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March 5, 2012

# VIA RESS, EMAIL and COURIER

Ms Kirsten Walli Board Secretary Ontario Energy Board 2300 Yonge Street, Suite 2700 Toronto, Ontario, M4P 1E4

Dear Ms Walli:

### Re: Enbridge Gas Distribution Inc. ("Enbridge") Updated Evidence – Appendix 3 - Ipsos Reid Report Renewable Natural Gas Program Application ("Application") Ontario Energy Board ("Board") File Number EB-2011-0242

As noted in the response to CME Interrogatory #10 (Exhibit I-6-10), the Utilities became aware that the most up to date Ipsos Reid report (Exhibit B, Tab 1, Appendix 3) was not included in the prefiled evidence as filed with the Board on September 30, 2011. An updated report had been prepared to correct the wording of the 4 questions as shown in pages 36-39 of the report, but the uncorrected version was inadvertently filed in the package.

Attached please find the updated Ipsos Reid report, to be filed at Exhibit B, Tab 1, Appendix 3.

This submission has been filed through the Board's Regulatory Electronic Submission System ("RESS"), and two hard copies will be sent to the Board via courier. Enbridge's filing for this proceeding can be found on the Enbridge website at: <a href="https://www.enbridgegas.com/ratecase">www.enbridgegas.com/ratecase</a>.

If you have any questions, please contact the undersigned.

Sincerely,

[Original Signed By]

Lesley Austin Regulatory Coordinator, Regulatory Affairs

cc: Mr. F. Cass, Aird & Berlis LLP (via email and courier) All Interested Parties EB-2011-0242 (via email)

Updated: 2012-03-05 EB-2011-0242 EB-2011-0283 Exhibit B Tab 1 Appendix 3 Pag 1 of 56



# **Ipsos Reid**





**Bio Methane Survey** Residential & Commercial Natural Gas Customers

November 2010

Ipsos Reid 160 Bloor Street East, Suite 300 Toronto ON M4W 1B9 Tel: 416.324.2900 Fax: 416.324.2865/6 www.ipsos.ca

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# 1. Background and Objectives

Ipsos Reid was commissioned by Enbridge Gas Distribution to better understand the potential residential and commercial markets for biogas, its market drivers, and customer sensitivities to a range of different price points. Green bio-methane gas could be mixed with regular natural gas in order to reduce Greenhouse Gas (GHG) emissions in Ontario. In recognition of the added value of a Green gas, it is anticipated that customers may be willing to pay a premium for this product.

Enbridge wanted to assess the support for this new form of Green gas in order to determine if there would be a large enough market to generate interest in developing new supply.

In addition to gauging general awareness and support for biogas, support was also measured under different assumptions of impact on customer gas bills.

Overall objectives of the research among both the <u>residential</u> and <u>commercial</u> segment included:

- Overall environmental awareness and level of concern for the environment;
- Awareness of alternative energy sources;
- Support for alternative energy sources initiatives; and
- Price points for those initiatives.



# 2. Methodology

Two phases of research were conducted. The first among a sample of 1052 residential natural gas consumers in Ontario conducted online between October 12<sup>th</sup> and 18<sup>th</sup>, 2010. The second among commercial natural gas consumers using a random sample of 500 respondents drawn from a listing of Enbridge Commercial Customers provided to us by Enbridge. Commercial customers were interviewed via the telephone between October 12<sup>th</sup> and 29<sup>th</sup>, 2010.

A survey with an unweighted probability sample of this size (n=1052) and a 100% response rate would have an estimated margin of error of  $\pm$ -3.1 percentage points, 19 times out of 20, of what the results would have been had the entire population of residential natural gas customers in Ontario been polled

Sub-population results have a larger error margin.

Within the residential sample of 1052 respondents, 632 were customers of Enbridge, and 420 were customers of Union. Participants for the residential survey were drawn from Ipsos Reid's iSay proprietary panel. Ipsos Reid is a pioneer in online data collection in Canada. The iSay Panel is one of Canada's largest proprietary panels with membership of over 300,000 Canadian households.

Unique reports were created for each of the residential and commercial surveys. This document presents the findings of the Residential Customer Study first followed by the findings of the Commercial Customer Study.



# 3. Executive Summary – Overall Results

#### **Environmental Concern**

Overall, sizeable majorities of those in both the residential and commercial studies are concerned about issues involving the environment. Across both groups, the highest level of concern is shown on the measure of the future state of the environment.

Nearly every residential and nine in ten commercial respondents have taken steps to reduce energy consumption. Among those who have taken steps to reduce energy, the use of energy efficient lighting is cited most often followed by participation in recycling programs.

#### Biogas Awareness and Support

While awareness of biogas is higher among commercial respondents than residential respondents, it is not particularly high in either group.

Once respondents are provided with some information regarding biogas creation and capture, strong majorities in both groups support utilities investing in and purchasing biogas.

In both groups, support for the purchase of biogas is based on the perception that doing so will benefit the environment, followed by it saving money or lowering costs. Any opposition to the inclusion of biogas centred on the perceived cost increase of doing so.

#### **Biogas Pricing**

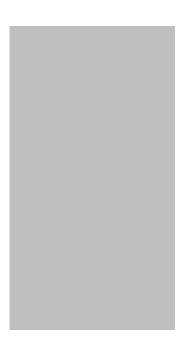
Both residential and commercial respondents exhibit fairly high tolerance for a price increase based on their utility purchasing biogas to meet customer needs. Of the four pricing scenarios tested (bill increases of 4%, 2%, 1% or 0.5%), respondents express the highest support for an increase of 0.5% (76% residential, 71% commercial). Even at 4%, the highest proposed increase, a majority in both groups (57% residential, 53% commercial) still express support for their utility purchasing biogas.

### Carbon Offsets

A majority of both residential and commercial customers have not heard of carbon offsets. When provided with additional information about carbon offsets (what they are, how they work) only a slight majority in each group favours their purchase.

Provided with a choice, residential and commercial customers indicate they are most likely to purchase a renewable energy program. About half as many would purchase an offset program. Within each group, significant portions would not purchase either of these options.







# **Residential Report**



Page 7

# 4. Key Findings – Residential Survey

#### **Environmental Concern**

Overall, a sizeable majority of respondents are concerned about issues involving the environment. Particularly high levels of concern are found on the measures of the current state of the environment, the future state of the environment and the loss of oxygen producing forests.

Nearly every respondent surveyed has undertaken steps in their homes to reduce energy consumption. The activities mentioned most often include the use of energy efficient lighting and efforts at reducing, re-using and recycling.

#### **Biogas Awareness and Support**

While only a minority of residential natural gas customers have heard of biogas, once some information about biogas is provided, large majorities of residential natural gas customers support their utility both investing in and purchasing biogas.

Support for utilities purchasing biogas is based primarily on the view that doing so is good for the environment, followed by biogas offering the potential to save money. Opposition is centered on the perceived cost increase of doing so.

#### **Biogas Pricing**

Residential natural gas customers exhibit fairly high tolerance for a price increase based on the inclusion of biogas. Of the four pricing scenarios tested (residential bill increases of 4%, 2%, 1% and 0.5%), residential natural gas customers express the highest support for an increase of 0.5% (76%). Even at 4%, the highest proposed increase, a majority of residential natural gas customers (57%) still express support for their utility purchasing biogas.

#### Carbon Offsets

Awareness of carbon offsets is split. When provided with additional information about carbon offsets (what they are, how they work) only a small majority says they are likely to purchase them.

Given a choice, the plurality of respondents say they would purchase a renewable energy program, similar portions would purchase either an offset program or neither.

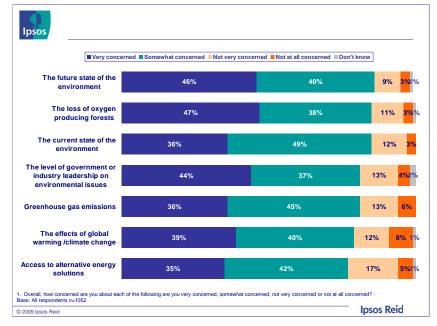


# 5. Detailed Findings

### 5.1 Environmental Concern

Overall, a sizeable majority of consumers are concerned with issues involving the environment. This includes both general concerns about the current and future state of the environment, as well as more specific issues such as the loss of forests, government leadership and greenhouse gases.

