



Climate Change & Energy Perceptions Survey Report

August 2018

Prepared by:



Study Objectives & Methodology

Background

The City of Edmonton has various programs working together to meet the goals of the Energy Transition Strategy. This strategy aims to make Edmonton a more energy sustainable and resilient city, by reducing the city's greenhouse gas emissions, reducing and conserving energy, and promoting local generation of energy. The support and participation of residents in the programs is essential to its success. To be able to market, target and even adapt their programs effectively, the City of Edmonton seeks to understand its audiences, their perceptions, what motivates them and what are their barriers to action. For this purpose, the City of Edmonton has conducted other research in the past, the most recent being an online survey which took place in June 2017. The results of that survey helped inform marketing efforts and also provided a baseline for the launch of climate change and energy efficiency programs. The current survey allows for a comparison of results, including changes in awareness and perceptions, and seeks to measure the effectiveness of messaging.

Research Objectives

- Measure and compare changes in behaviours and perceptions regarding climate change and energy efficiency
- Determine awareness and perceptions regarding the EnerGuide home evaluation program
- Establish baselines surrounding new City Programs being launched, such as those involving residential solar energy systems
- Measure the effectiveness of marketing campaign messages and images

Methodology

- Approach: Online survey using a general population online panel provided by Research Now. Both CRA and Research Now are Gold Seal members of MRIA.
- Target Audience: Edmontonians, 18 years of age or older
- Completed Surveys: 1000; as this is a general population non-probability panel survey, a margin of error is not reported. If this were a probability sample, than the margin of error would be +/- 3.1 percentage points, 19 times out of 20
- Weighting: Data was weighted by age, gender, and region using 2016 Census data to reflect the City's population along these dimensions
- Data Collection Dates: June 18 to June 24, 2018
- Average Survey Length: 11 minutes

Executive Summary

Feelings Toward Climate Change

Edmontonians continue to widely agree that climate change is a concern, and that there is a need to act now to address this issue. Indeed, more than seven in ten residents agree on both accounts. At least six in ten also agree that climate change is caused by human activities, that Edmonton residents should be doing more to help prevent climate change, that they want to do more personally to help prevent climate change, that individual actions contribute to the global impacts of climate change, and that they are taking action to prevent climate change.

In addition to expressing their own personal opinions on these matters, residents also were asked how they perceive Edmontonians in general feel in regards to climate change. As in 2017, residents are more so inclined to agree that they themselves hold progressive perceptions vis-à-vis climate change matters, as compared to the general public of Edmonton as a whole. That said, the gap is closing as compared to one year ago, as residents now perceive that a larger percentage of Edmonton residents hold progressive opinions regarding climate change, than was the case in 2017.

Although it remains the predominant opinion at 43 percent, fewer Edmonton residents this year believe the City should be doing more to address climate change. This corresponds with an increase in the number of residents with uncertain opinions in this regard. More than four in ten residents agree the City is taking the right actions to address climate change, on par with the previous year.

Many Edmontonians believe there are economic and employment opportunities that are associated with investing in energy efficiency, renewable resources, and climate change prevention. There is also widespread understanding of the contributors to greenhouse gases, and in turn, climate change. More than four in ten Edmontonians have become more supportive of actions to prevent this change in the past year, while one in ten have become less supportive.

Executive Summary

Home Energy Efficiency

Residents' knowledge of their home's impact on climate change and their capacity for energy efficiency remains relatively stable, with seven in ten agreeing in both instances. As well, an increasing number of Edmontonians are aware of how much energy is consumed by their home appliances.

Close to six in ten residents have taken actions to increase their home's energy efficiency this year, a modest decrease from a year ago. Those who have taken actions have largely done so by installing energy efficient appliances and (especially) lightbulbs, while other behavioural changes are less prevalent. Consistent with previous results, one-third of Edmontonians are aware of the EnerGuide evaluation program, and just over one in five indicate they are likely to get such an evaluation. The likelihood to get an evaluation doubles if it allows residents access to incentives and rebates. Moreover, opinions on the value of such a program are favourable.

Residential Solar Energy Systems

Four in ten residents are familiar with residential solar energy systems. In comparison, agreement that such systems have a positive impact on greenhouse gas emissions is more widespread, with more than six in ten in agreement. Fifteen percent of Edmonton homeowners are likely to install a residential solar energy system, with cost being the primary barrier to doing so. On the other hand, motivation for installing a solar energy system is driven by economic, environmental, and energy independence considerations, while innovation plays a more minor role.

Executive Summary

Greenhouse Gas Emissions

One in three Edmontonians have taken actions to reduce greenhouse gas emissions in the past year. Those who have taken such actions report having primarily driven less often, among other alterations to their mode of transportation. As improving energy efficiency in the home is a means of reducing greenhouse gas emissions, an overall total percentage of Edmonton residents was derived based on those saying they have improved their home's energy efficiency, and/or confirmed that they have taken actions to reduce greenhouse gas emissions. This calculation reveals that two-thirds of Edmontonians have taken some type of action, whether it is improving their home's energy efficiency and/or other types of action.

In terms of future intentions, one in eight residents indicate they are likely to buy an electric car in the next three years, and close to four in ten are likely to walk, bike, or take public transit for the majority of their trips to reduce greenhouse gas emission.

Campaigns

One in six residents recall, unaided, seeing or hearing about climate change programs or advertisements from the City of Edmonton. When prompted or aided with specific campaign images, three in ten Edmontonians recall at least one of the seven specific images from the Change for Climate campaign.

***Feelings
Toward Climate
Change***

*Home Energy
Efficiency*

*Residential
Solar Energy
Systems*

*Greenhouse
Gas Emissions*

Campaigns

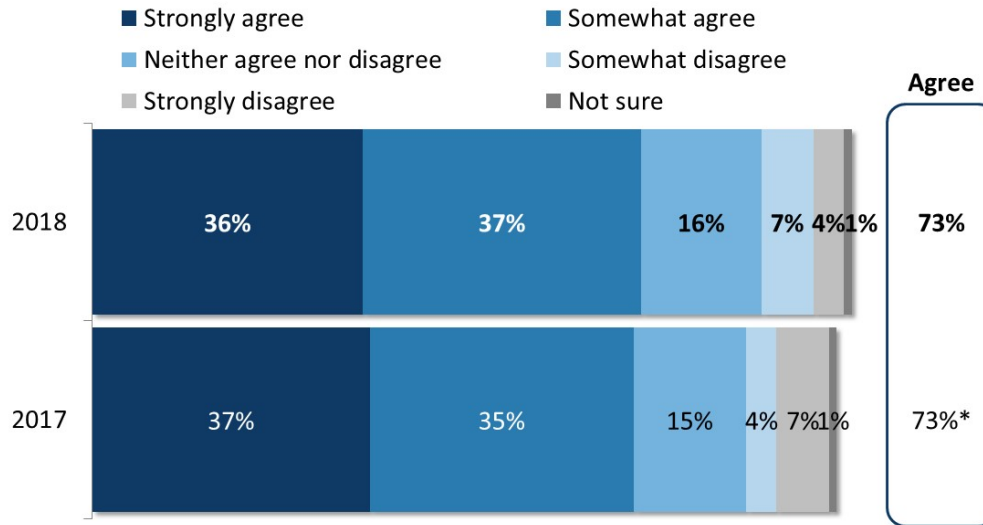
Demographics

Concern About Climate Change

Approximately, three-quarters of Edmonton residents are concerned about climate change, on par with results from a year ago.

I am Concerned about Climate Change

% agree (strongly/somewhat agree), on 5-pt. agreement scale



Concern is elevated among younger residents, and to a lesser extent, among females.

Q.1a: The next few statements are about how you **personally** feel about climate change. To what extent do you agree or disagree with the following statements? 2017: (n=506); 2018: (n=1000)

**Due to rounding.*

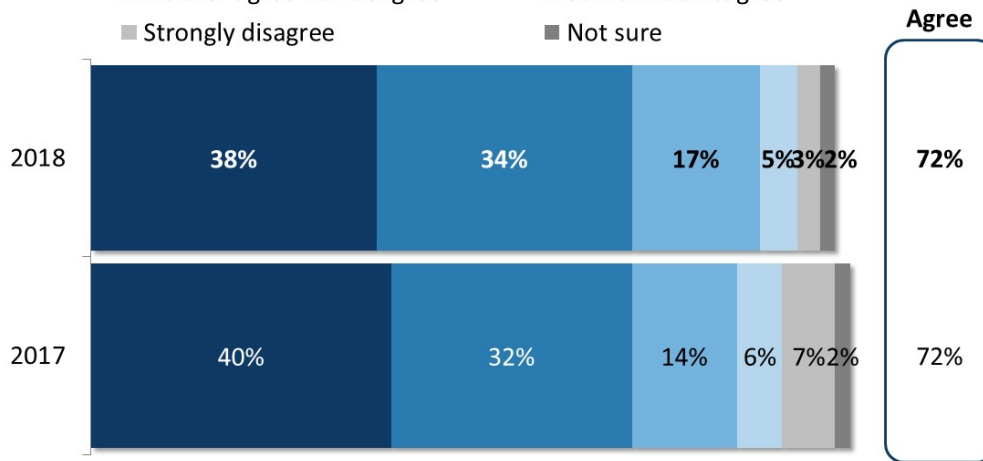
Action on Climate Change

More than seven in ten residents believe action is required now to address climate change, similar to a year ago.

I Think We Need to Act Now to Address Climate Change

% agree (strongly/somewhat agree), on 5-pt. agreement scale

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree
- Not sure



Younger residents are more inclined than older ones to perceive a need for action on climate change.

