
Solr Solvr
2022
Canadian
Solar Landscape
Study
For Home &
Business Owners

5 Core Topics Covered In The Solar Landscape Study

1 Introduction to the Solar Landscape Study

Study purpose and objectives.

Defining solar engagement segments.

2 Solar Trends and Behaviours

All segments' actions taken to prepare for solar within the past 3 years.

3 Solar Positive: Solar Committed and Considerers segments

Demographics & provincial breakdown.

Factors pushing towards solar.

4 Solar Negatives: Overcoming barriers

Demographics & provincial breakdown.

Barriers for solar adoption focusing on the two main barriers.

5 Future of the Solar Industry in Canada

Product/company considerations; future potential purchases and path towards the future.


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Introduction

Introduction to Canadian Solar Landscape Study

The **Canadian Solar Landscape Study** is the **first comprehensive** study in Canada examining homeowners' attitudes and behaviours toward solar and renewable energy.

Done in collaboration with **IMI** and **Solr Solvr**, this is a landmark survey evaluating the state of the industry in Canada.

- **Solr Solvr** is the study author, as an online marketplace to advise and connect Canadian homeowners and business owners to improve their energy footprint and go solar, allowing them to save money, save time and have more control.
- **IMI International** conducted the research as a full-service market research and consulting firm, established in 1970 in Canada, now with 7 offices and Fortune 500 clientele across the globe.

Purpose & Objectives

The purpose :

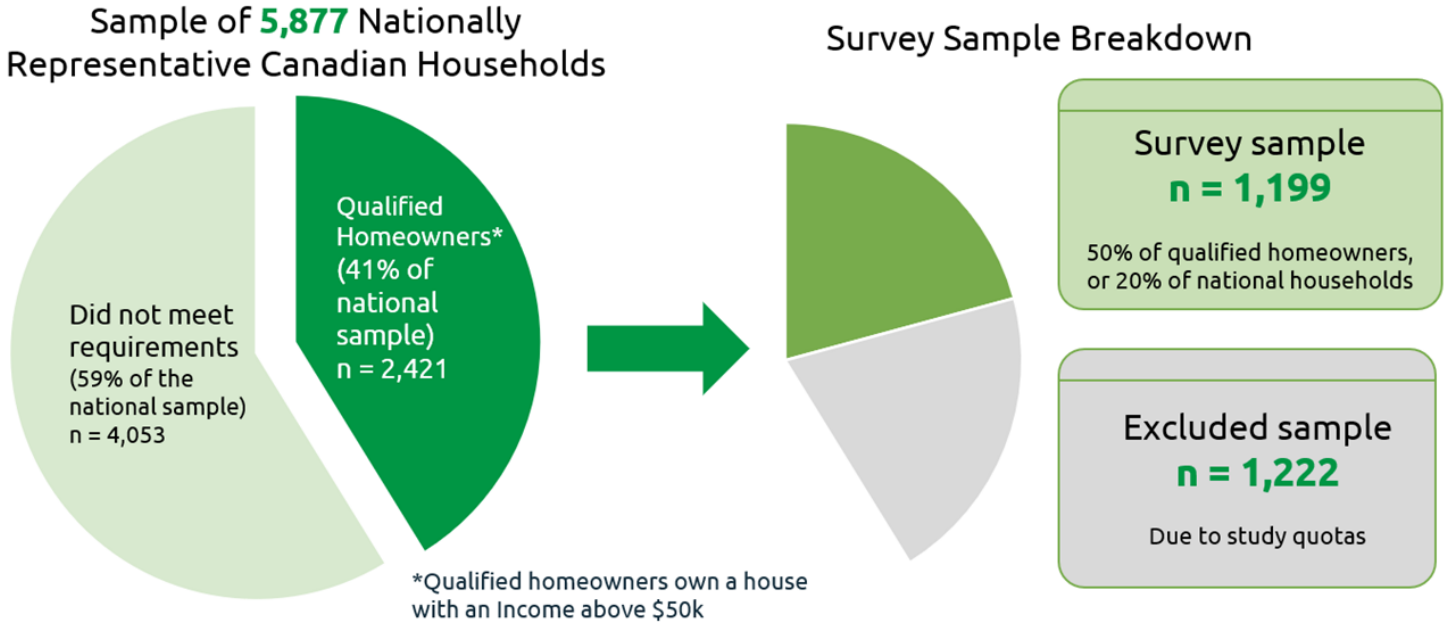
The purpose of this study is to collect information on homeowners' attitudes and behaviour towards solar power, the actions they have taken, along with barriers slowing adoption, to assist Canadians in making decisions and to have more control on going solar.

The Objectives :

- Establish an annual study detailing the baseline, sizing and trends for the Canadian Solar Landscape.
- Compare and contrast the attitudes, perceptions and behaviours of solar-interested consumers.
- Define opportunities and barriers in the solar marketplace.
- Determine the highest demand opportunities in the industry, going forward.