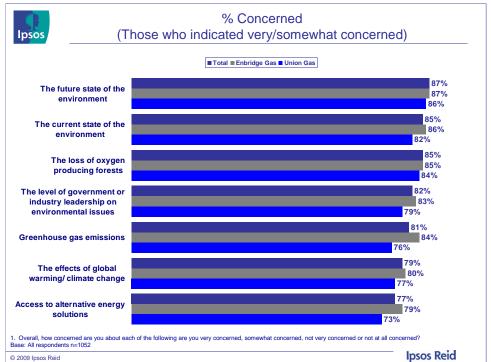
Particularly high levels of concern are found on: the future state of the environment (86% at least somewhat concerned), the loss of oxygen producing forests (85% at least somewhat concerned) and the current state of the environment (85% at least somewhat concerned). Still strong, but slightly lower levels of concern, are found on: the level of government/industry leadership on environmental issues (81% at least somewhat concerned), greenhouse gas emissions (81% at least somewhat concerned), the effects of global warming/climate change (79% at least somewhat concerned) and access to alternative energy solutions (77% at least somewhat concerned).



#### **Concern with the Environment**



Only slight differences are present between the two customer groups with Enbridge Gas residential customers, more concerned with greenhouse gas emissions (84%) and access to alternative energy solutions (79%), than Union Gas customers (76% and 73% respectively). There is no difference between the two customer groups on the key measures of: concern for the future state of the environment, the current state of the environment, the loss of oxygen producing forests and the level of government and industry leadership on environmental issues.

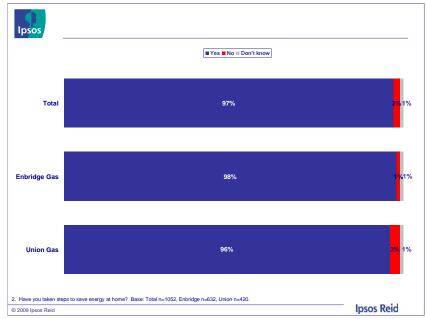


#### Concern with the Environment by Company



### 5.2 Activities Undertaken to Save Energy

Customers show a strong desire to actively save energy in their homes. When asked, virtually all (97%) residential natural gas customers have taken steps to save energy at home. There is no variation on this measure by customer group.

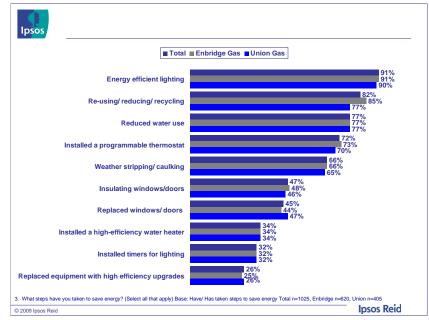


#### Whether Taken Steps to Save Energy

Respondents indicate using energy efficient lighting (91%) is the energy saving activity that has been undertaken most often. This is followed by respondents reducing/re-using/recycling (82%) along with efforts at reducing water use (77%). Almost three quarters have installed a programmable thermostat (72%), weather stripping/caulking (66%), insulating windows/doors (47%), replaced windows/doors (45%), installed high efficiency water heater (34%), installed timers for lighting (32%), and replaced equipment with high efficiency upgrades (26%).



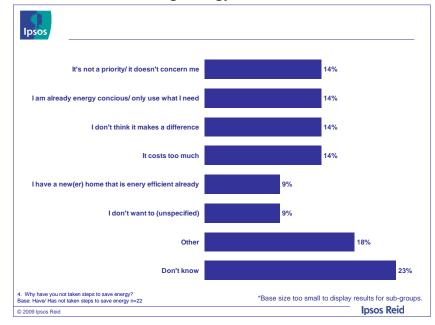




Among the very few respondents (3% or N = 22) who indicate they have not taken steps to save energy, 14% say each of: it is not a priority, they were already conscious of their energy use, they don't think it will make a difference or that actively taking steps to save energy costs too much. Other mentions include: their home is already energy efficient (9%), they have no interest in saving energy (9%), and other mentions (18%). Close to one quarter (23%) indicate they don't know why they haven't taken steps to save energy.



#### **Reasons Given for Not Saving Energy**



Looking at the questions in this section on a demographic basis, shows that overall women are more environmentally aware than men. The vast majority of women are concerned about the current state of the environment (91%), greenhouse gas emissions (87%), and access to alternative energy solutions (84%).

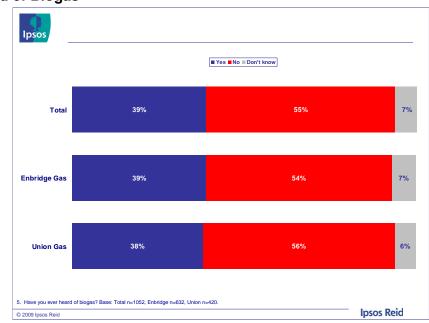
				G	ender an	d Age		
		Total	Men	Women	18 – 3		5 - 54	55+
	ŀ	%	%	%	%		%	%
Concern for current state of the environmen	t	85	79	91	79		86	85
Concern with greenhouse gas emissions		81		87	74		80	82
Concern with access to alternative energy solutions		77		84	69		78	77
Taken steps to save energy at home		97	96	99	99		96	98
			Educatio			In	ome	
	Total	High school or less	College	University	Less \$40K	\$40- 60K	\$60- 100K	\$100K +
	%	%	%	%	%	%	%	%
Concern for current state of the environment	85	80	86	86	86	82	83	87
Concern with greenhouse gas emissions	81	79	79	82	80	76	81	84
Concern with Access to alternative energy solutions	77	73	79	77	74	77	78	76
Taken steps to save energy at home	97	98	98	97	96	100	97	97

#### Environmental Concerns: Gender, Age, Education and Income Results



## 5.3 Biogas Awareness and Support

Only a minority of residential natural gas customers (39%) indicate they have previously heard of the term biogas. The majority (55%) have not heard of biogas.



#### Heard of Biogas

Respondents were then provided with a description of biogas:

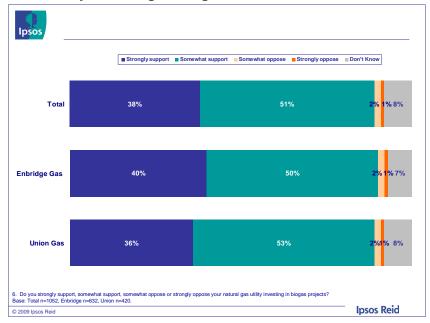
Bio methane gas or biogas is produced in landfills and waste water treatment plants and from animal manure and organic waste. It is a by-product of materials breaking down and rotting. The gas occurs naturally and is released into the atmosphere. It is possible to collect biogas. Once it is captured the biogas can then be cleaned and delivered to the market and used to heat homes and businesses thereby reducing greenhouse gas emissions.

Your natural gas utility is exploring the purchase of biogas to assist in meeting the overall gas supply needs of their customers. Biogas can then become a viable, renewable energy source for your region.

After being provided with this information, they were asked to indicate their support or opposition to their gas utility investing in biogas projects.

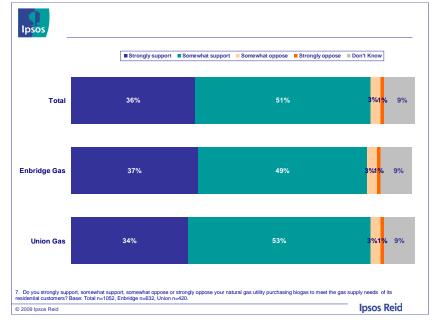
As the table below indicates, with 89% agreeing, strong support exists among residential natural gas customers for gas companies to invest in biogas projects. Very few, only three percent, expressed opposition, with a further eight percent indicating they did not know





#### Support for Utility Investing in Biogas

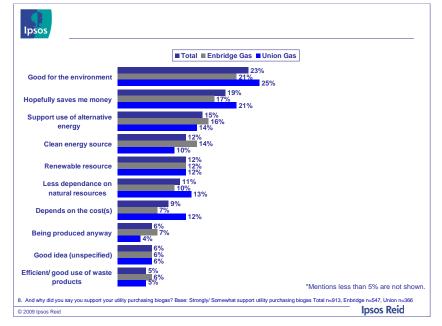
Similarly, strong support exists among residential natural gas customers for natural gas utilities purchasing biogas to meet the gas supply needs of residential customers. When asked 87% of respondents support their natural gas utility purchasing biogas. Only four percent are opposed to this, with nine percent indicating they do not know.



