

Brockton NG Gas Line Load Forecasting Survey

Final Questionnaire

Last Revised: January 13, 2020

Prepared by:

Innovative Research Group, Inc.
www.innovativeresearch.ca

Vancouver
888 Dunsmuir Street, Suite 350
Vancouver BC | V6C 3K4

Toronto
56 The Esplanade, Suite 310
Toronto ON | M5E 1A7



Survey Design

INTERNAL

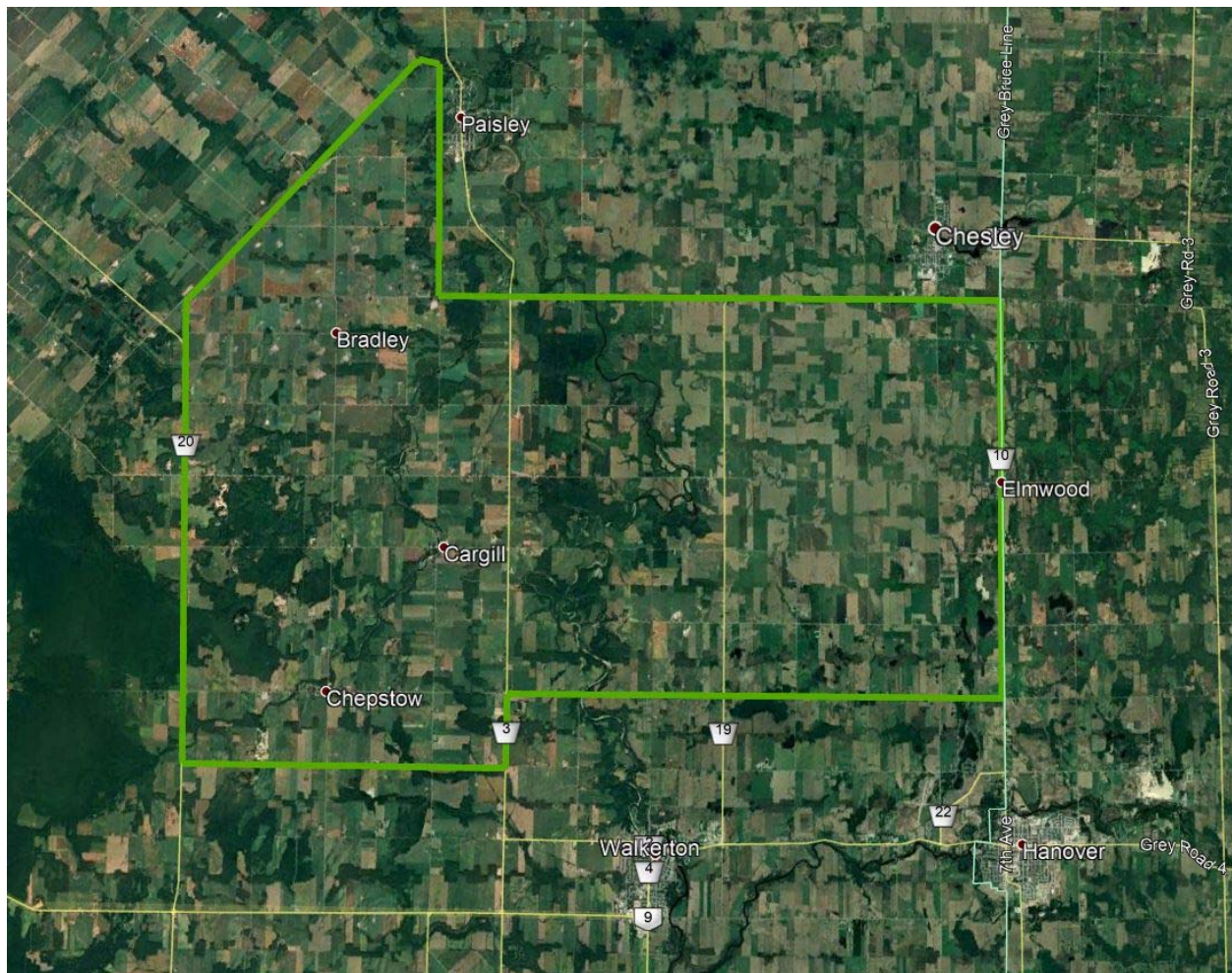
Method: Phone

Questionnaire Length: Equivalent of 30 Closed-Ended Questions

Language: English

Field Dates: TBD

Sample Design:



A. Introduction

HELLO. Good evening. I am calling on behalf of the Municipality of Brockton in regards to the extension of natural gas services in the municipality. My name is _____ and I'm calling from Innovative Research Group, a national public opinion research firm. We are conducting a short survey for the municipality on an issue currently being discussed by the Municipal Council which could have a positive impact on residents and property owners in the region. All your responses will be kept strictly confidential. Would you mind if I asked you a few questions right now?

Yes - Continue	1	
Not available now (ARRANGE CALLBACK)	2	=> /INT
Refuse – LOG (THANK AND TERMINATE)	99	=> /INT

MONIT This call may be monitored or audio taped for quality control and evaluation purposes.

PRESS NEXT CONTINUE	1
---------------------	---

A1. Have I reached you at your home phone number?

INTERVIEWER NOTE: IF NO SAY: May I speak to someone who does live here?

01	YES - SPEAKING, CONTINUE
02	YES - TRANSFERRED – (GO BACK TO INTRODUCTION)
03	NO - NOT AVAILABLE – (ARRANGE CALLBACK)
04	Refused – LOG (THANK AND TERMINATE)

A2. Are you 18 years of age or older?

01	Yes [CONTINUE]
02	No [SKIP TO A4]

A3. Are you the person in your household who is responsible for the home's energy bills?

01	Yes [SKIP TO A5]
02	No [CONTINUE TO A4]

A4. Can I speak to the person in your house who is 18 years of age or older and is the responsible for the home's energy bills?

01	Yes [TRANSFERRED – RETURN TO INTRO]
02	No [THANK AND TERMINATE]

A5. [ONLY ASK IF RES=1, if RES=2 skip to A7] Do you own or rent your home?

01	Own [SKIP TO NEXT SECTION]
02	Rent [CONTINUE TO A6]

A6. Can I have your landlord's...

First Name _____

Last Name _____

Phone Number _____

Thank & Add to Callback List, link to sample variables

If respondent questions how we obtained their information: "We were asked by your municipality to survey all residents and property owners, including seasonal residents. They provided us with a list of seasonal residents in the area."

B. PROPERTY INFORMATION

- B9. In order to have some idea as to the approximate size of your home can you tell me how many square feet your home is, not including any unfinished basement?

01	[RANGE: 100-10000]
99	Don't Know [DON'T READ]

- B10. In what year was your house built? Your best estimate is fine.

01	[RANGE: 1800-2019]
99	Don't Know [DON'T READ]

- B.13 What is the primary energy source for heat in your home? Is it... [RANDOMIZE 1-4 AND READ LIST]

01	Propane
02	Oil
03	Electricity
04	Wood
05	Geothermal
88	Other [DON'T READ - SPECIFY]
98	Don't know [DON'T READ]

IF B13=GEOTHERMAL SKIP OVER B14

- B14. What type of system provides the primary source of heat for your home? Is it... [RANDOMIZE 1-3 AND READ LIST]?

IF B13 = Propane

01	Forced Air Heating
02	Boiler (Hot Water Radiators)
88	Other [SPECIFY]
99	Don't Know [DO NOT READ]

IF B13 = Oil

01	Forced Air Heating
02	Boiler (Hot Water Radiators)
88	Other [SPECIFY]
99	Don't Know [DO NOT READ]

IF B13 = Electricity

01	Forced Air Heating
03	Electric Baseboard
04	Heat Pump
88	Other [SPECIFY]
99	Don't Know [DO NOT READ]

IF B13 = Wood

01	Forced Air Heating
05	Wood Stoves / Fireplace
88	Other [SPECIFY]
99	Don't Know [DO NOT READ]

IF B13 = Other/Don't Know

01	Forced Air Heating
02	Boiler (Hot Water Radiators)
03	Electric Baseboards
04	Heat pump
05	Wood Stoves / Fireplace
88	Other [SPECIFY]
99	Don't Know [DO NOT READ]

B15. How old is your heating system? If you are not sure please provide your best guess.