Survey Sample Size

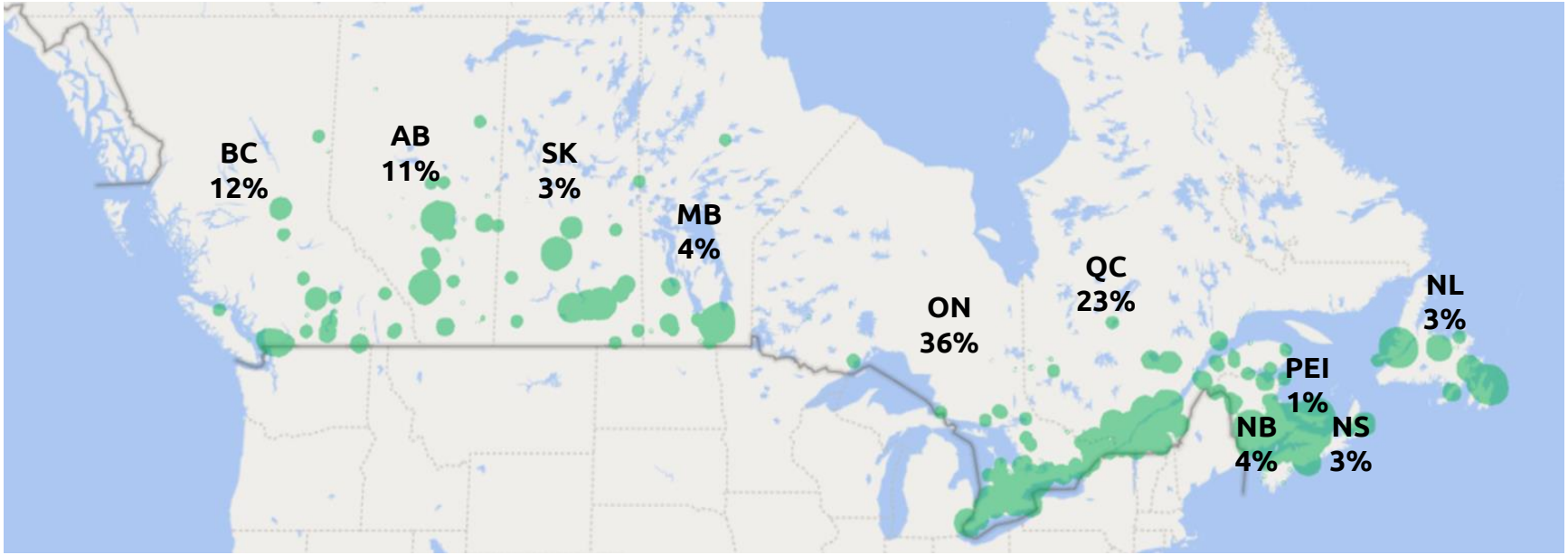
41% of Canadian households are 'Qualified Homeowners' for solar



The national representative homeowners: n = 2,421
The survey sample with quotas: n = 1,199

Survey Sample Methodology

A nationally representative sample of 1,199 was conducted by an online survey. The percentage of responders by province is shown in the figure below:



National
N=1,199

Quick Facts

The number of total respondents was 1,199–Every region and province was represented (excluding territories)

The survey was conducted in the field from
August 10 to 17th, 2021

The survey was conducted with an online sample of respondents, representative of Canadian households

Respondents were asked about their lifestyle and attitudes about solar

Respondents are “qualified homeowners” (townhouse, semi or detached home) between the ages of 25 to 74; household income >$50,000/year

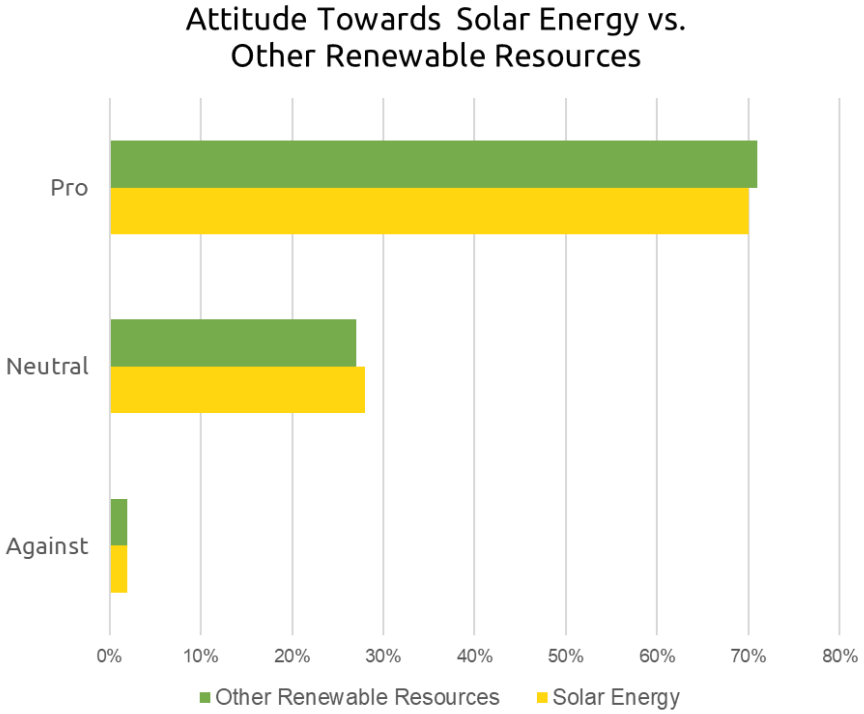
54% of respondents are male;
46% of respondents are female