### Support for Utility Purchasing Biogas



Of those who support natural gas utilities purchasing biogas, most indicate they do so because they feel it is good for the environment (23%). This is followed by the inclusion of biogas will help them save money (19%), or they support the use of alternative energy (15%). Other reasons include: biogas is a clean (12%), or renewable (12%) energy source, they want less dependence on natural resources (11%), that it depends on the cost(s) (9%), that biogas is being produced anyway (6%), or generally it is a good idea (6%) and it is an efficient use of waste products (5%). Union Gas customers are more likely to state it depends on the cost (12%) as a reason for their support.

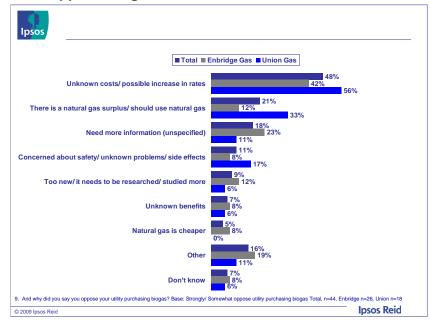


#### **Reasons for Support of Biogas**

Among the four percent (N of 44) of respondents who oppose gas utilities purchasing biogas, the unknown cost of doing so is stated as the top concern (48%). This is followed by 21% who say there is a current surplus of natural gas and 18% who say they have a lack of information. Other mentions for not supporting biogas include: concerns about safety (11%), biogas is too new and needs to be researched more (9%), the benefits are unknown (7%), natural gas is cheaper (5%), other reasons (16%), and don't know (7%).



**Reasons to Oppose Biogas** 



Looking at the biogas awareness and support questions across the demographics shows that men and those with a university education are more likely to have heard of biogas (52% and 48% respectively), compared to those with a high school (25%), and college education (31%) and those with a household income of less than \$40,000 (29%).

				G	iender an	d Age		
		Total	Men	Women	18 – 3	34 3	5 – 54	55+
	F	%	%	%	%		%	%
Heard of biogas		39		26	38		36	41
Support for investment in biogas		90	90	90	91		88	91
Support for purchase of biogas		87	87	86	89		85	88
Support for purchase of blogas			Educatio	n		Inc	ome	
Support for purchase of blogas	Total	High						\$1008
Support for purchase of blogas	Total	High school or less	Education College	n University	Less \$40K	Inc \$40- 60K	<b>:ome</b> \$60- 100K	\$100k +
Support for purchase of biogas	Total %	school				\$40-	\$60-	
		school or less	College	University	\$40K	\$40- 60К	\$60- 100K	+
Heard of biogas Support for investment in biogas	%	school or less %	College %	University %	\$40K	\$40- 60K %	\$60- 100K %	%

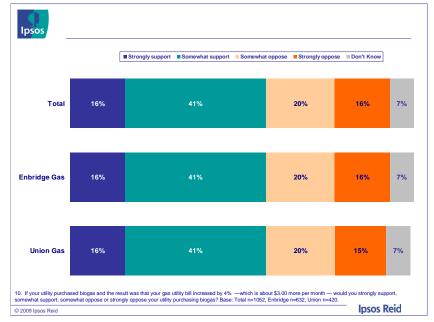
#### Biogas Awareness and Support: Gender, Age, Education and Income Results



### 5.4 Biogas Pricing

To assess the potential for the purchase and price of biogas, residential natural gas customers were asked a series of questions related to pricing and the impact of an increase in their gas bill on support for including biogas in the natural gas delivered to their homes.

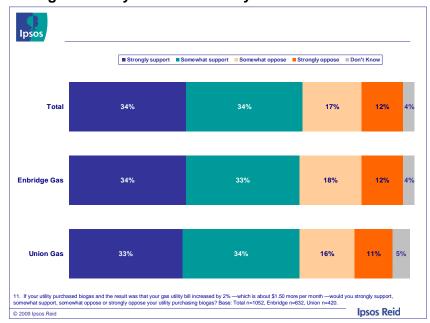
Close to six in ten residential natural gas customers (57%) support the purchase of biogas by their utility even if it means their individual natural gas bill would increase by 4%. Just over one third (36%) are opposed to the purchase of biogas if it resulted in a 4% increase in their natural gas bill.



### Support Biogas if Utility Bill Increased by 4%

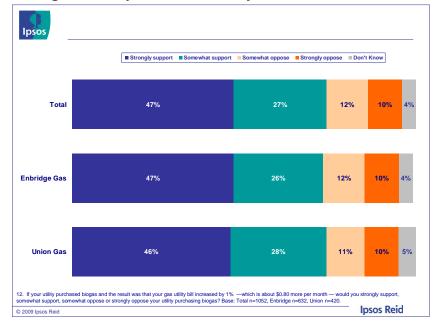
If the increase in respondents' natural gas bills was set at 2% based on the inclusion of biogas, support for the inclusion of biogas rises to just over two-thirds (68%). Opposition decreases to a level of 29%.





Support Biogas if Utility Bill Increased by 2%

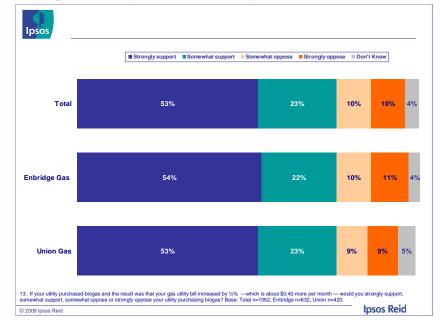
Nearly three quarters (74%) of residential natural gas customers express support for their utility purchasing biogas if the result is only a 1% increase in their residential gas bill. Just over two in ten (22%) say they are opposed to a 1% increase.



#### Support Biogas if Utility Bill Increased by 1%



The strongest level of support is found when residential natural gas customers are presented with the option of biogas inclusion resulting in a half of one percent increase in their utility bill. On this measure over three quarters (76%) of residential natural gas customers express support at this level. Two in ten (20%) report opposition even to a half of one percent increase in their gas bill.



#### Support Biogas if Utility Bill Increased by 1/2%



There are very few differences across the demographics assessed based on the four pricing options tested. If anything, older respondents appear to be more tolerant of a price increase to fund biogas inclusion, while younger respondents are less inclined to be supportive.

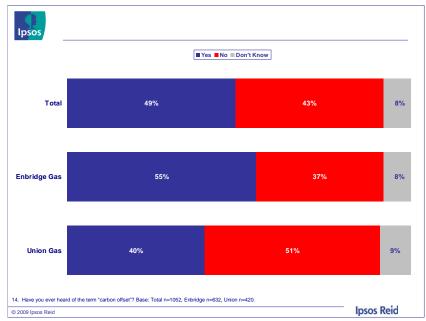
				G	iender an	d Age		
		Total	Men	Women	18 –	34 3	5 – 54	55+
		%	%	%	%		%	%
Support a 4% increase		57	54	61	49		55	60
Support a 2% increase		67	62	72	63		64	70
Support a 1% increase		74	69	78	63		70	78
Support 1/2% increase		76	73	80	63		73	81
		High	Education	1			come	
	Total	High school or less	Education College	n University	Less \$40K	In \$40- 60K	<b>come</b> \$60- 100K	\$100K +
	Total %	school				\$40-	\$60-	
		school or less	College	University	\$40K	\$40- 60K	\$60- 100K	+
Support a 4% increase	%	school or less %	College %	University %	\$40K %	\$40- 60K %	\$60- 100K %	+
Support a 4% increase Support a 2% increase Support a 1% increase	%	school or less % 57	College % 50	University % 61	\$40K % 58	\$40- 60K % 50	\$60- 100K % 58	+ % 61

**Biogas Pricing: Gender, Age, Education and Income Results** 



# 5.5 Carbon Offsets

Awareness of carbon offsets is split. Forty nine percent of residential natural gas customers say they have heard of the term "carbon offset" while 43% say they have not. Enbridge Gas customers (55%) report higher awareness than do Union Gas customers (40%).