01	5 years old or less
02	6 to 10 years old
03	11 to 15 years old
04	16 to 25 years old
05	Over 25 years old
98	Don't know

B16. How likely are you to replace your home heating system in the next 5 years? Would you say you ... [READ LIST]?

01	Definitely will replace it
02	Will likely replace it
03	Will not likely replace it
04	Definitely will not replace it
98	Don't know [DON'T READ]

- B17. Now I would like to ask a few questions about your water heater. What is the main fuel source for your water heater? Is it... **[RANDOMIZE 1-3, READ LIST]**

01	Propane
02	Oil
03	Electricity
88	Other [SPECIFY]
98	Don't know [DON'T READ]

- B18. And how old is your water heater?

01	5 years or less
02	6 to 10 years old
03	11 to 15 years old
04	16 to 25 years old
05	Over 25 years old
98	Don't know [DON'T READ]

- B19. Is your water heater owned or rented?

01	Owned
02	Rented
98	Don't know [DON'T READ]

It is not important that the below answer is precise, we are just getting people to think about costs. NOTE FOR AGENTS: You should expect responses close to, or over \$1,000. If a response is closer to \$100 the respondent is likely giving a *monthly* cost rather than an *annual* cost.

If respondent is unsure, ask them to consider a typical monthly cost - bearing in mind that it will be different in Winter and Summer – and then to multiply that by 12.

- B20. To best of your ability, thinking back over the past 12 months, how much would you estimate you spent in total to heat both your home and water?

01	[RANGE: 0-9,999]
99	Don't Know [DON'T READ]

C. UPGRADE OPTIONS

C21. Are you aware that Brockton is looking to work with natural gas suppliers to bring natural gas service into unserved areas your community?

01	Yes
02	No
98	Don't know [DON'T READ]

Cost and savings statements in questions C22 and C23 should be based on the information in table 1 below. Financed costs are based on the following assumptions: 10 year term, monthly payments, and a 4% annual interest rate. Cost ratios are provided by EPCOR and are based on current prices based on average residential volumes and comparing fuel amounts required to obtain the equivalent amount of heat energy from the fuel.

Table 1: Home heating costs and savings information

B14 Answer	B13 Answer	System Name	Up front cost	Monthly Financed cost	Fuel Source	Cost ratio (relative to NG)	Est. Annual Average Savings	Payback (internal purposes only Yrs)	Payback (for Q#25)
Forced Air	Oil	Oil Forced Air	\$4,000 to \$5,000	\$41 to \$51	Heating oil	Over two times	\$1,400-\$1,850	2.4 – 3.2	2 and a half to 3 and a half
Forced Air	Electricity	Electricity Forced Air	\$4,000 to \$5,000	\$41 to \$51	Electricity	Almost two times	\$1,200 - \$1,500	3.0 - 3.8	3 to 4
Heat Pump	Electricity	Heat Pump	\$4,000 to \$5,000	\$41 to \$51	Electricity	Almost two times	\$1,200 - \$1,500	3.0 - 3.8	3 to 4
Forced Air	Propane	Propane Forced Air	\$750 to \$1,500	\$8 to \$12	Propane	Almost two times	\$1,000 - \$1,400	0.6 - 1.3	1 to 1 and a half
Forced Air	Other/Don't Know	Forced Air	As much as \$4,000 to \$5,000	\$41 to \$51	For example heating oil, electricity, and propane	Almost two times	Up to \$1,850	2.4 - 3.2	2 and a half to 3 and a half
Electricity	Electric Baseboard	Electric Baseboard	\$10,000-\$16,000	\$101-161	Electricity	Almost two times	\$1,200 - \$1,500	7.5 - 12.0	7 and a half to 12