Q.1f: The next few statements are about how you **personally** feel about climate change. To what extent do you agree or disagree with the following statements? 2017: (n=506); 2018: (n=1000)

**Due to rounding.*

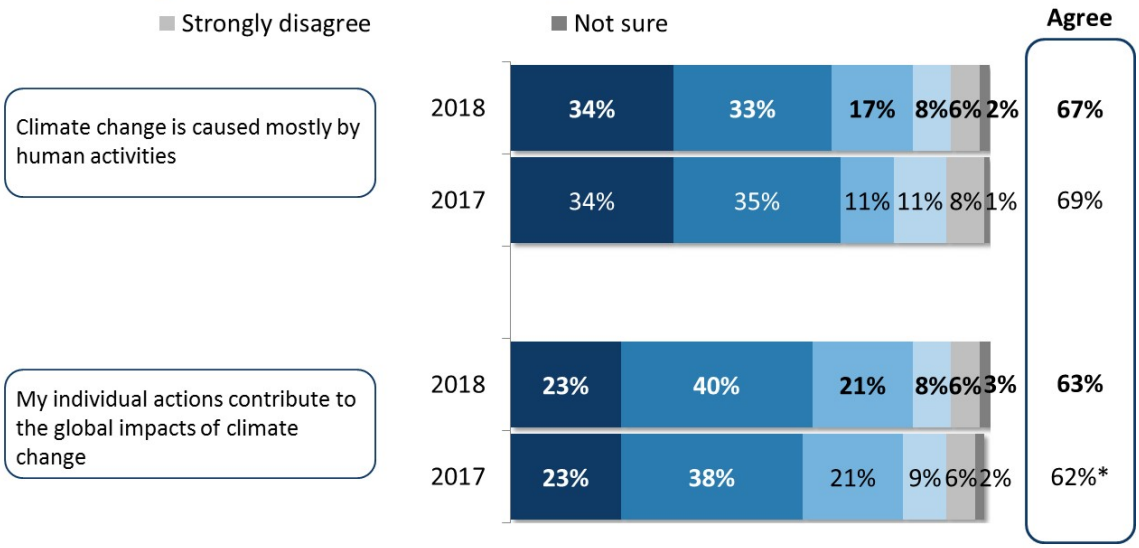
Human Action and Climate Change

Two-thirds of Edmontonians believe climate change is caused mostly by human activities, while six in ten believe their individual actions contribute to the global impacts of climate change. Results are on par with those from one year ago.

Extent Agree with Statement About Climate Change

% agree (strongly/somewhat agree), on 5-pt. agreement scale

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree
- Not sure



Agreement is elevated among younger residents.

Q.1b-c: The next few statements are about how you personally feel about climate change. To what extent do you agree or disagree with the following statements? 2017: (n=506); 2018: (n=1000)

*Due to rounding.

Desire to Do More to Prevent Climate Change

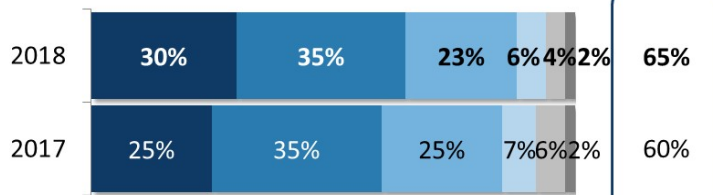
Two-thirds of Edmontonians believe Edmonton residents should be doing more to prevent climate change, and the same proportion want to do more personally to prevent climate change. Agreement is slightly up for both measures relative to a year ago.

Extent Agree with Statement About Climate Change

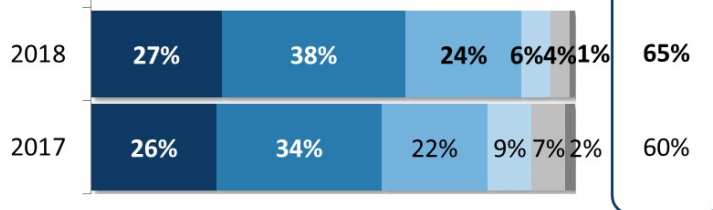
% agree (strongly/somewhat agree), on 5-pt. agreement scale

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree
- Not sure

I think Edmontonians should be doing more to help prevent climate change



I want to do more personally to help prevent climate change



These perceptions are elevated among younger residents, while females are also more inclined to believe Edmontonians should be doing more to prevent climate change.

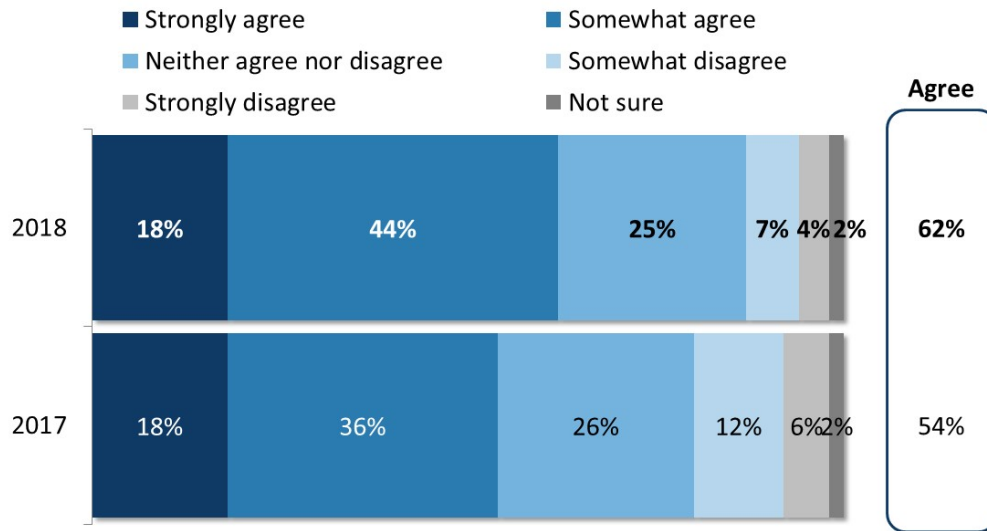
Q.1d-e: The next few statements are about how you **personally** feel about climate change. To what extent do you agree or disagree with the following statements? 2017: (n=506); 2018: (n=1000)

Action to Prevent Climate Change

Six in ten Edmonton residents are taking actions to help prevent climate change, an increase from one year ago.

I am Taking Action to Help Prevent Climate Change

% agree (strongly/somewhat agree), on 5-pt. agreement scale



There is little variation across the population, although agreement is somewhat elevated among home owners versus those who lease or rent.

Q.1g: The next few statements are about how you personally feel about climate change. To what extent do you agree or disagree with the following statements? 2017: (n=506); 2018: (n=1000)

Perceived Opinions of Edmontonians on Climate Change

Residents were also asked how they perceive Edmontonians in general feel in regards to climate change. As in 2017, residents are more so inclined to agree that they themselves hold progressive perceptions vis-à-vis climate change matters, as compared to the general public of Edmonton as a whole. That said, the gap is shrinking between the two measures: personal opinion and perceived agreement among Edmontonians.

Younger residents are more likely to believe that Edmontonians in general are more likely to agree with these statements. Homeowners are more likely than leasers or renters to believe Edmontonians as a whole are concerned about climate change.

Opinions on Climate Change

% agree (strongly/somewhat agree), on 5-pt. agreement scale

| | Perceived Agreement Among Edmontonians | | GAP* (% Personally - % Edmontonians) | |
|--|--|------------------|---|------------------|
| | 2017 (n=506) | 2018 (n=1000) | 2017 (n=506) | 2018 (n=1000) |
| Concerned about climate change | 39% | 47% | 34% | 25% |
| Need to act now to address climate change | 41% | 48% | 31% | 25% |
| Climate change is caused mostly by human activities | 48% | 54% | 20% | 14% |
| Edmonton residents should be doing more to help prevent climate change | 36% | 47% | 24% | 18% |
| Want to do more personally to help prevent climate change | 35% | 44% | 25% | 21% |
| Individual actions contribute to the global impacts of climate change | 37% | 44% | 24% | 19% |
| Taking action to prevent climate change | 25% | 34% | 30% | 28% |

Q.2a-g: The next few statements are about how you think Edmontonians feel about climate change. To what extent do you agree or disagree with the following statements?

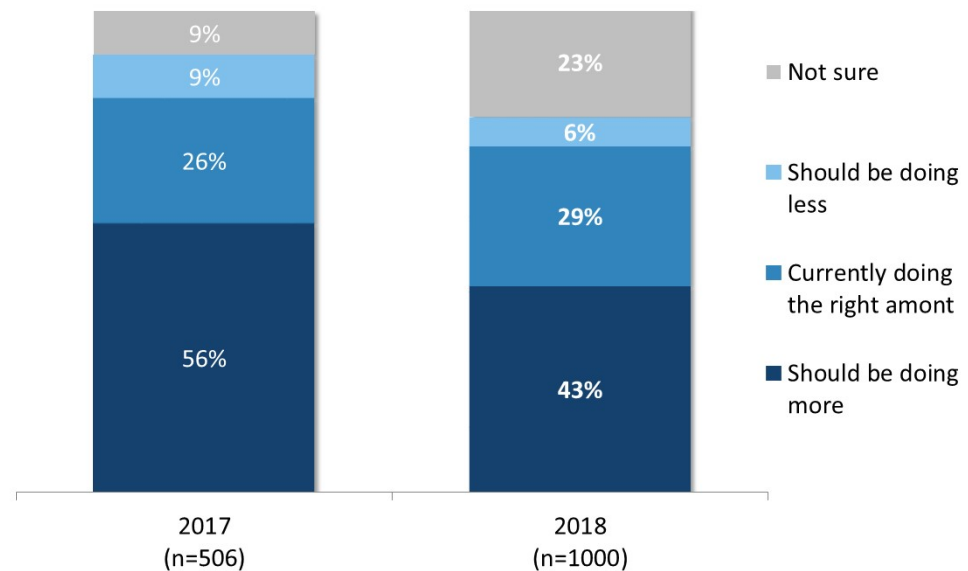
**Note: The GAP figures presented here are based on calculations rounded to the nearest percent.*

City of Edmonton's Actions to Address Climate Change

Compared with 2017, fewer Edmontonians believe the City should be doing more than what it is doing currently to address climate change. This corresponds to an increase in uncertainty, rather than an increase in the belief that the City should be doing less or is currently doing the right amount. Despite the decline, belief that the City should be doing more remains the predominant opinion in this regard, with more than four in ten holding this opinion.

Opinion that the City of Edmonton should be doing more than what it is currently doing to address climate change is elevated among residents between the ages of 18 and 34 years, and leasers or renters.

Perception of the Amount Being Done by the City of Edmonton to Address Climate Change



Q.3: Do you think the City of Edmonton [should be doing more than it currently is/is currently doing the right amount/should be doing less than it currently is/not sure] to address climate change?

