list and mark one only)

- 1 OUTSIDE
  - 2 INSIDE
  - 3 BOTH
- 

HECS-Q4 WAS THE BASEMENT WALL INSULATION ADDED TO THE OUTSIDE OR PUT INSIDE THE WALLS?

(Read list and mark one only)

- 1 OUTSIDE
  - 2 INSIDE
  - 3 BOTH
- 

HECS-Q4a DID THE IMPROVEMENT OF BASEMENT WALL INSULATION INVOLVE...

(Read list and mark all that apply)

- 1 A REPLACEMENT (REPLACED OR UPGRADED EXISTING INSULATION)
  - 2 A NEW INSTALLATION (TO WALL SPACE NOT PREVIOUSLY INSULATED)
- 

HECS-Q5 IN 1995, DID YOU HAVE A BASEMENT?

- 1 Yes
- 2 No

---

HECS-Q5a WAS YOUR BASEMENT HEATED (PARTIALLY OR COMPLETELY)?

- 1 Yes  
2 No
- 

HECS-Q5b IN 1995 , WAS YOUR BASEMENT A NEW (PARTIALLY OF COMPLETELY) HEATED SPACE?

- 1 Yes  
2 No
- 

HECS-Q6 HOW WOULD YOU CURRENTLY DESCRIBE THE INSULATION IN YOUR INTERIOR BASEMENT WALLS?

(Read list and mark all that apply)

- 1 VERY LITTLE OR NO INSULATION IN WALLS  
2 INSULATION ON TOP HALF OF WALLS ONLY  
3 INSULATION FROM CEILING TO FLOOR
- 

HECS-Q7 IN 1995, WERE ANY IMPROVEMENTS MADE TO YOUR WINDOWS?

- 1 Yes  
2 No
- 

HECS-Q7a WERE THEY...

(Read list and mark all that apply)

- 1 UPGRADES FROM SINGLE PANE TO DOUBLE PANE?  
2 UPGRADES FROM DOUBLE PANE TO TRIPLE PANE?  
3 UPGRADES WITH THE SAME NUMBER OF PANES AS BEFORE?  
4 IMPROVED CAULKING OR WEATHERSTRIPPING?  
5 AN ADDITION OF NEW STORM WINDOWS TO SINGLE PANE WINDOWS?  
6 OTHER TYPES OF IMPROVEMENTS?
- 

HECS-Q7b HOW MANY OF YOUR WINDOWS WERE UPGRADED FROM SINGLE PANE TO DOUBLE PANE?

(Read list and mark one only)

- 1 ALL  
2 MOST  
3 HALF  
4 LESS THAN HALF  
5 ONE
- 

HECS-Q7c HOW MANY OF YOUR WINDOWS WERE UPGRADED FROM DOUBLE PANE TO TRIPLE PANE?

(Read list and mark one only)

- 1 ALL  
2 MOST  
3 HALF  
4 LESS THAN HALF  
5 ONE

HECS-Q7d HOW MANY OF YOUR WINDOWS WERE UPGRADED WITH THE SAME NUMBER OF PANES AS BEFORE?

(Read list and mark one only)

- 1 ALL
- 2 MOST
- 3 HALF
- 4 LESS THAN HALF
- 5 ONE

HECS-Q7e TO HOW MANY OF YOUR WINDOWS DID YOU IMPROVE THE CAULKING OR WEATHERSTRIPPING?

(Read list and mark one only)

- 1 ALL
- 2 MOST
- 3 HALF
- 4 LESS THAN HALF
- 5 ONE

HECS-Q7f TO HOW MANY OF YOUR SINGLE PANE WINDOWS DID YOU ADD STORM WINDOWS?

(Read list and mark one only)

- 1 ALL
- 2 MOST
- 3 HALF
- 4 LESS THAN HALF
- 5 ONE

HECS-Q8 IN 1995, WERE ANY IMPROVEMENTS MADE TO THE EXTERIOR DOORS OF YOUR DWELLING?

- 1 Yes
- 2 No

HECS-Q8a WERE THEY...

(Read list and mark all that apply)

- 1 UPGRADES FROM WOOD DOOR TO A METAL DOOR?
- 2 UPGRADES FROM/TO ANY OTHER TYPE OF DOOR?
- 3 AN ADDITION OF NEW STORM DOORS?
- 4 IMPROVED CAULKING OR WEATHERSTRIPPING?
- 5 OTHER TYPES OF IMPROVEMENTS?