Boiler	Propane	Propane hot water radiator	\$750 to \$1,500	\$8 to \$12	Propane	Almost two times	\$1,000 - \$1,400	0.6 - 1.3	1 to 1 and a half
Boiler	Oil	Oil hot water radiator	\$4,000 to \$5,000	\$41 to \$51	Heating oil	Over two times	\$1,400 - \$1,850	2.4 - 3.2	2 and a half to 3 and a half
Boiler	Electricity	Electrical hot water radiator	\$4,500 to \$5,000	\$41 to \$51	Electricity	Almost two times	\$1,200 - \$1,500	3.2 - 3.8	3 and a half to 4
Boiler	Other/Don't Know	Hot water radiator	\$4,000 to \$5,000	\$41 to \$51	For example heating oil, electricity, and propane	Almost two times	Up to \$1,850	2.4 - 3.2	2 and a half to 3 and a half
Other/Don't Know/Heat Pump	Geothermal/Wood/Other/Don't Know	Typical	As much as \$10,000-\$16,000	\$As much as 101 to \$161	For example heating oil, electricity, and propane	Almost two times	Up to \$1,600	7.3-11.7	7 and a half to 12

Question below is meant to educate about different financing costs and options and to assess preferences.

- C22. Let's talk about what's involved in converting a home heating system to natural gas. People who sign up for natural gas have two costs, the cost of converting their heating systems to natural gas and the cost of the natural gas they use.

Thinking first about the conversion costs, there are two options. The upfront cost to convert a [SYSTEM NAME] heating system to natural gas would be approximately [UP FRONT COST]. Alternatively financing could be arranged, secured by a lien against your house, which would typically cost [FINANCED COST] per month for 10 years.

Given these options, if you chose to convert your home heating to natural gas, would you be more likely to...[READ LIST]

01	Pay the full cost of conversion up front
02	Finance the conversion over 10 years
03	I wouldn't convert to natural gas [DON'T READ].
04	I would finance over a different period of time [DON'T READ]
98	Don't know [DON'T READ]

- C23. In addition to the conversion costs above, natural gas also means that you are paying a different amount for the energy you use in your home heating system. The cost of [FUEL SOURCE] is approximately [COST RATIO] the price of natural gas.

Thinking about both this price difference and the conversion costs, how likely would be to convert your home heating system to natural gas when it became available? Would you say you ...[READ LIST]

01	Definitely would convert [SKIP TO C24b]
02	Would likely convert [SKIP TO C24b]
03	It would depend [SKIP TO C24c]
04	Likely would not convert [CONTINUE TO C24a]
05	Definitely would not convert [CONTINUE TO C24a]
98	Don't know [DON'T READ – SKIP TO C25]

- C24. [C24a] [ONLY ASK IF C23 = 04 or 05] And what's the main reason why you would not convert? [OPEN ENDED; SKIP TO C25]

C24b. [ONLY ASK IF C23 = 01 or 02] And what's the main reason why you would convert? [OPEN ENDED; SKIP TO C25]

C24c. [ASK IF C23 = 03] And what does it depend on? [OPEN ENDED; SKIP TO C25]

C25. If it was going to take [PAYBACK PERIOD] years for your monthly savings from converting to natural gas to add up to the cost of conversion, would that leave you feeling more or less likely to convert to natural gas, or would it make no difference? **[IF MORE/LESS: And would that be much more/less or somewhat more/less?]**

- 01 Much more likely
- 02 Somewhat more likely
- 03 Makes no difference
- 04 Somewhat less likely
- 05 Much less likely
- 98 Don't know **[DO NOT READ]**

[ONLY ASK C31 and C32 IF C27a/b/c = 01 or 02 OR IF C23 = 01 or 02]

C31. There are a number of reasons why homeowners would consider converting to natural gas. For you, which of the following reasons is the *most* important? **[RANDOMIZE 01 to 04 AND READ LIST]**