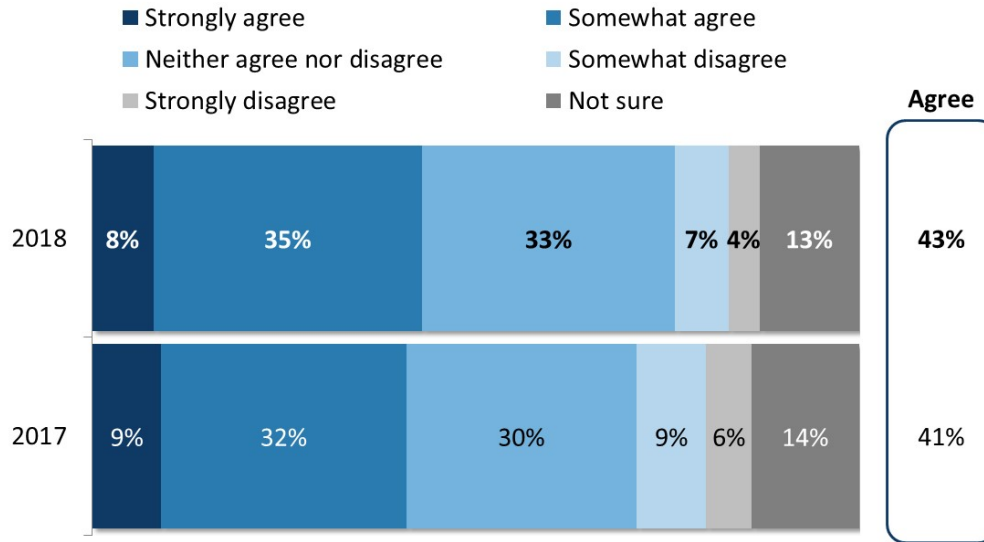
City of Edmonton's Actions to Address Climate Change

More than four in ten residents perceive the City of Edmonton as taking the right actions to address climate change, with results on par relative to 2017 findings.

Agreement in this regard is slightly higher among residents under 55 years of age, as compared to their older counterparts.

Extent Agree that City of Edmonton is Taking the Right Action to Address Climate Change

% agree (strongly/somewhat agree), on 5-pt. agreement scale



Q.4d: To what extent do you agree or disagree with the following statements about climate change? 2017: (n=506); 2018: (n=1000)

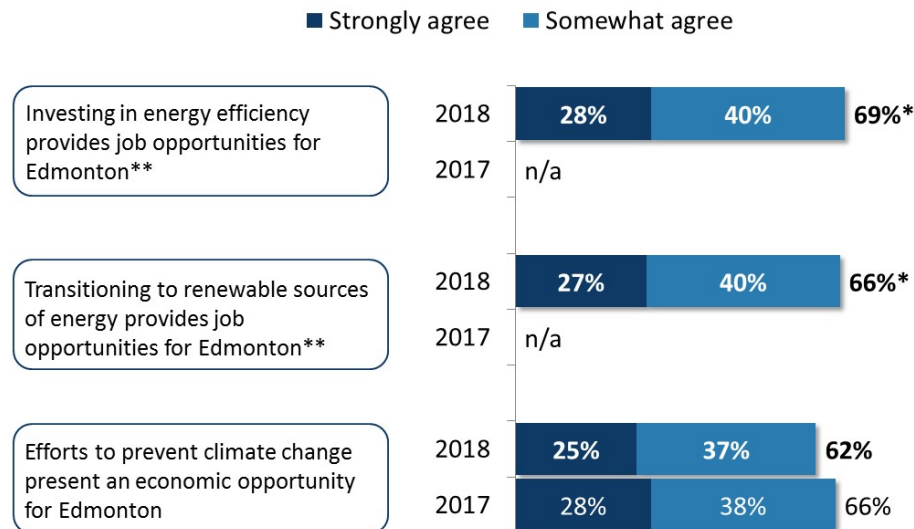
Economic and Employment Impacts

There is generally widespread recognition of the economic and employment opportunities associated with energy efficiency and addressing climate change. Approximately two in three Edmontonians agree that investing in energy efficiency and transitioning to renewable energy sources provide job opportunities for the city, while approximately six in ten agree that efforts to prevent climate change present economic opportunity to Edmonton.

Agreement with each measure is generally higher among younger Edmontonians.

Economic and Employment Impacts

% agree (strongly/somewhat agree), on 5-pt. agreement scale



Q.4a-c: To what extent do you agree or disagree with the following statements about climate change? 2017: (n=506); 2018: (n=1000)

*Due to rounding. **New question in 2018.

Impact on Climate Change and Greenhouse Gas Emissions

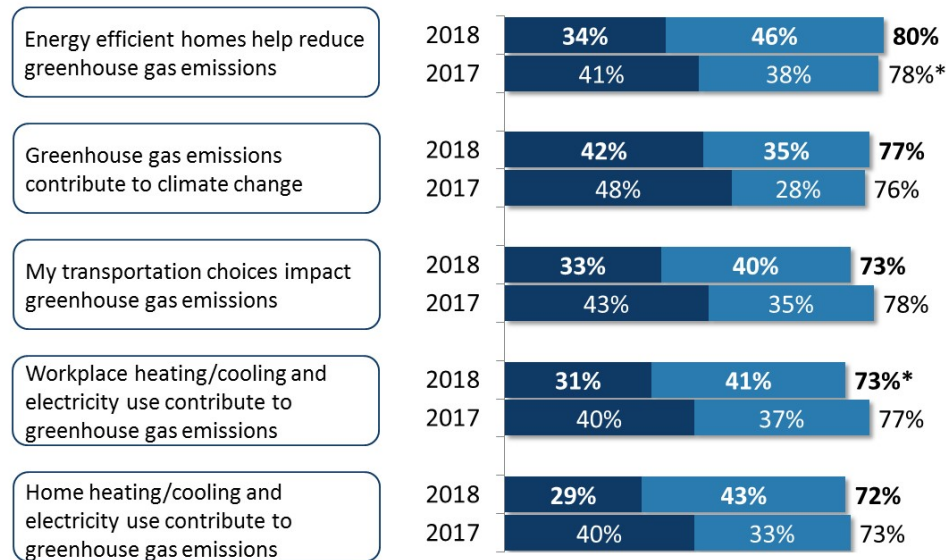
Knowledge remains widespread regarding the impacts of various actions on greenhouse gas emissions and climate change. Results have shifted modestly in comparison to a year ago for some measures.

There are no notable differences among the demographic subgroups concerning this question.

Impact of Actions on Climate Change and Greenhouse Gas Emissions

% agree (strongly/somewhat agree), on 5-pt. agreement scale

■ Strongly agree ■ Somewhat agree



Q.4e-i: To what extent do you agree or disagree with the following statements about climate change? 2017: (n=506); 2018: (n=1000)

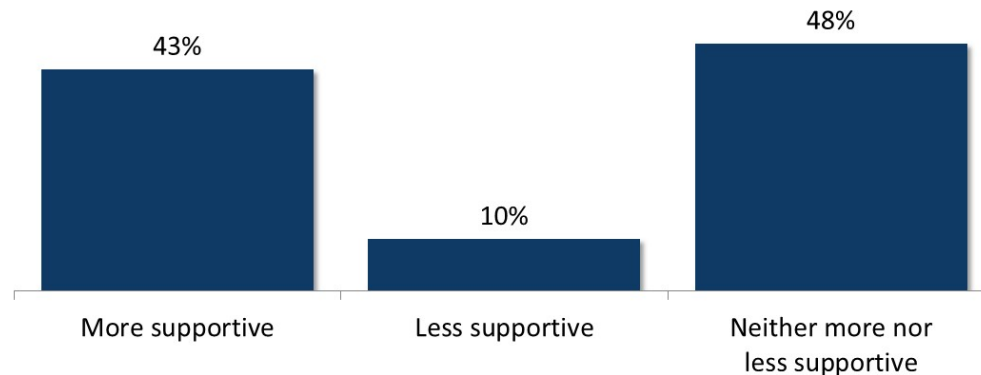
*Due to rounding.

Taking Action on Climate Change

More than four in ten Edmontonians have become more supportive of taking action on climate change in the past year, while approximately one-half are neither more nor less supportive of taking action on climate change. One in ten residents have become less supportive of taking action on climate change in the past year.

The likelihood of becoming more supportive of taking action on climate change in the past year is elevated among Edmontonians between the ages of 18 and 34 years, and those with at least some post-secondary education.

Shift in Support of Taking Action on Climate Change in Past Year



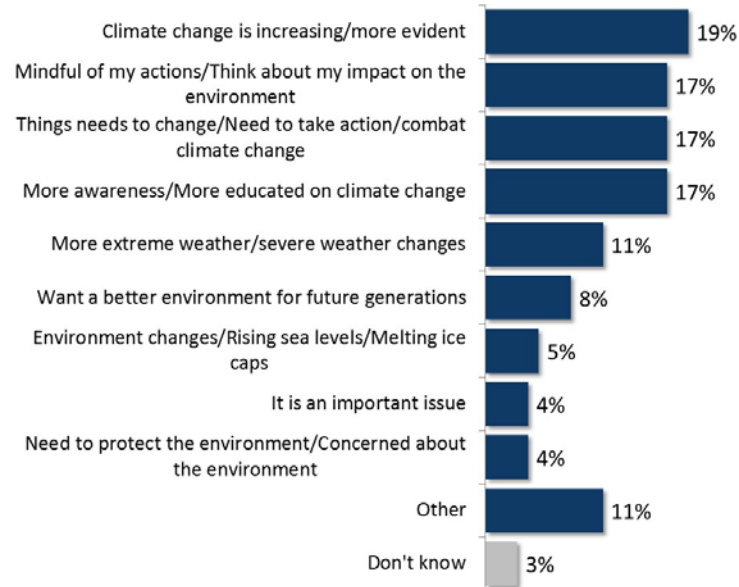
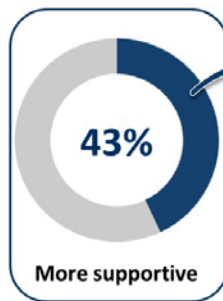
Q.5: In the past year, have you become more or less supportive of taking action on climate change? (n=1000)
New question in 2018.