HECS-Q8b HOW MANY OF YOUR DOORS WERE UPGRADED FROM WOOD TO METAL?  
(Read list and mark one only)

- 1 ALL
- 2 ONE
- 3 OTHER (Please SPECIFY)

HECS-Q8c TO HOW MANY OF YOUR DOORS DID YOU ADD STORM DOORS?  
(Read list and mark one only)

- 1 ALL
- 2 ONE
- 3 OTHER (Please SPECIFY)

---

HECS-Q8d TO HOW MANY OF YOUR DOORS DID YOU IMPROVE THE CAULKING OR WEATHERSTRIPPING?

(Read list and mark one only)

- 1 ALL
  - 2 ONE
  - 3 OTHER (Please SPECIFY)
- 

HECS-Q9 IN 1995, WERE ANY MECHANICAL VENTILATION SYSTEMS INSTALLED OR UPGRADED IN YOUR DWELLING? (THIS REFERS ONLY TO SYSTEMS THAT BRING FRESH AIR TO THE HOUSE AND/OR EXHAUST STALE AIR)

- 1 Yes
  - 2 No
- 

HECS-Q9a DID YOU ...

(Read list and mark all that apply)

- 1 INSTALL A CENTRAL VENTILATION SYSTEM (AIR EXCHANGER)
  - 2 INSTALL EXHAUST FAN(S) (SUCH AS BATHROOM FANS)
  - 3 UPGRADED OR FIXED EXISTING EXHAUST FAN(S)
  - 4 OTHER (please SPECIFY)
- 

HECS-Q9b DOES THIS SYSTEM HAVE HEAT RECOVERY?

- 1 Yes
  - 2 No
- 

HECS-Q10 WHAT TYPE OF PRINCIPAL HEATING EQUIPMENT DO YOU CURRENTLY USE IN YOUR DWELLING?

(Read list and mark one only)

- 1 STEAM OR HOT WATER BOILER (FURNACE)
  - 2 FORCED HOT AIR FURNACE
  - 3 OTHER TYPE OF HOT AIR FURNACE
  - 4 ELECTRIC BASEBOARD OR HEAT PUMPS
  - 5 COOKSTOVE OR HEATING STOVE
  - 6 OTHER (SPECIFY IN NOTES)
- 

HECS-Q10a IN 1995, WAS THE PRINCIPAL HEATING EQUIPMENT IN YOUR DWELLING CHANGED?

- 1 Yes
  - 2 No
- 

HECS-Q10b WHAT TYPE OF PRINCIPAL HEATING EQUIPMENT DID YOU PREVIOUSLY USE IN YOUR DWELLING BEFORE THE CHANGE IN 1995?

(Read list and mark one only)

- 1 STEAM OR HOT WATER BOILER (FURNACE)
- 2 FORCED HOT AIR FURNACE
- 3 OTHER TYPE OF HOT AIR FURNACE
- 4 ELECTRIC BASEBOARD OR HEAT PUMPS
- 5 COOKSTOVE OR HEATING STOVE
- 6 OTHER (SPECIFY IN NOTES)

---

HECS-Q11 WHICH FUEL OR ENERGY SOURCE DOES YOUR PRINCIPAL HEATING SYSTEM CURRENTLY USE?

(Read list and mark all that apply)

- 1 ELECTRICITY
  - 2 COAL
  - 3 WOOD
  - 4 PROPANE
  - 5 NATURAL GAS
  - 6 OIL
  - 7 OTHER
- 

HECS-Q11a IS THIS A BI-ENERGY SYSTEM?

- 1 Yes
  - 2 No
- 

HECS-Q11b IN 1995, DID YOU CHANGE THE HEATING FUEL OR ENERGY SOURCE OF YOUR PRINCIPAL HEATING SYSTEM?

- 1 Yes
  - 2 No
- 

HECS-Q11c WHICH FUEL OR ENERGY SOURCE DID YOUR PRINCIPAL HEATING SYSTEM USE BEFORE THE CHANGE IN 1995?

(Read list and mark all that apply)

- 1 ELECTRICITY
  - 2 COAL
  - 3 WOOD
  - 4 PROPANE
  - 5 NATURAL GAS
  - 6 OIL
  - 7 OTHER
- 

HECS-Q11d WAS THIS A BI-ENERGY SYSTEM?

- 1 Yes
  - 2 No
- 

HECS-Q12 IN 1995, WERE ANY REPLACEMENTS OR UPGRADES MADE TO THE HEATING EQUIPMENT THAT WAS USED AS YOUR PRINCIPAL HEATING SYSTEM?

- 1 Yes
  - 2 No
- 

HECS-Q12a WERE THEY...