#### Heard of Carbon Offsets

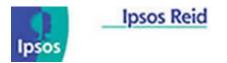
To better understand the likelihood of purchasing a carbon offset, residential natural gas customers were provided with the following description:

A carbon offset is a reduction in emissions of carbon or greenhouse gases made in order to compensate for or to offset an emission made elsewhere. In the case of a gas customer, the customer would receive a carbon offset in exchange for supporting a project that reduces the emission of greenhouse gases into the environment.

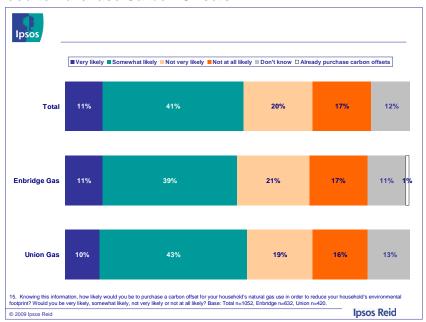
The customer benefits because their purchase of a carbon offset balances out greenhouse gases that they may release through activities such as home heating.

Offset projects support reduction in greenhouse gases by the planting of trees or the development of clean renewable energy projects such as biogas, wind and solar energy, etc.

They were then asked to indicate the likelihood of purchasing a carbon offset in order to reduce their household's environmental footprint. As the table below shows, just over half (52%) of the residential natural gas customers surveyed say they are at least somewhat



likely to purchase a carbon offset for their residence. Thirty seven percent are unlikely to do so.

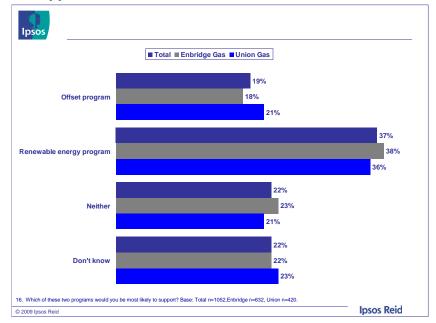


### Likelihood to Purchase Carbon Offsets

Given the choice, residential natural gas customers are more likely to support (37%) a renewable energy program (questionnaire wording -- In a renewable energy program, customers pay a premium for a portion of their natural gas to be supplied from a utility investing in renewable energy projects such as biogas) than they are an offset program (19%) (Questionnaire wording -- In an offset program, customers are offered the option to offset their home natural gas use by purchasing carbon offsets through the utility). Two in ten report they would support neither option (22%) or that they don't know (22%).



#### Program Support

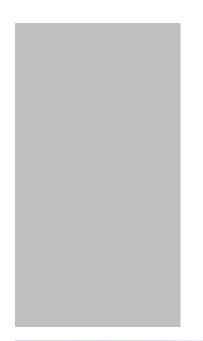


While men are more likely to have heard of carbon offsets (59%) than women (39%), women are more likely to support the purchase of carbon offsets (57%) than men (45%). Those who are university educated (61%) or have a household income of more than \$100,000 (57%) are also more likely to have heard the term carbon offset.

				G	ender an	d Age		
		Total	Men	Women	18 – 3	4 3	5 - 54	55+
		%	%	%	%		%	%
Heard of carbon offset		49	59	39	58		47	49
Likely to purchase		51		57	30		48	57
Support renewable energy program		37	38	36	47		37	35
Support offset program		19	17	22	13		17	22
			Education	ו		Inc	ome	
		Llink						
	Total	High school or less	College	University	Less \$40K	\$40- 60K	\$60- 100K	\$100K +
	Total	school	College %	University %				\$100K + %
Heard of carbon offset		school or less		î	\$40K	60K	100K	+
Heard of carbon offset Likely to purchase	%	school or less %	%	%	\$40K %	60K %	100K	+
	%	school or less % 31	% 38	% 61	\$40K % 30	60K % 47	100K % 52	+ % 57

Carbon Offsets: Gender, Age, Education and Income Results







# **Commercial Report**



Ipsos Reid

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# 6. Key Findings – Commercial Study

#### **Environmental Concern**

Overall, a sizeable majority of commercial natural gas customers are concerned about issues involving the environment. Particularly high levels of concern are found on the measure of the future state of the environment.

Nearly nine in ten commercial natural gas customers have undertaken steps in their businesses to reduce energy consumption. The activities mentioned most often include the use of energy efficient lighting and efforts at reducing, re-using and recycling. Among those who have not taken steps to save energy, most say they are not sure what to do.

#### **Biogas Awareness and Support**

Commercial natural gas customers are essentially split on their awareness of the term biogas. Forty six percent have heard of biogas, while 53% have not.

Strong support exists for gas utilities to both invest in biogas projects and purchase biogas to meet customer gas supply needs.

Support for utilities purchasing biogas is based primarily on the view that doing so is good for the environment. Opposition is centered on the perceived cost increase of doing so.

#### **Biogas Pricing**

Commercial natural gas customers exhibit fairly high tolerance for a price increase based on the utility purchasing biogas to meet their gas supply needs. Of the four pricing scenarios tested (commercial bill increases of 4%, 2%, 1% and 0.5%), commercial natural gas customers express the highest support for an increase of 0.5% (71%). Even at 4%, the highest proposed increase, a majority of commercial natural gas customers (53%) still express support for their utility purchasing biogas.

#### Carbon Offsets

A majority of commercial natural gas customers have not heard of carbon offsets. When provided with additional information about carbon offsets (what they are, how they work) only a slight majority says they are likely to purchase them.

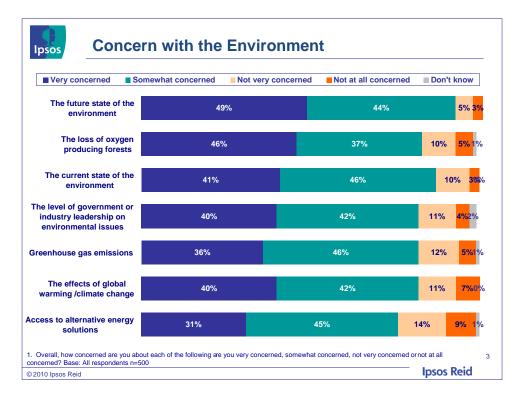
Given a choice, the plurality of commercial natural gas customers say they would likely purchase a renewable energy program. Two in ten would purchase an offset and one third would not purchase either option.



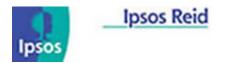
# 7. Detailed Findings

### 7.1 Environmental Concern

Overall, a sizeable majority of commercial natural gas customers are concerned with issues involving the environment. This includes both general concerns about the current and future state of the environment, as well as more specific issues such as the loss of forests, the level of government and industry leadership and greenhouse gases. Particularly high levels of concern are found on the future state of the environment (93% at least somewhat concerned).

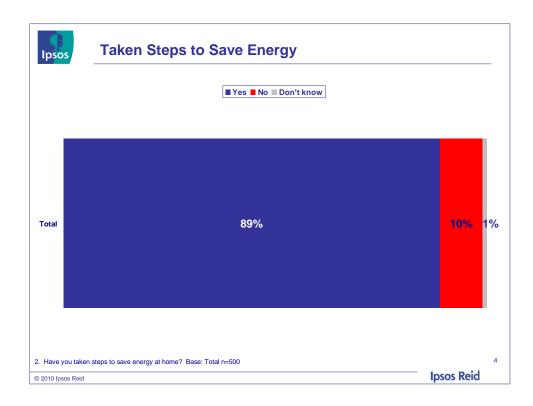


Still substantial, but slightly lower levels of concern are found on: the loss of oxygen producing forests (83% at least somewhat concerned), the current state of the environment (87% at least somewhat concerned), the level of government and industry leadership (82% at least somewhat concerned), greenhouse gas emissions (82% at least somewhat concerned) and the effects of global warming/climate change (82% at least somewhat concerned). Three quarters of respondents (76%) say they are concerned about access to alternative sources of energy.