Taking Action on Climate Change

Among the 43 percent of Edmontonians who have become more supportive of taking action on climate change in the past year, there are a wide variety of reasons for this change in opinion. The most prevalent reasons include views that climate change is becoming more evident, residents becoming more mindful of their actions toward the environment, opinions that change is required to take action against climate change, and more education on climate change.

There are no notable differences among the demographic subgroups concerning this question.

Reasons More Supportive of Taking Action on Climate Change



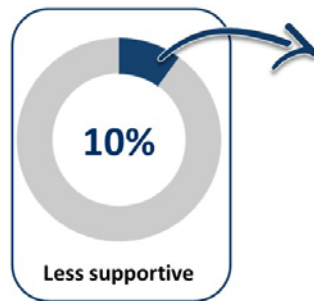
Q.6: [IF MORE SUPPORTIVE IN Q.6] Why has your level of support for taking action on climate change changed in the last year? Please be as specific as possible. (n=399)

New question in 2018.

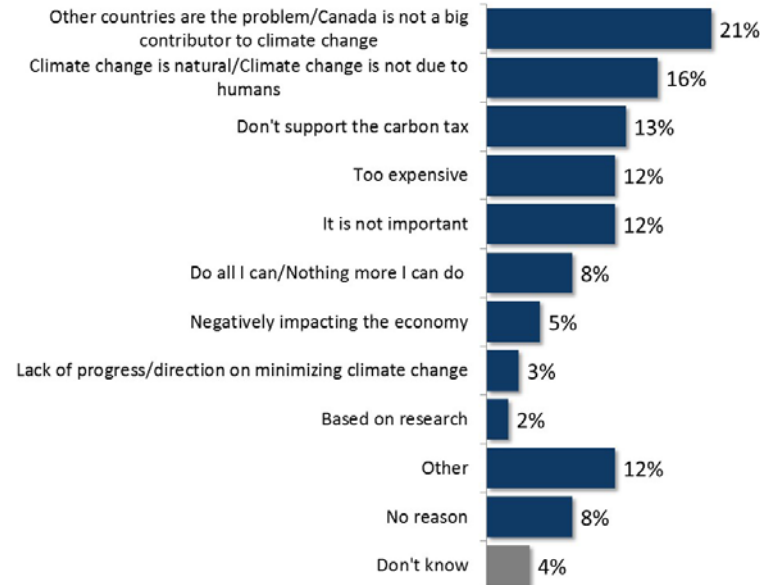
Taking Action on Climate Change

Among the 10 percent of Edmontonians who have become less supportive of taking action on climate change in the last year, there are a number of reasons for this opinion. Most prevalently, such residents mention that Canada is not a major contributor to climate change, the issue is not due to humans, they do not support a carbon tax, action is too expensive, and it is not important.

There are no notable differences among the demographic subgroups concerning this question.



Reasons Less Supportive of Taking Action on Climate Change



Q.6: [IF LESS SUPPORTIVE IN Q.6] Why has your level of support for taking action on climate change changed in the last year? Please be as specific as possible. (n=97)

New question in 2018.

*Feelings Toward
Climate Change*

***Home Energy
Efficiency***

*Residential
Solar Energy
Systems*

*Greenhouse
Gas Emissions*

Campaigns

Demographics

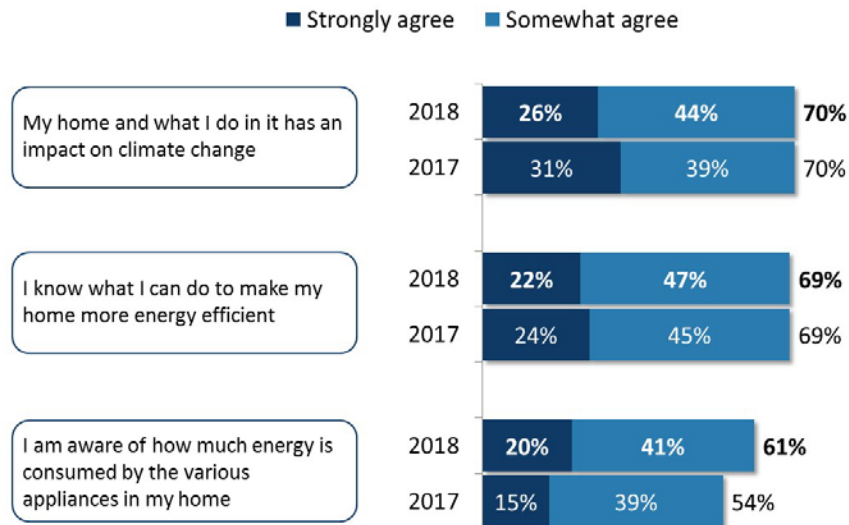
Awareness of Electricity Generation and Energy Consumption at Home

Consistent with previous findings, seven in ten residents agree that their home has an impact on climate change, and that they know what can be done to make their home more energy efficient. Over the past year, Edmontonians have become somewhat more aware of how much energy is consumed by the various appliances in their homes, with six in ten currently reporting such awareness.

Younger residents are more likely than their older counterparts to agree that their home has an impact on climate change, while homeowners and older residents are more likely than their counterparts to be aware of how much energy is being consumed in their homes. Meanwhile, the likelihood that residents know what they can do to make their home more energy efficient is also elevated among homeowners, and among fully or semi-detached or townhome dwellers.

The Home and Climate Change

% agree (strongly/somewhat agree), on 5-pt. agreement scale



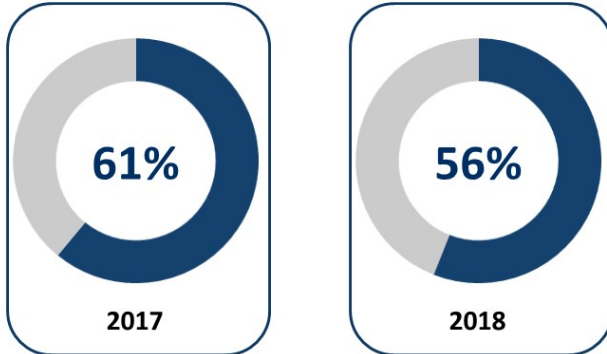
Q.7a-c: To what extent do you agree or disagree with the following statements regarding your home? 2017: (n=506); 2018: (n=1000)

Actions Taken to Increase Energy Efficiency in the Home

Just under six in ten Edmontonians indicate that they have taken actions to increase energy efficiency in their homes in the past year. This is a small decrease from the previous year.

Taken Actions to Increase Home's Energy Efficiency in Past Year

% 'Yes'



Q.8: Have you taken any actions to increase the energy efficiency of your home in the past year? 2017: (n=506); 2018: (n=1000)

The likelihood of having taken actions to increase energy efficiency rises modestly with age, and is elevated among residents with higher household incomes, and among those with at least some post-secondary education.

Homeowners, and those with fully or semi-detached or townhomes, remain more likely than renters or leasers, and condominium or apartment dwellers, to have taken actions to increase the energy efficiency of their homes in the past year. The number of Edmontonian leasers or renters who have taken actions to increase energy efficiency has declined compared with last year.

Taken Actions to Increase Home's Energy Efficiency in Past Year

By home ownership and dwelling type

| | Home Ownership | | | | Dwelling Type | | | |
|-------|-----------------|-----------------|-----------------|-----------------|---------------------------------|-----------------|------------------|-----------------|
| | Own | | Lease/Rent | | Fully/Semi Detached or Townhome | | Condo/ Apartment | |
| | 2017 (n=369) | 2018 (n=732) | 2017 (n=129) | 2018 (n=268) | 2017 (n=375) | 2018 (n=741) | 2017 (n=110) | 2018 (n=242) |
| % Yes | 62% | 62% | 56% | 42% | 63% | 59% | 52% | 47% |

Q.8: Have you taken any actions to increase the energy efficiency of your home in the past year?

Actions Taken to Increase Energy Efficiency in the Home

Overall changes to home appliances and behaviours are mostly consistent with previous findings, with energy efficient light bulb installation being the most common action. Slightly more residents have installed energy efficient appliances, and fewer Edmontonians have reduced their use of electricity, compared with last year.

Actions Taken to Increase Home's Energy Efficiency in Past Year

Key unaided mentions among those who took actions to increase home's efficiency in past year

| | 2017 (n=304) | 2018 (n=566) |
|--|--------------|--------------|
| Changed Appliances (NET) | 74% | 77% |
| Installed energy efficient light bulbs | 26% | 28% |
| Energy efficient appliances | 12% | 19% |
| Installed LED lights/lamps | 18% | 15% |
| Energy efficient furnace | 10% | 12% |
| Replaced windows | 12% | 11% |
| Added/changed insulation | 6% | 7% |
| Changed Behaviour (NET) | 36% | 37% |
| Reduce use of electricity | 18% | 11% |
| Keeping lower temperatures in the home | 5% | 10% |
| Turn off/unplug appliances when not in use | 6% | 7% |
| Turn lights off when not in use | 6% | 7% |
| Reduce water consumption | 4% | 6% |

Q.9: [IF 'YES' IN Q.8] What actions have you taken to increase the energy efficiency of your home in the past year? Please be as detailed as possible.

Note: NETs include categories not listed in this key mentions table.

Older Edmontonians, along with residents with higher household incomes, and those living in detached homes, are more likely to have **changed an appliance** in the past year. Meanwhile, counterparts to each of the aforementioned demographic subgroups are more likely to have **changed behaviours** in the past year.

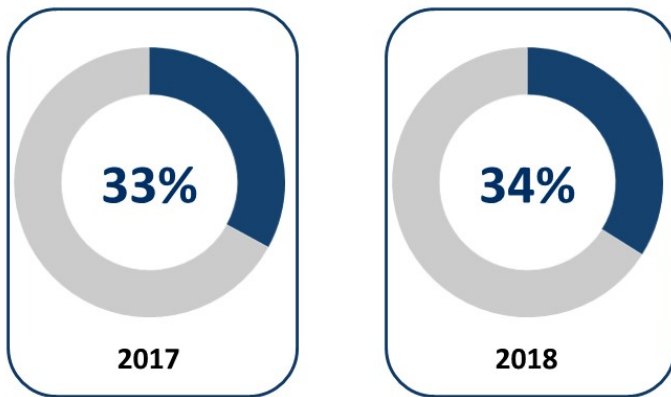
Awareness of EnerGuide Program

Consistent with previous findings, one-third of Edmontonians indicate awareness of the City's EnerGuide home evaluation program.