- 01 Cost savings
- 02 Reliability
- 03 Convenience
- 04 Safety
- 88 Another reason **[SPECIFY]**
- 98 Don't know **[DO NOT READ – SKIP TO C33]**

C32. And which reason is the *second most* important? **[RANDOMIZE 01 to 04, EXCLUDING ANSWER FROM C31, AND READ LIST]**

- 01 Cost savings
- 02 Reliability
- 03 Convenience
- 04 Safety
- 88 Another reason **[SPECIFY]**
- 98 Don't know **[DO NOT READ]**

[ONLY ASK C31 and C32 IF C27a/b/c =01 or 02 OR IF C23 = 01 or 02]

I am going to read you a list of appliances that could be powered by natural gas. For each appliance, please tell me if you would be definitely interested, probably interested, probably not interested or definitely not interested in natural gas for the appliance. **[RANDOMIZE C33 to C36]**

01	Definitely interested
02	Probably interested
03	Probably not interested
04	Definitely not interested
98	Don't know [DON'T READ]

- C33. Fireplace
- C34. Oven, range or stove
- C35. Clothes dryer
- C36. BBQ**

[END BATTERY]

[RANDOMIZE AND TRACK]

RANDSCENARIO Randomized rate scenario

- 01 LOW
 02 MEDIUM
 03 HIGH

Table 2 Savings under hypothetical rate scenarios

B14 Answer	B13 Answer	System Name	[SAVINGS] if scenario=LOW	[SAVINGS] if scenario=MED	[SAVINGS] if Scenario=HIGH
Forced Air	Oil	Oil Forced Air	\$80	\$110	\$140
Forced Air	Electricity	Electricity Forced Air	\$70	\$90	\$110
Heat Pump	Electricity	Electric Heat Pump	\$70	\$90	\$110
Forced Air	Propane	Propane Forced Air	\$50	\$75	\$100
Forced Air	Other/Don't Know	Forced Air	\$70	\$105	\$140
Electricity	Electric Baseboard	Electric Baseboard	\$70	\$90	\$110
Boiler	Propane	Propane hot water radiator	\$50	\$75	\$100
Boiler	Oil	Oil hot water radiator	\$80	\$110	\$140
Boiler	Electricity	Electrical hot water radiator	\$70	\$90	\$110
Boiler	Other/Don't Know	Hot water radiator	\$70	\$90	\$110
Other/Don't Know/Heat Pump	Geothermal/Wood/Other/Don't Know	Typical	\$50	\$95	\$140

- C37. The cost savings from natural gas can depend on a number of factors. However, if your bill were **[SAVINGS]** less per month than it currently is, how likely would you be to convert to natural gas?

01	Definitely would convert
02	Would likely convert
03	It would depend
04	Likely would not convert
05	Definitely would not convert
98	Don't know [DON'T READ]

D. DEMOGRAPHICS

The following questions are for statistical purposes only. They are used to group similar people together when we analyse the results. As always, this information is kept completely confidential.

D44. How many adults 18 years or over usually live at this address, including yourself?

01	[RANGE: 1-99]
98	Refused

D45. How many children 17 years or younger usually live at this address, if any?

01	[RANGE: 0-99]
98	Refused

D46. Was your TOTAL HOUSEHOLD INCOME for last year under or over \$80,000?

01	UNDER \$80,000 [CONTINUE TO XA]
02	OVER \$80,000 [CONTINUE TO XB]
99	Refused [THANKS and END SURVEY]

XA. And would that be...?

01	Under \$20,000
02	\$20,000 to under \$40,000
03	\$40,000 to under \$60,000
04	\$60,000 to under \$80,000
05	UNDER \$80,000 UNSPECIFIED (DO NOT READ)
99	REFUSE (DO NOT READ)

XB. And would that be...?

06	\$80,000 to under \$100,000
07	\$100,000 to under \$120,000
08	\$140,000 to under \$160,000
09	\$160,000 or more
12	OVER \$80,000 UNSPECIFIED (DO NOT READ)
99	REFUSE (DO NOT READ)

THANK and END SURVEY

Thank you very much for taking the time to complete this survey.