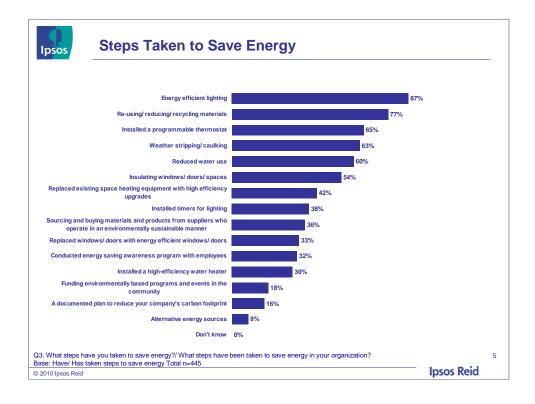
# 7.2 Activities Undertaken to Save Energy

Commercial customers show a strong desire to actively save energy within their locations. Nearly nine in ten (89%) commercial natural gas customers have taken steps to save energy within their company. One in ten (10%) indicate they have not undertaken energy saving measures.





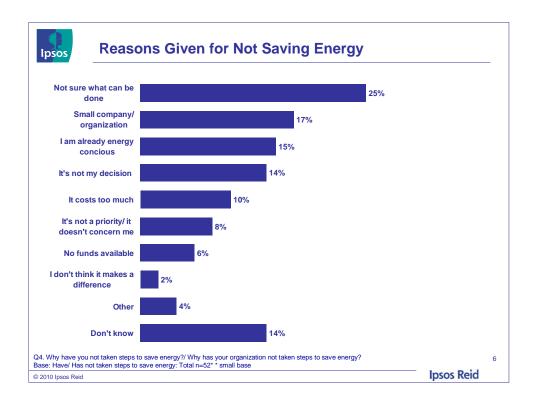
Commercial customers indicate using energy efficient lighting (87%) is the energy saving activity that has been undertaken most often. This is followed by respondents undertaking reducing/re-using/recycling (77%). About two thirds say each of installing a programmable thermostat (65%) or weather stripping (63%). Six in ten (60%) have reduced water use, and 54% have insulated windows/doors or spaces. Fewer have done each of replacing/upgrading heating equipment (42%), installing timers for lighting (38%), sourcing products from suppliers who work in an environmentally responsible manner (36%), replacing windows and doors (33%), conducting energy awareness programs with employees (32%), installing a high efficiency water heater (30%), funding environmental programs in the community (18%), drafting a plan to reduce the company's carbon footprint (16%) or looking at alternative energy sources (8%).





Among the few commercial respondents (10% or N = 52) who indicate they have not taken steps to save energy, a quarter (25%) say they are not sure what can be done. This is followed by 17% who say they are a small company, 15% who say they are already energy conscious and 14% who say saving energy is not their decision. About one in ten (10%) say it costs too much or that it is not a priority (8%). Six percent say there is no money available to fund energy saving programs. Two percent do not think energy saving programs will make a difference.

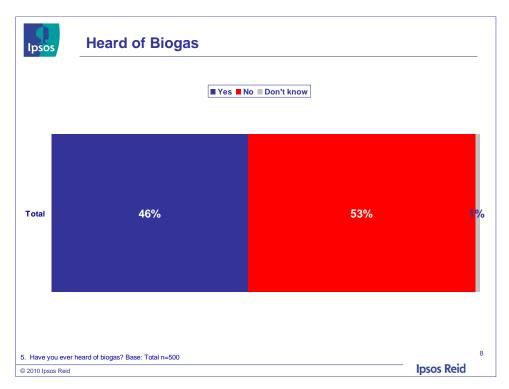
Fourteen percent say they don't know why they haven't taken steps to save energy.





# 7.3 Biogas Awareness and Support

Commercial natural gas customers are essentially split on their awareness of the term biogas. Forty six percent have heard of biogas, while 53% indicate they have not heard of biogas.



To better understand biogas, respondents were provided with the following description:

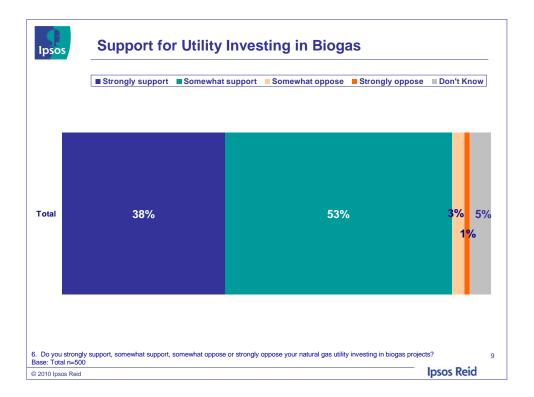
Bio methane gas or biogas is produced in landfills and waste water treatment plants and from animal manure and organic waste. It is a by-product of materials breaking down and rotting. The gas occurs naturally and is released into the atmosphere. It is possible to collect biogas. Once it is captured the biogas can then be cleaned and delivered to the market and used to heat homes and businesses thereby reducing greenhouse gas emissions.

Your natural gas utility is exploring the purchase of biogas to assist in meeting the overall gas supply needs of their commercial customers. Biogas can then become a viable, renewable energy source for your region.

After being provided with this information, they were asked to indicate their company's support or opposition to their gas utility investing in biogas projects.

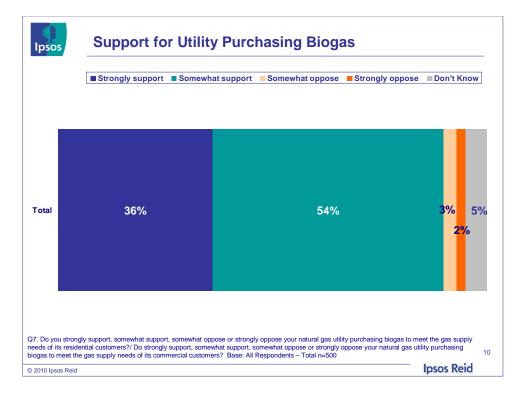


As the table below indicates with 91% agreeing, strong support exists among commercial natural gas customers for gas companies to invest in biogas projects. Very few, only four percent, expressed opposition, with a further five percent indicating they did not know.





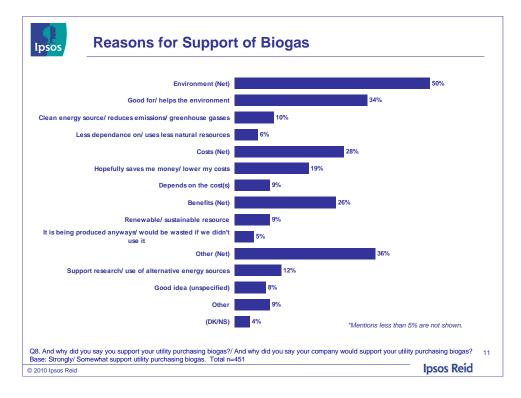
Similarly, strong support exists among commercial natural gas customers for natural gas utilities purchasing biogas to meet the gas supply needs of business customers. When asked 90% of commercial natural gas customers support their natural gas utility purchasing biogas. Only five percent are opposed to this, with five percent indicating they do not know.





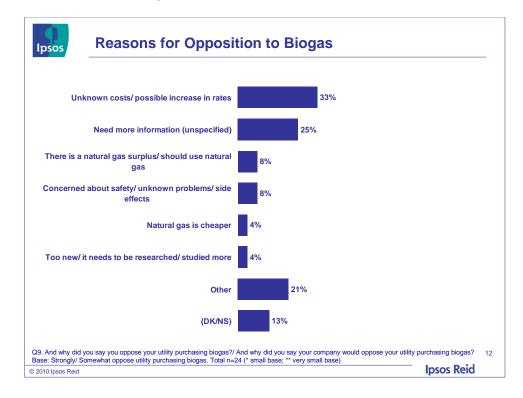
Of those who support natural gas utilities purchasing biogas, most indicate they do so out of a combination of responses related to it being good for the environment (50%), this includes; good for/helps the environment (34%), clean energy source/reduce emissions/greenhouse gases (10%) and less dependence on natural resources (6%). About one quarter (28%) indicate factors related to cost including; the inclusion of biogas will help them save money (19%), or that it depends on the cost (9%). Twenty six percent cite general benefits including; that it is renewable/sustainable (9%) and is being produced anyway (5%).

Over one third (36%) commercial natural gas customers provide other reasons for their support of the purchase of biogas.





Among the five percent or N of 24 of respondents who oppose gas utilities purchasing biogas, the unknown cost of doing so is stated as the top concern (33%). This is followed by 25% who say they have a lack of information. Other mentions for not supporting biogas include: there is a natural gas surplus (8%), concerns about safety (8%), natural gas is cheaper (4%) and biogas is too new and needs to be researched more (4%).