Awareness of the EnerGuide program increases with age. Homeowners are more likely than renters or leasers to report awareness of the program, which would be as expected given the program is meant for homeowners.

Aware of EnerGuide Program

% 'Yes'



Q.12: Have you heard of the City of Edmonton's EnerGuide home evaluation program that helps residents make their homes more energy efficient? 2017: (n=506); 2018: (n=1000)

Aware of EnerGuide Program

By home ownership and dwelling type
% Yes

| | Home Ownership | | | | Dwelling Type | | | |
|-------|-----------------|-----------------|-----------------|-----------------|---------------------------------|-----------------|------------------|-----------------|
| | Own | | Rent/Lease | | Fully/Semi Detached or Townhome | | Condo/ Apartment | |
| | 2017 (n=369) | 2018 (n=732) | 2017 (n=129) | 2018 (n=268) | 2017 (n=375) | 2018 (n=741) | 2017 (n=110) | 2018 (n=242) |
| % Yes | 34% | 37% | 33% | 27% | 35% | 35% | 28% | 32% |

Q.12: Have you heard of the City of Edmonton's EnerGuide home evaluation program that helps residents make their homes more energy efficient?

Likelihood to Get EnerGuide Evaluation

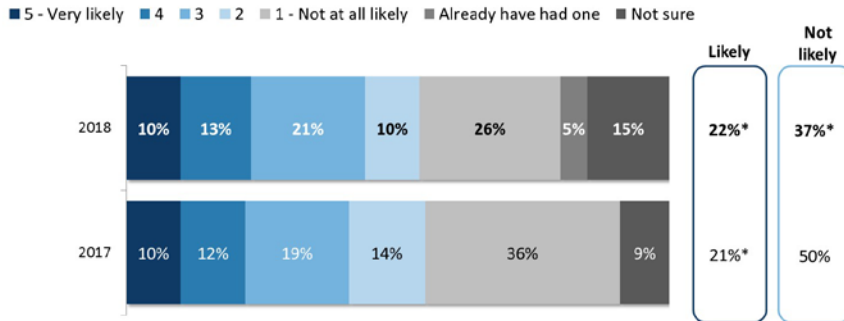
Twenty-two percent of Edmontonians are likely to get an EnerGuide home evaluation (four or five on a five-point scale), while 37 percent are unlikely to do so (one or two on a five-point scale). The proportion indicating they are unlikely to get one has declined since 2017. This program is only available to homeowners, and thus it is of note that 24 percent of homeowners are likely to get such an evaluation.

The City of Edmonton has an **EnerGuide** program to help residents make their homes more energy efficient. This program includes a home evaluation, a label that indicates the energy performance of the home, and expert advice on how to make it more energy efficient. To help residents pay for the evaluation the City provides a rebate of \$400 against its cost, which usually ranges between \$400-\$800.

The likelihood of getting an EnerGuide evaluation is more elevated among residents under 55 years of age.

Since 2017, there has been a decline in the number of renters or leasees who say they are likely to get an EnerGuide evaluation (which, as mentioned, is only available to homeowners). Currently, the likelihood of receiving this evaluation is generally consistent regardless of home ownership status or dwelling type. A decreased number of homeowners and those living in fully or semi-detached or townhome dwellings, indicate that they are not likely to get an EnerGuide home evaluation compared with last year.

Likelihood to Get EnerGuide Evaluation



Q.13: How likely are you to get an EnerGuide home evaluation? 2017: (n=506); 2018: (n=1000)
 Note: Slight change in question wording in 2018. In 2017 the home evaluation program was not yet available. Thus the 2018 response option "Already have had an evaluation" was not included on the 2017 survey. *Due to rounding.

Likelihood to Get EnerGuide Evaluation

By home ownership and dwelling type

| | Home Ownership | | | | Dwelling Type | | | |
|----------------------|----------------|--------------|--------------|--------------|---------------------------------|--------------|------------------|--------------|
| | Own | | Rent/Lease | | Fully/Semi Detached or Townhome | | Condo/ Apartment | |
| | 2017 (n=369) | 2018 (n=732) | 2017 (n=129) | 2018 (n=268) | 2017 (n=375) | 2018 (n=741) | 2017 (n=110) | 2018 (n=242) |
| Likely (4-5) | 19% | 24% | 27% | 19% | 22% | 24% | 19% | 20% |
| 3 | 20% | 21% | 16% | 21% | 20% | 22% | 17% | 17% |
| Not likely (1-2) | 54% | 35% | 41% | 41% | 50% | 33% | 53% | 46% |
| Already have had one | n/a | 7% | n/a | 2% | n/a | 6% | n/a | 2% |
| Not sure | 7% | 14% | 16% | 18% | 8% | 14% | 12% | 15% |

Q.13: How likely are you to get an EnerGuide home evaluation? 2017: (n=506); 2018: (n=1000)
 Slight change in question wording in 2018. In 2017 the home evaluation program was not yet available. Thus the 2018 response option "Already have had an evaluation" was not included on the 2017 survey. *Due to rounding.

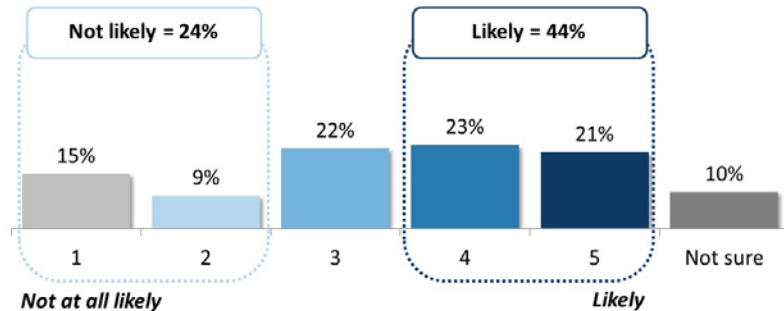
Likelihood to Get EnerGuide Evaluation: If Given Incentives/Rebates

The likelihood that residents would get an evaluation doubles if it allows them to access rebates and incentives to make energy efficiency updates to their homes. It should be noted that these results exclude the small number of Edmontonians who already received an EnerGuide evaluation. Among homeowners (the group to whom this program is available), 45 percent would be likely to get an evaluation with the incentives/rebates.

Getting an EnerGuide evaluation if it allows residents to access rebates and incentives is notably more elevated among younger residents.

Likelihood to Get EnerGuide Evaluation If It Allowed Access to Incentives and Rebates

Among those who have not already had an EnerGuide evaluation



Q.14: [NOT IF 'ALREADY HAVE HAD ONE' IN Q.13] How likely is it that you would get an EnerGuide home evaluation if it would allow you to access incentives and rebates to make energy efficiency upgrades in your home? (n=939)
 New question in 2018.

Edmontonians who own their homes are slightly more likely than renters or leasees to get an EnerGuide evaluation if allows access to rebates or incentives. This would be as expected as the program indeed is only available to homeowners. The likelihood of residents who live in fully or semi-detached dwellings or townhomes getting an EnerGuide evaluation under these conditions is higher than that of condominium or apartment dwellers.

Likelihood to Get EnerGuide Evaluation If It Allowed Access to Incentives and Rebates

Among those who have not already had an EnerGuide evaluation
 By home ownership and dwelling type

| | Home Ownership | | Dwelling Type | |
|------------------|----------------|-----------------------|--|-----------------------------|
| | Own (n=677) | Rent/Lease (n=262) | Fully/Semi Detached or Townhome (n=685) | Condo/ Apartment (n=237) |
| Likely (4-5) | 45% | 40% | 46% | 37% |
| 3 | 23% | 19% | 23% | 19% |
| Not likely (1-2) | 21% | 31% | 21% | 34% |
| Not sure | 11% | 9% | 10% | 10% |

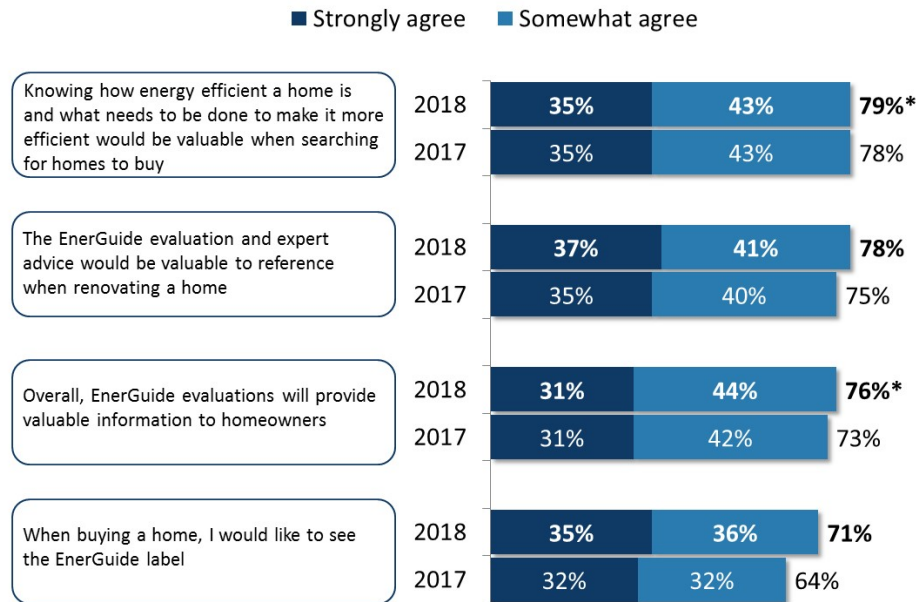
Q.14: [NOT IF 'ALREADY HAVE HAD ONE' IN Q.13] How likely is it that you would get an EnerGuide home evaluation if it would allow you to access incentives and rebates to make energy efficiency upgrades in your home?
 New question in 2018.