(Read list and mark all that apply)

- 1 REPLACEMENT OF BURNER
  - 2 INSTALLATION OF A NEW FURNACE OR BOILER
  - 3 ADDITION (NOT REPLACEMENT) OF ELECTRIC BASEBOARD HEATERS
  - 4 OTHER UPGRADES OR REPLACEMENTS
-

HECS-Q12b WAS THIS A MID OR HIGH-EFFICIENCY GAS FURNACE OR BOILER?

- 1 Yes
  - 2 No
- 

HECS-Q13 WHAT TYPE OF PRINCIPAL TAP WATER HEATING SYSTEM DO YOU CURRENTLY USE?

(Read list and mark one only)

- 1 STANDARD WATER HEATER
  - 2 HIGH-EFFICIENCY WATER HEATER
  - 3 COMBINED WATER HEATING SYSTEM
  - 4 OIL-FIRED WATER HEATER
  - 5 ELECTRIC WATER HEATER
  - 6 OTHER (SPECIFY IN NOTES)
- 

HECS-Q13a IN 1995, WAS THE PRINCIPAL TAP WATER HEATING SYSTEM IN YOUR DWELLING CHANGED?

- 1 Yes
  - 2 No
- 

HECS-Q13b WHAT TYPE OF PRINCIPAL WATER HEATING SYSTEM DID YOU PREVIOUSLY USE BEFORE THE CHANGE IN 1995?

(Read list and mark one only)

- 1 STANDARD WATER HEATER
  - 2 HIGH-EFFICIENCY WATER HEATER
  - 3 COMBINED WATER HEATING SYSTEM
  - 4 OIL-FIRED WATER HEATER
  - 5 ELECTRIC WATER HEATER
  - 6 OTHER (SPECIFY IN NOTES)
- 

HECS-Q14 DID YOU ADD A HEAT PUMP IN 1995?

- 1 Yes
  - 2 No
- 

HECS-Q14a IS THE HEAT PUMP AIR SOURCE OR GROUND SOURCE (WATER SOURCE)?

(Read list and mark one only)

- 1 AIR SOURCE
  - 2 GROUND SOURCE
- 

HECS-Q15 WHICH OF THE FOLLOWING ENERGY SAVING FEATURES WERE ADDED TO YOUR DWELLING IN 1995 TO REDUCE ENERGY CONSUMPTION?

(Read list and mark all that apply)

- 1 PROGRAMMABLE THERMOSTAT
- 2 INSULATION BLANKET AROUND OUTSIDE OF HOT WATER TANK
- 3 INSULATION AROUND HOT WATER SYSTEM PIPES
- 4 INSULATION AROUND THE HOT AIR DUCTS FROM THE FURNACE AND/OR SEALING OF LEAKY DUCTWORK
- 5 LOW FLOW SHOWER HEADS
- 6 ATTACHMENT TO HOT WATER FAUCETS TO REDUCE WATER FLOW (COMMONLY CALLED AN AERATOR)
- 7 FLUORESCENT LIGHTS TO REPLACE CONVENTIONAL LIGHT BULBS
- 8 OTHER (SPECIFY IN NOTES)
- 9 NONE

---

HECS-Q16      APPROXIMATELY, WHAT IS THE TOTAL HEATED LIVING AREA OF YOUR DWELLING? (EXCLUDE GARAGES AND BEDROOMS OR LIVING ROOMS IN BASEMENT)

---

HECS-Q16b      Was this...

(Mark one only)

- 1      in square feet
  - 2      in square metres
  - 3      the total number of heated rooms
  - 4      in other units (please comment)
- 

HECS-Q17      IN 1995, WERE THERE ANY STRUCTURAL EXTENSIONS OR RENOVATIONS MADE TO YOUR DWELLING WHICH ADDED TO THE HEATED FLOOR SPACE? (EXAMPLE: EXPANSION OF EXTERIOR WALLS TO ENLARGE FLOOR SPACE, ADDITION OF HEATED ROOMS, SOLARIUMS AND SUNROOMS)

- 1      Yes
  - 2      No
- 

HECS-Q17a      WHAT IS THE SIZE OF THE FLOOR SPACE WHICH WAS ADDED?

---

HECS-Q17b      Was this...

(Mark one only)

- 1      in square feet
  - 2      in square metres
  - 3      the total number of heated rooms
  - 4      in other units (please comment)
- 

HECS-Q18      DID YOU ADD A FIREPLACE IN YOUR DWELLING IN 1995?

- 1      Yes
  - 2      No
- 

HECS-Q18a      IS IT WOOD BURNING OR GAS BURNING?

(Read list and mark one only)

- 1      WOOD
  - 2      NATURAL GAS
- 

HECS-Q18b      IS YOUR WOOD BURNING FIREPLACE?