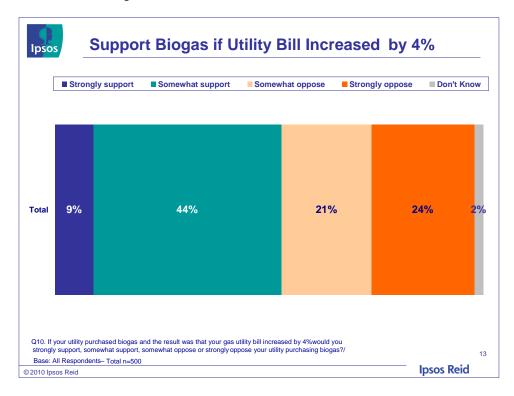




### 7.4 Biogas Pricing

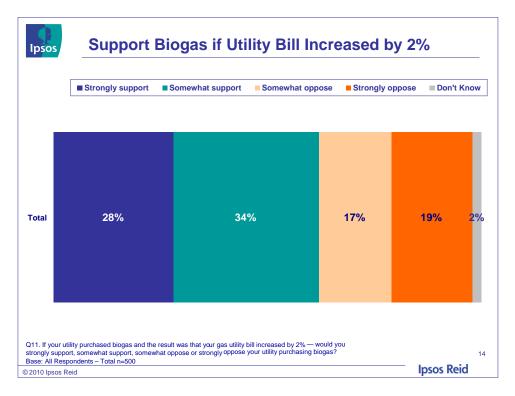
Commercial natural gas customers were asked a series of questions related to pricing and the impact of an increase in their gas bill on support for including biogas in the natural gas delivered to their businesses.

Just over half of commercial natural gas customers (53%) support the purchase of biogas by their utility even if it means their commercial natural gas bill would increase by 4%. Just under one half (45%) are opposed to the purchase of biogas if it resulted in a 4% increase in their natural gas bill.



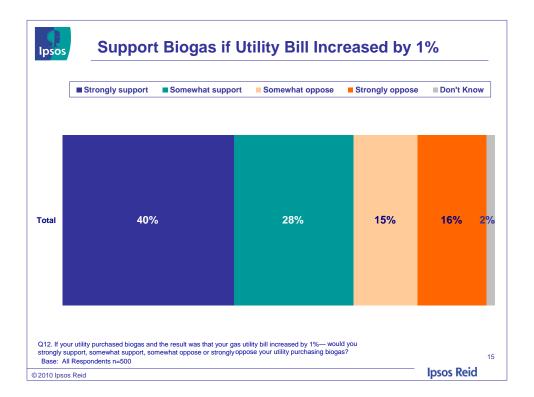


If the increase in the business's natural gas bills was set at 2% based on the inclusion of biogas, support for the inclusion of biogas rises to just over six in ten (62%). Opposition decreases somewhat to 36%.



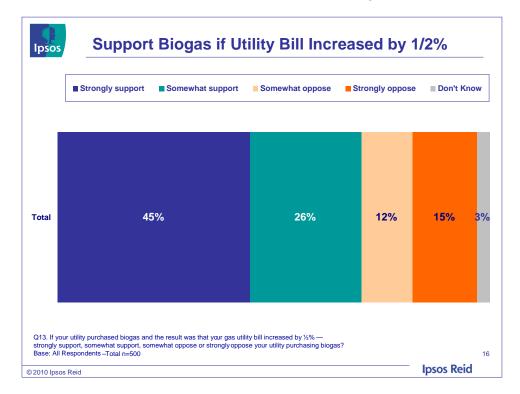


Just over two thirds (68%) of commercial natural gas customers express support for their utility purchasing biogas if the result is only a 1% increase in their corporate gas bill. Just over three in ten (31%) say they are opposed to a 1% increase.





The strongest level of support is found when commercial natural gas customers are presented with the option of biogas inclusion resulting in a one half of one percent increase in their utility bill. On this measure just over seven in ten (71%) commercial natural gas customers express support at this level. Twenty seven percent report opposition even to a one half of one percent increase in their gas bill.





### 7.5 Carbon Offsets

A majority (56%) of commercial natural gas customers indicate they have not heard of carbon offsets. Just over four in ten (43%) of commercial customers have heard of carbon offsets.

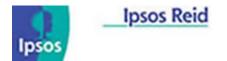
lpsos	Heard of Carbon (	Offsets	
		Yes No	
Total	43%	56%	
14. Have you ever heard of the term "carbon offset"? Base: Total n=500 © 2010 Ipsos Reid			18 S Reid

To better understand the likelihood of purchasing a carbon offset, commercial natural gas customers were provided with the following description:

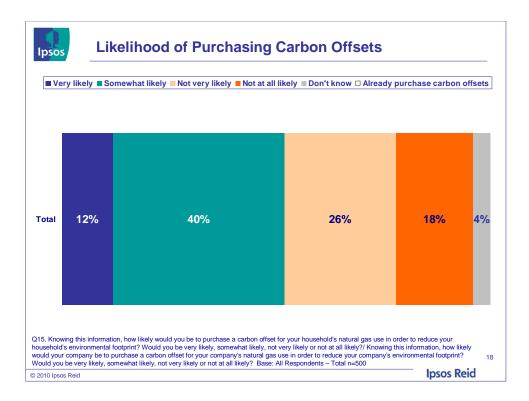
A carbon offset is a reduction in emissions of carbon or greenhouse gases made in order to compensate for or to offset an emission made elsewhere. In the case of a gas customer, the customer would receive a carbon offset in exchange for supporting a project that reduces the emission of greenhouse gases into the environment.

The commercial customer benefits because their purchase of a carbon offset balances out greenhouse gases that they may release through activities such as office and facility heating.

Offset projects support reduction in greenhouse gases by the planting of trees or the development of clean renewable energy projects such as biogas, wind and solar energy, etc.

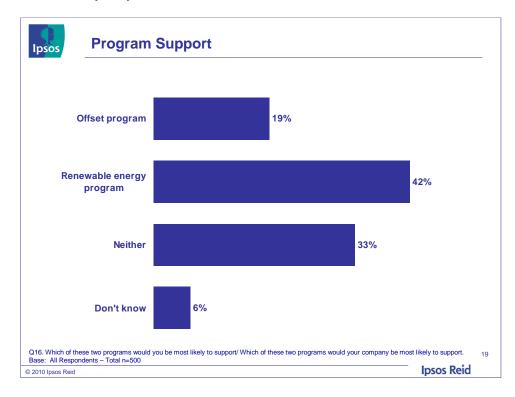


They were then asked to indicate the likelihood of purchasing a carbon offset in order to reduce their company's environmental footprint. As the table below shows, just over half (52%) of the commercial natural gas customers surveyed say they are at least somewhat likely to purchase a carbon offset for their business. One third (44%) say they would not purchase carbon offsets.





Provided with a choice, commercial natural gas customers are more likely to support (42%) a renewable energy program (questionnaire wording -- In a renewable energy program, commercial customers pay a premium for a portion of their natural gas to be supplied from a utility investing in renewable energy projects such as biogas) than they are an offset program (19%) (Questionnaire wording -- In an offset program, commercial customers are offered the option to offset their corporate natural gas use by purchasing carbon offsets through the utility). One third (33%) say they would not support either option, while 6% say they don't know.