Opinions on EnerGuide Program

A strong majority of residents continue to provide favourable ratings of various statements related to the EnerGuide program. Specifically, eight in ten Edmontonians agree that knowledge of home energy efficiency and what needs to be done to make it more efficient would be valuable when searching for home to buy, while a similar number of residents agree that the EnerGuide evaluation and expert advice would be valuable when renovating a home. Three-quarters of Edmontonians express agreement that the evaluations will provide valuable information to homeowners, while seven in ten agree that they would like to see the EnerGuide label when buying a home, up slightly from last year.

There are no notable differences among the demographic subgroups concerning this question.

Opinions on EnerGuide Program % agree (strongly/somewhat agree), on 5-pt. agreement scale



Q.15a-d: To what extent do you agree or disagree with the following statements about energy efficiency? 2017: (n=506); 2018: (n=1000)

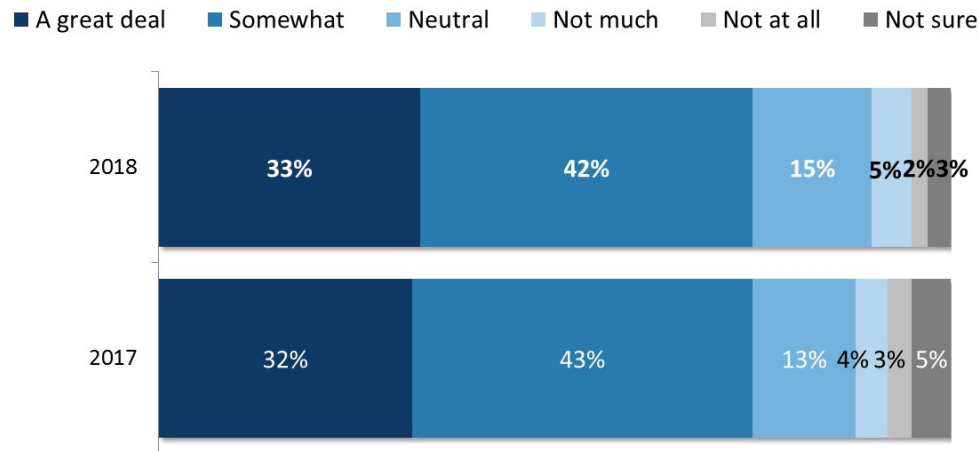
*Due to rounding.

Impact of Energy Inefficiency on Home Purchase

Nearly identical to results one year ago, three-quarters of Edmontonians believe a home inspection that indicates energy consumption inefficiencies would at least somewhat affect their decision to purchase the home.

The likelihood that such inefficiencies identified in a home inspection would greatly impact a home purchasing decision is more elevated among Edmontonians with lower household incomes.

Impact of Energy Inefficiency on Likelihood to Purchase Home



Q.16: If you were considering purchasing a home and the home inspection indicated inefficiencies in the home's energy consumption (for example, poor insulation, inefficient appliances, and so forth), how much would this affect your decision to purchase this home? 2017: (n=506); 2018: (n=1000)

Slight change in question wording in 2018.

*Feelings Toward
Climate Change*

*Home Energy
Efficiency*

***Residential
Solar Energy
Systems***

*Greenhouse
Gas Emissions*

Campaigns

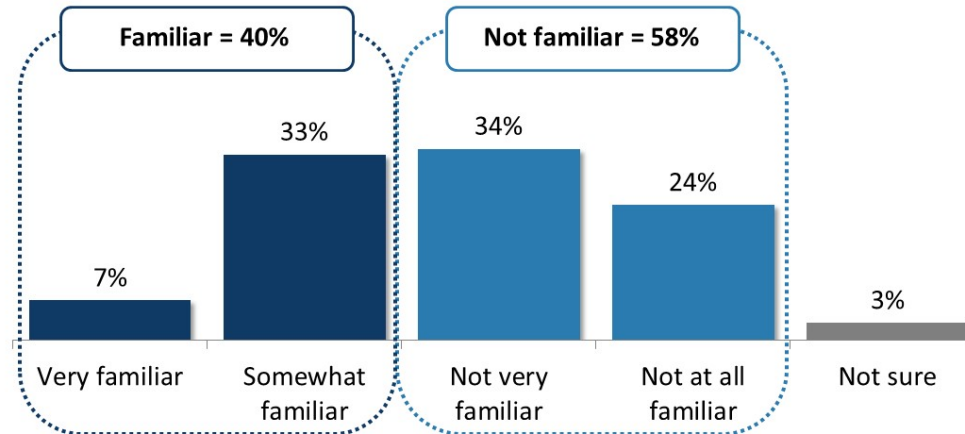
Demographics

Familiarity with Residential Solar Energy Systems

Overall, four in ten residents are familiar with residential solar energy systems, while six in ten Edmontonians are not very or not at all familiar with such systems.

Familiarity with residential solar energy systems is slightly elevated among males, and residents between the ages of 18 and 34 years.

Familiarity with Residential Solar Energy Systems



Q.19: How familiar are you with residential solar energy systems? (n=1000)

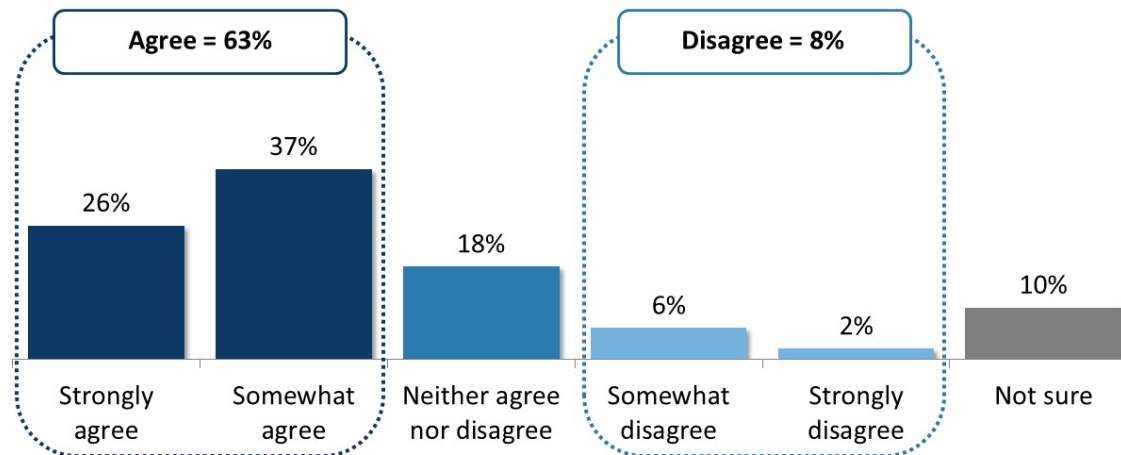
New question in 2018.

Impact of Solar Energy Systems on GHG Emissions

More than six in ten Edmontonians agree that a solar energy system would significantly decrease their household's greenhouse gas emissions.

Agreement in this regard is elevated among residents between the ages of 18 and 34 years.

A Residential Solar Energy System Would Significantly Decrease Household's Greenhouse Gas Emissions



Q.20: To what extent do you agree or disagree that a residential solar energy system would significantly decrease your household's greenhouse gas emissions? (n=1000)

New question in 2018.

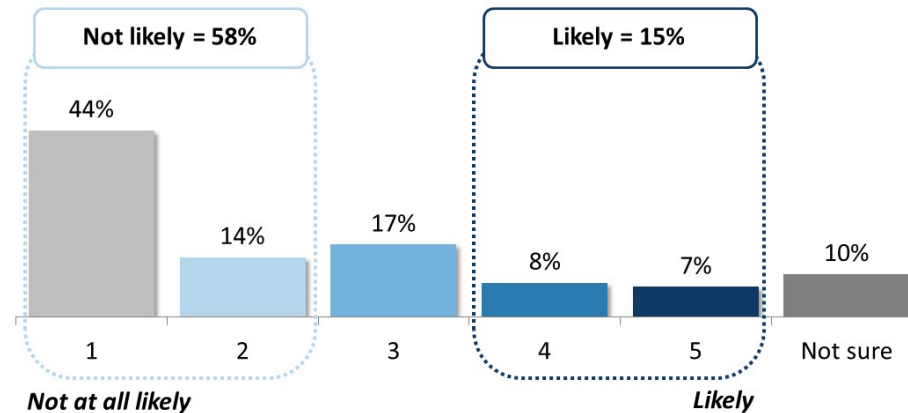
Likelihood of Installing Residential Solar Energy System

One in seven Edmonton homeowners are likely to install a residential solar heating or energy system on their roof or garage in the next three years.

The likelihood of doing so is higher among younger homeowners than among their older counterparts. Further analysis indicates that those who agree that a residential solar energy system would significantly decrease their greenhouse gas emissions, are more likely to have one installed in the next three years.

Likelihood of Installing A Residential Solar Heating or Energy System on Home's Roof/Garage in Next 3 Years

Among those who own their primary residence



Q.21: [IF 'OWN' IN Q.17] How likely is it that you will install a ([IF 'SOLAR IN Q.18] an additional) residential solar heating or energy system on your home's roof/garage in the next 3 years?

New question in 2018.

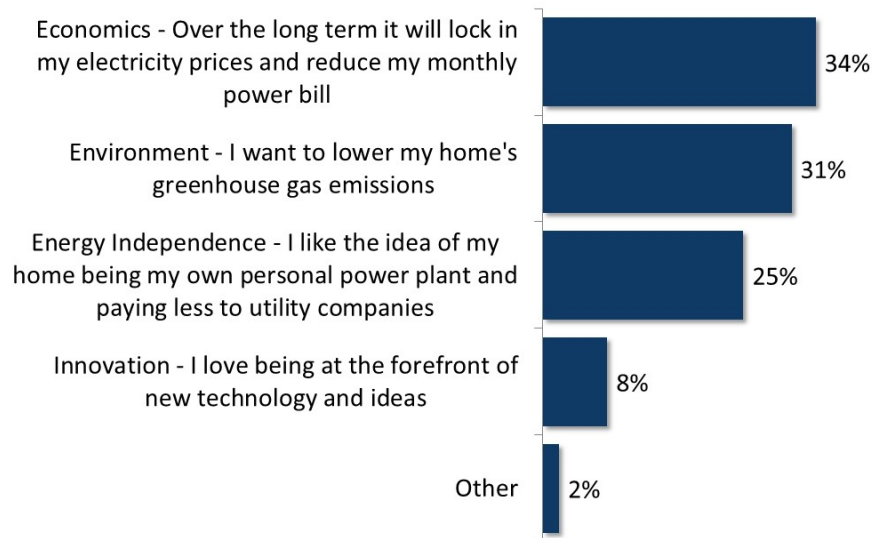
Factors Affecting Likelihood of Installation

Among the 15 percent of Edmonton homeowners who indicate that they are likely to install a residential solar energy system in the next three years, economic, environmental, and energy independence considerations are most often cited as motivating factors for such a decision.