(Read list and mark all that apply)

- 1      A MASONRY (BRICK) FIREPLACE
- 2      A PREFAB METAL FIREPLACE
- 3      EQUIPPED WITH GLASS DOORS
- 4      AN ADVANCED COMBUSTION, HIGH EFFICIENCY FIREPLACE

---

HECS-Q18c IS YOUR NATURAL GAS OR PROPANE BURNING FIREPLACE?

(Read list and mark all that apply)

- 1 A GAS LOG SET IN EXISTING FIREPLACE
  - 2 NATURAL DRAFT GAS FIREPLACE WITH GLASS DOORS
  - 3 POWER VENTED GAS FIREPLACE WITH GLASS DOORS
  - 4 DIRECT VENT GAS FIREPLACE ( HIGH EFFICIENCY )
- 

HECS-Q18d IN 1995, WERE THERE ANY UPGRADES OR ADDITIONS MADE TO YOUR FIREPLACE?

- 1 Yes
  - 2 No
- 

HECS-Q18e WERE THEY...

(Read list and mark all that apply)

- 1 ADDITION OF A FIREPLACE INSERT TO THE EXISTING WOOD FIREPLACE
  - 2 ADDITION OF GLASS DOORS TO THE EXISTING WOOD FIREPLACE
  - 3 NEW INSTALLATION OF A WOOD FIREPLACE WITHOUT FIREPLACE INSERT
  - 4 NEW INSTALLATION OF A WOOD FIREPLACE WITH FIREPLACE INSERT
  - 5 CONVERSION OF THE EXISTING WOOD FIREPLACE TO A GAS FIREPLACE
  - 6 OTHER TYPES OF UPGRADES OR ADDITIONS
- 

HECS-Q19 FOR THE WORK PERFORMED ON THE INSULATION, WINDOWS OR DOORS WHAT REASONS MOTIVATED YOU TO DO IT?

(Do not read list. Mark all that apply)

- 1 Maintenance
  - 2 Appearance
  - 3 Comfort
  - 4 Energy savings
  - 5 Addition of living space
  - 6 Resale value of your home
  - 7 Concern about the environment
  - 8 Included in a renovation project
  - 9 Indoor air quality/health
  - 10 Other (SPECIFY in notes)
- 

HECS-Q19a FOR THE WORK PERFORMED ON THE INSULATION, WINDOWS OR DOORS WAS THE WORK DONE BY A CERTIFIED GENERAL CONTRACTOR?

- 1 Yes
  - 2 No
- 

HECS-Q19b GET FOR THE WORK PERFORMED ON THE INSULATION, WINDOWS OR DOORS WHERE DID YOU THE INFORMATION THAT INFLUENCED YOUR CHOICE OF MATERIAL?

(Do not read list. Mark all that apply)

- 1 Retail stores/home centers
  - 2 Magazines/newspapers
  - 3 Friends/relatives
  - 4 Personal knowledge
  - 5 Contractor
  - 6 Other (SPECIFY in notes)
- 

HECS-Q20 FOR THE CHANGES, ADDITIONS OR IMPROVEMENTS TO YOUR HEATING AND VENTILATION EQUIPMENT, WHAT REASONS MOTIVATED YOU TO DO IT?

(Do not read list. Mark all that apply)





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- 1 Maintenance
  - 2 Comfort
  - 3 Energy savings
  - 4 Addition of living space
  - 5 Resale value of your home
  - 6 Concern about the environment
  - 7 Included in a renovation project
  - 8 Indoor air quality/health
  - 9 Other (SPECIFY in notes)
- 

HECS-Q21 WHEN WAS THIS DWELLING ORIGINALLY BUILT?

(Read list and mark one only)

- 1 BEFORE 1941
  - 2 1941 - 1950
  - 3 1951 - 1960
  - 4 1961 - 1970
  - 5 1971 - 1980
  - 6 1981 - 1990
  - 7 1991 - 1995
- 

HECS-Q22 WHAT IS YOUR TOTAL HOUSEHOLD INCOME?

(Read list and mark one only)

- 1 LESS THAN \$10,000
  - 2 \$10,000 TO \$14,999
  - 3 \$15,000 TO \$19,999
  - 4 \$20,000 TO \$24,999
  - 5 \$25,000 TO \$29,999
  - 6 \$30,000 TO \$34,999
  - 7 \$35,000 TO \$39,999
  - 8 \$40,000 TO \$49,999
  - 9 \$50,000 TO \$59,999
  - 10 \$60,000 TO \$79,999
  - 11 \$80,000 OR MORE
- 

END-I2 *Interviewer: Thank respondent and end.*



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