# 8. Appendix I – Residential Questionnaire



## **Ipsos Reid Public Affairs**

INTRODUCTION

SCREENING

A. Do you or does anyone in your household work in any of the following areas?

Advertising or Public Relations Market Research The media, that is TV, radio or newspaper Energy providers (e.g. natural gas, oil, electricity, propane) None of the above [IF CODE 1-4 THEN TERMINATE]

B. Are you... (Select one)

Male Female

C. In what year were you born? PLEASE RECORD YEAR.

[INSERT SMALL TEXT BOX] RANGE 1900-2010 [TERMINATE IF >1992] (Resulting Codes – 18-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70/older)

D. Are you the person in your household who is fully or jointly responsible for decisions about utility services? Yes No [IF YES AT D CONTINUE, IF NO TERMINATE]

E. Which of the following energy sources do you use in your home? (SELECT/RECORD ALL THAT APPLY) Natural Gas Electricity

Other (specify)

[IF YES HAVE NATURAL GAS AT E CONTINUE, ELSE TERMINATE]



F1. Do you receive your natural gas bill from Enbridge, Union Gas or someone else? Enbridge Gas Union Gas Someone else Don't know [IF 3 OR 4 THEN TERMINATE]

F2. Which company do you purchase your natural gas supply from? Your natural gas distributor e.g. Enbridge or Union Gas Or A marketer or broker that provides a separate charge on your utility bill for the supply of natural gas

G. Are you enrolled in the [ENBRIDGE CUSTOMER: Budget Billing Plan/ UNION CUSTOMER: Equal Billing Plan]?

Yes No DON'T KNOW

Overall, how concerned are you about each of the following are you very concerned, somewhat concerned, not very concerned or not at all concerned?

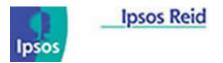
[RANDOMIZE] [COLUMNS] The <u>current</u> state of the environment The <u>future</u> state of the environment The effects of global warming /climate change Greenhouse gas emissions The loss of oxygen producing forests The level of government or industry leadership on environmental issues Access to alternative energy solutions

[ROWS] Very concerned Somewhat concerned Not very concerned Not at all concerned Don't know

Have you taken steps to save energy at home?

Yes No Don't know [IF Q2 IS YES CONTINUE, IF Q2 IS NO SKIP TO Q4, ELSE SKIP TO Q5]

What steps have you taken to save energy? (Select all that apply)



Reduced water use (e.g., aerators, water-conserving faucets) Energy efficient lighting Installed timers for lighting Installed a programmable thermostat Weather stripping / caulking Insulating windows / doors / spaces Replaced windows / doors with energy efficient windows / doors Re-using / reducing / recycling materials Replaced existing space heating equipment with high efficiency upgrades Installed a high-efficiency water heater Alternative energy sources (e.g., heat pumps, solar panels) Other (Specify)

Why have you not taken steps to save energy? (RECORD RESPONSE)

[UNAIDED] Don't know

BIO METHANE GAS

[ASK ALL]

Have you ever heard of biogas? Yes No Don't know

Bio methane gas or biogas is produced in landfills and waste water treatment plants and from animal manure and organic waste. It is a by-product of materials breaking down and rotting. The gas occurs naturally and is released into the atmosphere. It is possible to collect biogas. Once it is captured the biogas can then be cleaned and delivered to the market and used to heat homes and businesses thereby reducing greenhouse gas emissions.

Your natural gas utility is exploring the purchase of biogas to assist in meeting the overall gas supply needs of their customers. Biogas can then become a viable, renewable energy source for your region.

Do you strongly support, somewhat support, somewhat oppose or strongly oppose your natural gas utility investing in biogas projects?

Strongly support Somewhat support Somewhat oppose Strongly oppose



Don't Know

Do you strongly support, somewhat support, somewhat oppose or strongly oppose your natural gas utility purchasing biogas to meet the gas supply needs of its residential customers?

Strongly support Somewhat support Somewhat oppose Strongly oppose Don't Know

[IF STRONGLY/SOMEWHAT SUPPORT AT Q7 ASK Q8, IF STRONGLY/SOMEWHAT OPPOSE AT Q7 ASK Q9]

And why did you say you support your utility purchasing biogas? (RECORD RESPONSE)

And why did you say you oppose your utility purchasing biogas ? (RECORD RESPONSE)

If your utility purchased biogas and the result was that your gas utility bill increased by 4% —which is about \$3.00 more per month — would you strongly support, somewhat support, somewhat oppose or strongly oppose your utility purchasing biogas?

Strongly support Somewhat support Somewhat oppose Strongly oppose DON'T KNOW

If your utility purchased biogas and the result was that your gas utility bill increased by 2% —which is about \$1.50 more per month —would you strongly support, somewhat support, somewhat oppose or strongly oppose your utility purchasing biogas?

Strongly support Somewhat support Somewhat oppose Strongly oppose DON'T KNOW

If your utility purchased biogas and the result was that your gas utility bill increased by 1% —which is about \$0.80 more per month — would you strongly support, somewhat support, somewhat oppose or strongly oppose your utility purchasing biogas?



Strongly support Somewhat support Somewhat oppose Strongly oppose DON'T KNOW

If your utility purchased biogas and the result was that your gas utility bill increased by 1/2% —which is about \$0.40 more per month — would you strongly support, somewhat support, somewhat oppose or strongly oppose your utility purchasing biogas?

Strongly support Somewhat support Somewhat oppose Strongly oppose DON'T KNOW

CARBON OFFSET

Changing topics slightly...

Have you ever heard of the term "carbon offset"?

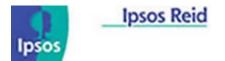
Yes No Don't know

A carbon offset is a reduction in emissions of carbon or greenhouse gases made in order to compensate for or to offset an emission made elsewhere. In the case of a gas customer, the customer would receive a carbon offset in exchange for supporting a project that reduces the emission of greenhouse gases into the environment. The customer benefits because their purchase of a carbon offset balances out greenhouse gases that they may release through activities such as home heating.

Offset projects support reduction in greenhouse gases by the planting of trees or the development of clean renewable energy projects such as biogas, wind and solar energy, etc.

Knowing this information, how likely would you be to purchase a carbon offset for your household's natural gas use in order to reduce your household's environmental footprint? Would you be very likely, somewhat likely, not very likely or not at all likely?

Very likely Somewhat likely Not very likely Not at all likely Don't know Already purchase carbon offsets



There are potentially two types of pricing programs utilities could offer in relation to reducing residential environmental footprints. One is called an offset program and the other is called a renewable energy program.

In an offset program, customers are offered the option to offset their home natural gas use by purchasing carbon offsets through the utility.

In a renewable energy program, customers pay a premium for a portion of their natural gas to be supplied from a utility investing in renewable energy projects such as biogas.

Which of these two programs would you be <u>most</u> likely to support (Select one only)

Offset program Renewable energy program Neither Don't know

DEMOGRAPHICS

[ACTIVISM INDEX] In the last year which of the following have you done?

[ROWS - RANDOMIZE ITEMS]

a. Written a letter or email to or called a newspaper, radio or TV station, an elected official, company or any other organization

b. Been a volunteer, donor or member of a community service organization, charity, political party or other organization like an environmental group

c. Regularly talked with friends or relatives about political or social issues and tried to convince them to see things your way

[COLUMNS] Yes No

What is the highest level of schooling that you have completed? (Select one)

Less than elementary school Elementary School High School Community College Some University Completed University Graduate Degree



Which of the following income groups would best represent your annual HOUSEHOLD income? (Select one)

Less than \$20,000 \$20,000 to less than \$40,000 \$40,000 to less than \$60,000 \$60,000 to less than \$80,000 \$80,000 to less than \$100,000 \$100,000 to less than \$120,000 \$120,000 or more

Do you own or rent your home?

Own Rent Don't Know

What type of home do you live in?

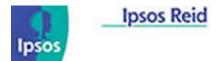
Single Detached House Semi- Detached House An attached row or townhouse A duplex A triplex A four-plex A six plex An apartment condominium An apartment A condominium bungalow Other

Including yourself, how many people live in your household?

One Two Three Four Five Six Seven or more Decline

How many children 17 years of age or under, if any, do you have living in your household?

[DROP DOWN MENU – 0 TO 15]



# 9. Appendix II – Commercial Questionnaire



**Ipsos Reid Public Affairs** 

INTRODUCTION

SCREENING

My name is \_\_\_\_\_\_ and I am calling on behalf of Ipsos Reid a Canadian based market research and public opinion company. May I please speak with the person in an accounting/accounts receivable decision making role who is responsible for selecting office space, rental rates, paying large corporate bills including utilities.

We are speaking with senior staff across a number of Ontario based companies on issues related to energy, energy supply and the environment. The study is being sponsored by Enbridge Gas and it takes about ten minutes to complete. All of your answers are confidential. Is now a good time to conduct the interview or would you prefer that I schedule an appointment with you?