There are no notable differences among the demographic subgroups concerning this question.

Most Important Motivating Factor for Putting Residential Solar Energy System on Home's Roof/Garage

Among those who are very likely/likely to install solar energy system or already have solar as their primary heat and energy source



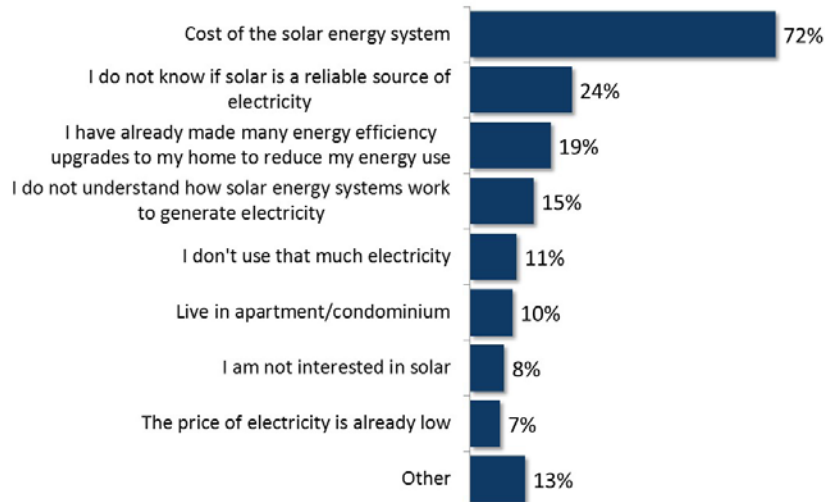
Q.22: [IF 'VERY LIKELY/LIKELY TO INSTALL SOLAR ENERGY SYSTEM' IN Q.21 OR 'SOLAR' IN Q.18] What was/would be the single most important motivating factor for putting a residential solar energy system on your home's roof/garage? (n=97)
New question in 2018.

Factors Affecting Likelihood of Installation

Among Edmonton homeowners who are unlikely to install a residential solar energy system in the next three years, the most commonly cited factor preventing installation, by a wide margin, is cost. Other factors, mentioned by notably fewer residents, include uncertainty regarding the reliability of solar energy, and perceptions that enough energy efficiency upgrades have been previously made to their homes.

Factors Preventing Installation of Residential Solar Energy System on Home's Roof/Garage

Among those who own their primary residence and do not have solar as their primary heat and energy source



Cost is most often mentioned as the factor preventing installation of residential solar energy systems across all demographic subgroups.

Q.23: [IF 'OWN' IN Q.17 AND NOT 'SOLAR' IN Q.18] What, if anything, is the single most important factor preventing you from installing a residential solar energy system on your home's roof/garage? And what other factors are preventing you from installing a residential solar energy system on your home's roof/garage?(n=721)

New question in 2018.

*Feelings Toward
Climate Change*

*Home Energy
Efficiency*

*Residential
Solar Energy
Systems*

***Greenhouse
Gas Emissions***

Campaigns

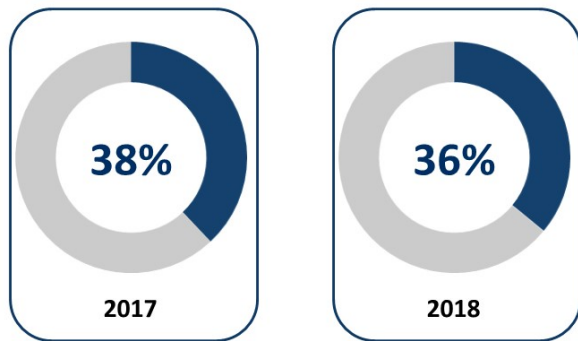
Demographics

Actions to Reduce Greenhouse Gas Emissions

Close to four in ten Edmontonians have taken actions to reduce their greenhouse gas emissions in the past year, similar to previous findings.

Taken Actions to Reduce Greenhouse Gas Emissions in Past Year

% 'Yes'



Q.10: Have you taken any actions to reduce your greenhouse gas emissions in the past year?

2017: (n=506); 2018: (n=1000)

Slight change in question wording in 2018.

The likelihood of having taken actions to reduce greenhouse gas emissions in the past year are relatively consistent between home ownership status and dwelling type. There has been a decline in the number of condominium or apartment dwellers who have taken action in this regard, compared with last year.

Taken Actions to Reduce Greenhouse Gas Emissions in Past Year

By home ownership and dwelling type

| | Home Ownership | | | | Dwelling Type | | | |
|-------|-----------------|-----------------|-----------------|-----------------|---------------------------------|-----------------|------------------|-----------------|
| | Own | | Rent/Lease | | Fully/Semi Detached or Townhome | | Condo/ Apartment | |
| | 2017 (n=369) | 2018 (n=732) | 2017 (n=129) | 2018 (n=268) | 2017 (n=375) | 2018 (n=741) | 2017 (n=110) | 2018 (n=242) |
| % Yes | 38% | 37% | 39% | 33% | 38% | 37% | 43% | 30% |

Q.10: Have you taken any actions to reduce your greenhouse gas emissions in the past year?

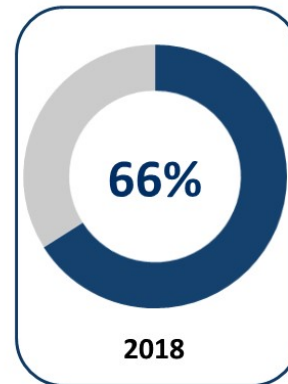
Slight change in question wording in 2018.

Actions to Reduce Greenhouse Gas Emissions

As improving energy efficiency in the home is a means of reducing greenhouse gas emissions, a combined overall total was derived for those who have improved their home's energy efficiency, and/or confirmed that they have taken actions to reduce greenhouse gas emissions. Overall, by this calculation 66 percent of Edmontonians have taken action to reduce greenhouse gas emissions.

Taken Actions to Reduce Greenhouse Gas Emissions – Improved Home's Energy Efficiency and/or Other Actions

% 'Yes'



Q.8: Have you taken any actions to increase the energy efficiency of your home in the past year? / Q.10: Have you taken any actions to reduce your greenhouse gas emissions in the past year? 2018: (n=1000)

Actions to Reduce Greenhouse Gas Emissions

Among Edmontonians who have taken actions to reduce their greenhouse gas emissions, changes in behaviour continue to be more common than changes to appliances, with actions involving transportation, such as less driving, taking public transit, walking, and bicycling representing the most commonly identified changes in behaviour. Compared with results last year, a higher proportion of residents indicate they are driving less to reduce their greenhouse gas emissions.

Actions Taken to Reduce Greenhouse Gas Emissions in Past Year

Key unaided mentions among those who took actions to reduce their GHG emissions
in past year

| | 2017 (n=193) | 2018 (n=357) |
|---------------------------------------|--------------|--------------|
| Changed Behaviour (NET) | 75% | 80% |
| Less driving | 19% | 31% |
| Take public transit | 24% | 21% |
| Walk | 18% | 18% |
| Bicycle | 17% | 10% |
| Reduce electricity usage | 4% | 7% |
| Recycle/Compost/Reduce waste* | 10% | 6% |
| Lower heat in home | 4% | 6% |
| Carpool | 10% | 3% |
| Changed Appliances (NET) | 11% | 12% |
| Drive a fuel/energy efficient vehicle | 9% | 6% |
| Bought energy efficient lights | 2% | 4% |
| Energy efficient furnace | n/a | 4% |

Q.11: [IF 'YES' IN Q.10] What actions have you taken to reduce your greenhouse gas emissions in the past year? Please be as detailed as possible.

*Slight change in question wording in 2018. **Reduce waste" added to category in 2018.*

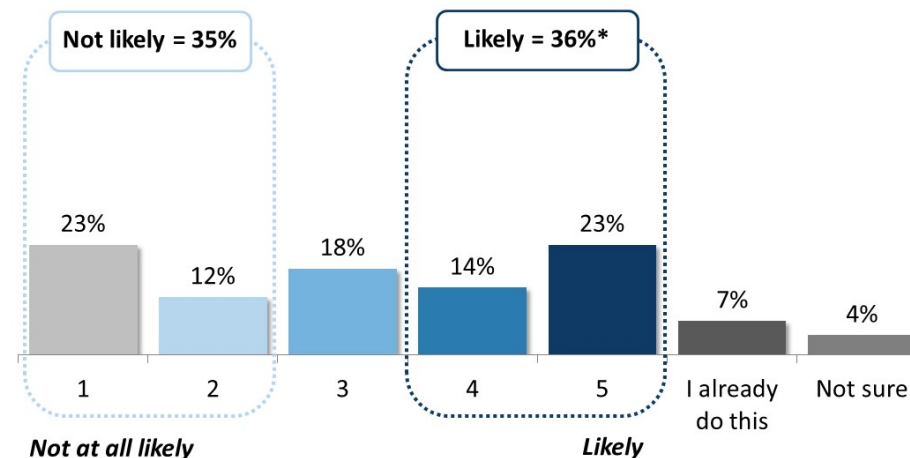
Behavioural changes are more likely among females, and those with higher household incomes. Meanwhile, each of the aforementioned demographic subgroup's counterparts are more likely to have *changed appliances* in the past year.

Likelihood of Behaviours to Reduce GHG Emissions

Edmontonians are split on their likelihood to walk, bike, take public transit or car share for the majority of trips to reduce greenhouse gas emissions, as just over one-third of residents indicate that they are likely to do so, while a similar number believe they are not likely to perform such activities.

The likelihood of walking, biking, taking public transit or car sharing to reduce greenhouse gas emissions is elevated among residents between 18 and 34 years of age and those with lower household incomes. This measure is also notably more elevated among leasers or renters.

Likelihood of Walking, Biking, Taking Public Transit, or Car Sharing for a Majority of Trips to Reduce Greenhouse Gas Emissions



Q.26: How likely or unlikely are you to walk, bike, take public transit, or car share for the majority of your trips to reduce your greenhouse gas emissions?

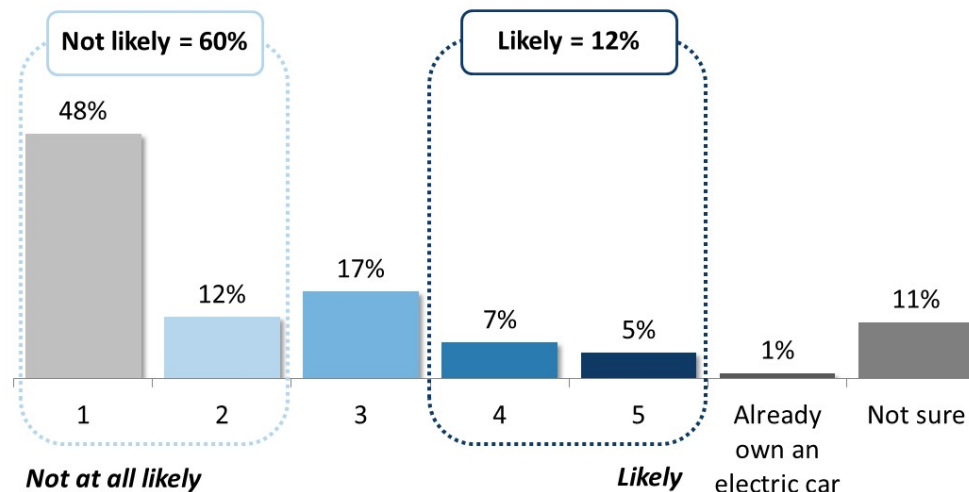
*New question in 2018. *Due to rounding.*

Likelihood to Purchase Electric Car

One in eight Edmonton residents are likely to purchase an electric car in the next three years.

Males and residents between the ages of 18 and 34 years are more likely than their counterparts to buy an electric car in the next three years.

Likelihood of Buying Electric Car in Next 3 Years



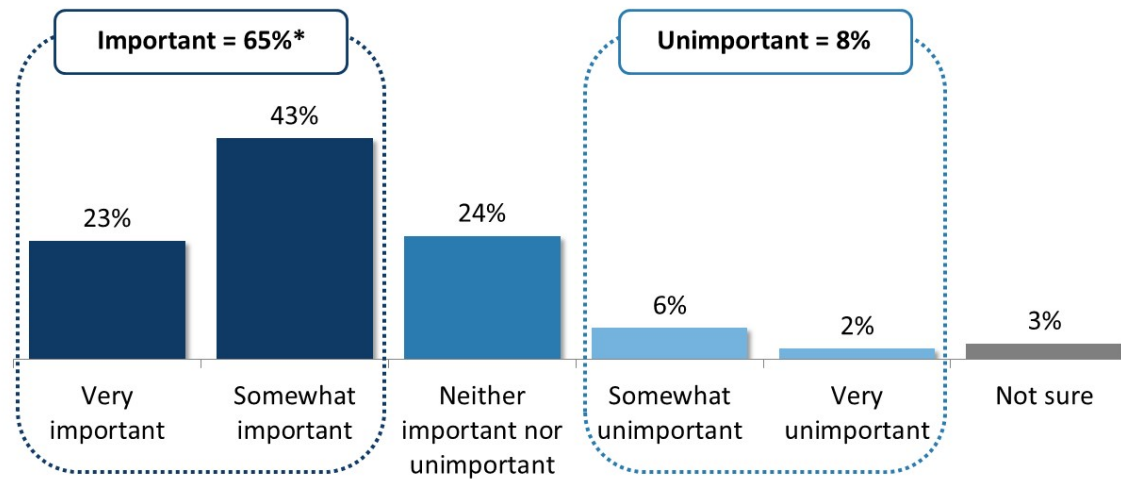
Q.25: How likely or unlikely are you to buy an electric car in the next three years?
New question in 2018.

Importance of Energy Efficiency Buildings

Edmontonians place considerable importance in the energy efficiency of the buildings in which they work, study, play, or shop, as two-thirds of residents indicate that energy efficiency is important for such buildings.

Importance in this regard is elevated in areas outside Northeast Edmonton.

Importance of Building Where People Work, Study, Play, and Shop Being Energy Efficient



Q.24: How important or unimportant is it that buildings you work, study, play, or shop in are energy efficient? (n=1000)
 New question in 2018. *Due to rounding.

*Feelings Toward
Climate Change*

*Home Energy
Efficiency*

*Residential
Solar Energy
Systems*

*Greenhouse
Gas Emissions*

Campaigns

Demographics

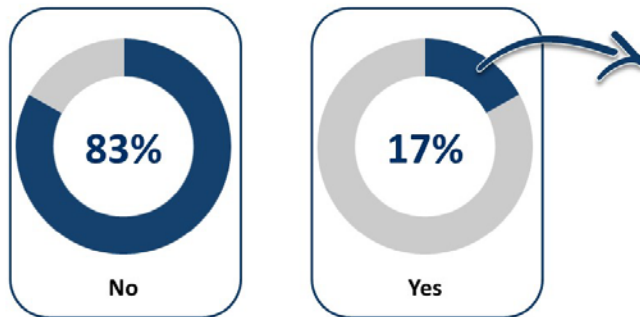
Awareness of Climate Change Programs or Advertisements

One in six residents recall, unaided, seeing or hearing about climate change programs or advertisements from the City of Edmonton.

No single element was recalled, unaided/unprompted, by a substantial proportion of residents. Rather, a wide variety of topics were identified, with only a small number of residents citing each topic. That said, mentions of a climate change movement, energy efficiency programs, and energy efficient upgrades are most commonly identified.

Awareness is similar across all demographic subgroups.

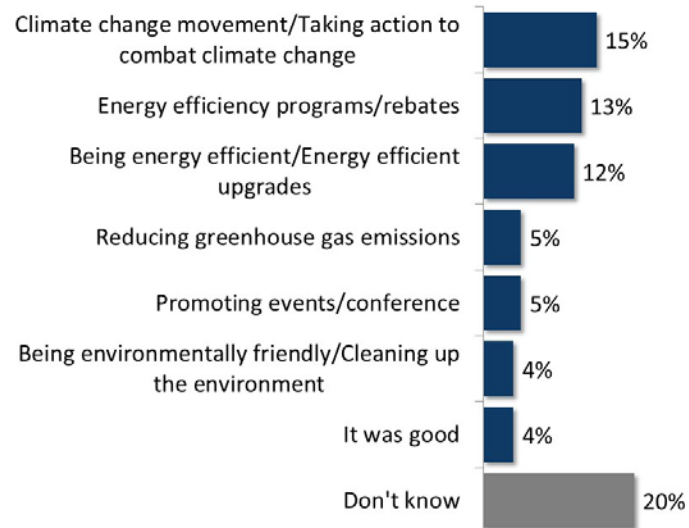
Recall Seeing or Hearing About Climate Change Programs or Advertisements from the City of Edmonton



Q.27: Do you recall seeing or hearing about any climate change programs or advertisements from the City of Edmonton? (n=1000)

Information Recalled

Key unaided mentions



Q.28: [IF 'YES, DO RECALL' IN Q.27] Please describe what you recall seeing or hearing about climate change programs or advertisements from the City of Edmonton? Please be as specific as possible. (n=151)

New question in 2018.

Awareness of Change for Climate Campaign

When aided or prompted with specific campaign images, three in ten residents recall at least one of the seven individual images from the City of Edmonton's Change for Climate campaign.

Recall of Images from City of Edmonton's Change for Climate Campaign

% Saying 'Yes'



29%
recall seeing one or more of the seven images from the City of Edmonton's Change for Climate campaign

Q.29a-g: Which, if any, of the following images related to the City of Edmonton's Change for Climate campaign do you recall seeing? (n=1000)
New question in 2018.

*Feelings Toward
Climate Change*

*Home Energy
Efficiency*

*Residential
Solar Energy
Systems*

*Greenhouse
Gas Emissions*

Campaigns

Demographics

Demographics

The following summarizes the demographic profile of survey respondents.



| | | (n=1000) |
|---|--|----------|
| Gender | | |
| Male | | 50% |
| Female | | 50% |
| Age | | |
| 18-24 | | 11% |
| 25-34 | | 25% |
| 35-44 | | 18% |
| 45-54 | | 16% |
| 55-64 | | 15% |
| 65 or older | | 15% |
| Highest Level of Education Completed | | |
| Some high school | | 3% |
| Completed high school | | 12% |
| Some community college/technical college/CEGEP | | 10% |
| Completed community college/technical college/CEGEP | | 23% |
| Some university | | 8% |
| Completed university | | 30% |
| Post-graduate degree | | 13% |



| | | (n=1000) |
|--|--|----------------|
| Household Income in 2017 | | |
| Up to \$40,000 | | 22% |
| \$40,001 - \$60,000 | | 17% |
| \$60,001 - \$80,000 | | 16% |
| \$80,001 - \$100,000 | | 17% |
| \$100,001 - \$150,000 | | 18% |
| More than \$150,000 | | 11% |
| Dwelling Type | | |
| Fully detached house | | 58% |
| Condo/apartment | | 24% |
| Townhouse/row house | | 9% |
| Semi-detached house/duplex | | 7% |
| Other | | 1% |
| [If currently rent or lease] | | |
| Planning to Buy a Home in Next 12 Months | | (n=268) |
| Yes | | 15% |
| No | | 67% |
| Not sure | | 19% |
| [If planning to buy a home in next 12 months] | | |
| Type of Home Interested in Buying | | (n=37)* |
| Fully detached house | | 67% |
| Semi-detached house/duplex | | 26% |
| Townhouse/row house | | 13% |
| Condo/apartment | | 8% |
| Other | | 6% |
| Not sure | | 9% |

*Caution: Small sample size.