Now is fine (CONTINUE) Schedule a callback on the following date and time \_\_\_\_\_

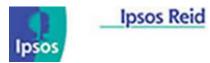
[INTERVIEWER: RECORD GENDER] [DO NOT ASK]

Male Female

D. Are you the person in your organization who is fully or jointly responsible for decisions about utility services? Yes

No [IF YES AT D CONTINUE, IF NO TERMINATE]

E. Which of the following energy sources do you use in your organization? (SELECT/RECORD ALL THAT APPLY) (READ LIST) Natural Gas Electricity Oil Propane Wood Solar Other (specify)



[IF YES HAVE NATURAL GAS AT E ASK F1, IF NO/DON'T KNOW/REFUSE TO NATURAL GAS AT E TERMINATE] F1. Do you receive your natural gas bill from Enbridge, Union Gas or someone else? Enbridge Gas Union Gas Broker/Marketer Someone else

F2. Which company do you purchase your natural gas supply from? (READ LIST)Your natural gas distributor e.g. Enbridge or Union GasOrA marketer or broker that provides a separate charge on your utility bill for the supply of natural gas

Overall, how concerned is your organization about each of the following are you very concerned, somewhat concerned, not very concerned or not at all concerned? (READ SCALE AS NECESSARY)

[RANDOMIZE] The <u>current</u> state of the environment The <u>future</u> state of the environment The effects of global warming /climate change Greenhouse gas emissions The loss of oxygen producing forests The level of government or industry leadership on environmental issues Access to alternative energy solutions

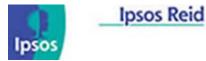
Very concerned Somewhat concerned Not very concerned Not at all concerned

Has your organization taken steps to save energy at its location(s)?

Yes No Don't know

[IF Q2 IS YES CONTINUE, IF Q2 IS NO/DON'T KNOW SKIP TO Q4, ELSE SKIP TO Q5]

What steps have been taken to save energy in your organization? (Select all that apply) (READ LIST) Reduced water use (e.g., aerators, water-conserving faucets)



Energy efficient lighting Installed timers for lighting Installed a programmable thermostat Weather stripping / caulking Insulating windows / doors / spaces Replaced windows / doors with energy efficient windows / doors Re-using / reducing / recycling materials Replaced existing space heating equipment with high efficiency upgrades Installed a high-efficiency water heater Alternative energy sources (e.g., heat pumps, solar panels) Conducted energy saving awareness program with employees Sourcing and buying materials and products from suppliers who operate in an environmentally sustainable manner A documented plan to reduce your company's carbon footprint Funding environmentally based programs and events in the community Other (Specify)

[IF NO AT Q2 ASK Q4, OTHERWISE SKIP TO Q5] Why has your organization not taken steps to save energy? (UNAIDED, ACCEPT TWO RESPONSES – PROBE FOR DETAIL)

#### **BIO METHANE GAS**

[ASK ALL]

Have you ever heard of bio gas? Yes No

As you may know, bio methane gas or biogas is produced in landfills and waste water treatment plants and from animal manure and organic waste. It is a by-product of materials breaking down and rotting. The gas occurs naturally and is released into the atmosphere. It is possible to collect biogas. Once it is captured the biogas can then be cleaned and delivered to the market and used to heat homes and businesses thereby reducing greenhouse gas emissions.

Your natural gas utility is exploring the purchase of biogas to assist in meeting the overall gas supply needs of their commercial customers. Biogas can then become a viable, renewable energy source for your region.

(READ IF NECESSARY: IF RESPONDENT ASKS WHAT GREENHOUSE GASES ARE SAY 'GREENHOUSE GASES ARE THOSE GASES THAT RESULT FROM THE BURINING OF FOSSIL FUELS AND MAY BE A CAUSE OF GLOBAL WARMING.')

Do you strongly support, somewhat support, somewhat oppose or strongly oppose your natural gas utility investing in biogas projects?



Strongly support Somewhat support Somewhat oppose Strongly oppose

Do strongly support, somewhat support, somewhat oppose or strongly oppose your natural gas utility purchasing biogas to meet the gas supply needs of its commercial customers?

Strongly support Somewhat support Somewhat oppose Strongly oppose

[IF STRONGLY /SOMEWHAT SUPPORT AT Q7 ASK Q8, IF SOMEWHAT / STRONGLY OPPOSE AT Q7 ASK Q9]

And why did you say your company would <u>support</u> your utility purchasing biogas? (UNAIDED – PROBE FOR DETAIL)

And why did you say your company would <u>oppose</u> your utility purchasing biogas? (UNAIDED – PROBE FOR DETAIL)

If your utility purchased biogas and the result was that your company's utility bill increased by 4%, would you strongly support, somewhat support, somewhat oppose or strongly oppose your utility purchasing biogas?

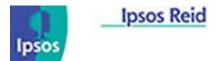
Strongly support Somewhat support Somewhat oppose Strongly oppose

And how about if your company's utility bill increased by 2%...

(READ IF NECESSARY: If your utility purchased biogas and the result was that your company's utility bill increased by 2%, would you strongly support, somewhat support, somewhat oppose or strongly oppose your utility purchasing biogas?)

Strongly support Somewhat support Somewhat oppose Strongly oppose

And how about if your company's utility bill increased by 1%...



(READ IF NECESSARY: If your utility purchased biogas and the result was that your company's utility bill increased by 1%, would you strongly support, somewhat support, somewhat oppose or strongly oppose your utility purchasing biogas?)

Strongly support Somewhat support Somewhat oppose Strongly oppose

And how about if your company's utility bill increased by half a percent... (READ IF NECESSARY: If your utility purchased biogas and the result was that your company's utility bill increased by half a percent, would you strongly support, somewhat support, somewhat oppose or strongly oppose your utility purchasing biogas?)

Strongly support Somewhat support Somewhat oppose Strongly oppose

CARBON OFFSET

Changing topics slightly...

Have you ever heard of the term "carbon offset"?

Yes No

As you may know, a carbon offset is a reduction in emissions of carbon or greenhouse gases made in order to compensate for or to offset an emission made elsewhere. In the case of a gas commercial customer, the commercial customer would receive a carbon offset in exchange for supporting a project that reduces the emission of greenhouse gases into the environment.

The commercial customer benefits because their purchase of a carbon offset balances out greenhouse gases that they may release through activities such as office and facility heating. Offset projects support reduction in greenhouse gases by the planting of trees or the development of clean renewable energy projects such as biogas, wind and solar energy, etc.

Knowing this information, how likely would your company be to purchase a carbon offset for your company's natural gas use in order to reduce your company's environmental footprint? Would you be very likely, somewhat likely, not very likely or not at all likely?

Very likely Somewhat likely Not very likely Not at all likely



(DO NOT READ: VOLUNTEERED) Already purchase carbon offsets

There are potentially two types of pricing programs utilities could offer in relation to reducing commercial environmental footprints. One is called an offset program and the other is called a renewable energy program.

In an offset program, commercial customers are offered the option to offset their corporate natural gas use by purchasing carbon offsets through the utility.

In a renewable energy program, commercial customers pay a premium for a portion of their corporate natural gas to be supplied from a utility investing in renewable energy projects such as biogas.

Which of these two programs would your company be <u>most</u> likely to support (Select one only)

(READ LIST) Offset program Renewable energy program Neither

Which of the following policies or programs does your company have in place at present?

Programs that seek ways to minimize our consumption of resources, including energy, paper and water

Programs that reduce our generation of waste and emissions Office recycling

Sourcing and buying materials and products from suppliers who operate in an environmentally sustainable manner

A documented plan to reduce your company's carbon footprint

Funding environmentally based programs and events in the community.

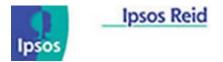
Yes No

Finally we would like to ask you a few questions about your organization. Please be assured that whatever you say will be kept entirely anonymous and absolutely confidential.

Approximately how many employees, including yourself, does your company presently employ at this location? [RANGE 1-999999]

What sector or industry does your company operate in? (UNAIDED, DO NOT READ LIST, ACCEPT ONE RESPONSE)

Hospitality industry Real estate



Restaurant/food service Property management Retail Services Manufacturing Financial services/insurance/banking Natural resources (i.e. Mining, oil and gas, lumber, forestry, agriculture) Engineering Telecommunications/information/technology Media Government/Crown Corporation Transportation Pharmaceuticals/medical Consumer products Automotive Aerospace Other (specify) \_\_\_\_\_