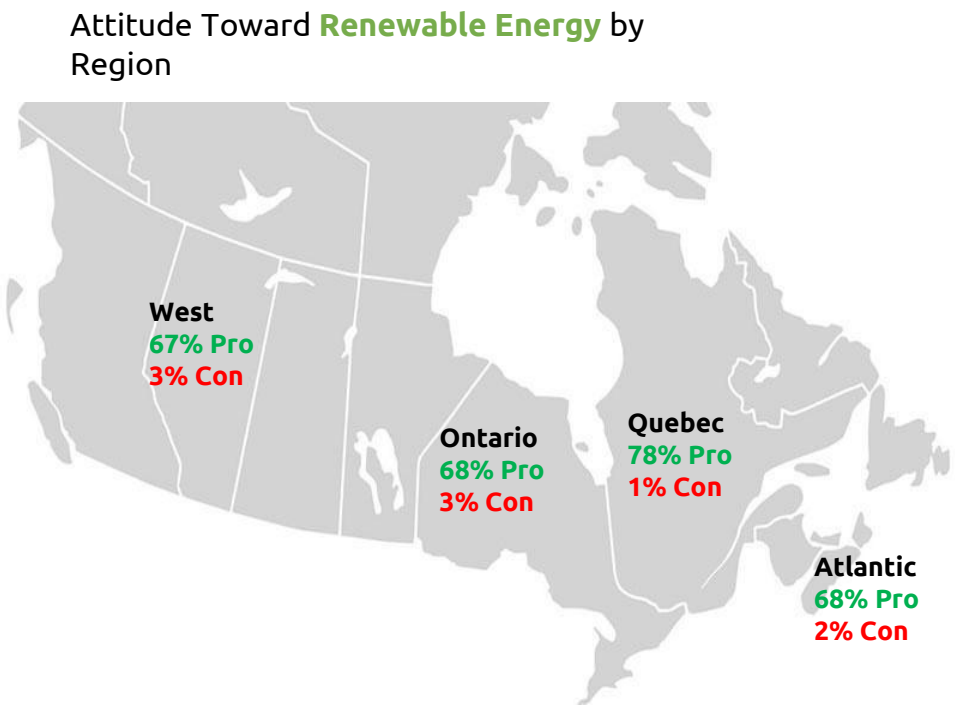
The sample size of **n=999** homeowners who have or would consider solar energy for their home (including owners)

The sample size of **n=200** homeowners who would not consider solar for their home

Base: n = 1,199

Most Canadian households are in favour of solar and renewable energy, with very few against





Base: n = 2,421

Defining the five Solar Engagement Segments based on attitude towards solar. 57% are 'Committed and Considerers', those most likely to go solar in the next 3 years

Solar owners
Households that already have solar panels installed.

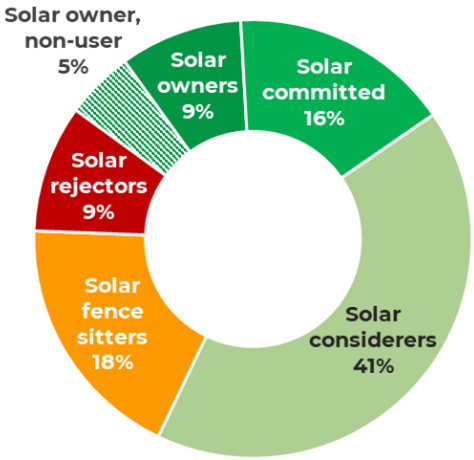
Solar committed
Households that are planning to install solar in the next three years.

Solar considerers
Households considering solar in the future.

Solar fence sitters
Households unsure if solar is right for them.

Solar rejectors
Households that will not consider solar for their home.

Solar Engagement Segments,
% Among Qualified Homeowners



Solar committed are 16% of the national representative qualified homeowners (19% of survey)

Solar considerers are 41% of the national representative qualified homeowners (51% of the survey)

Solar owners non-users: Solar owners who are not currently generating power from their panels
The national representative homeowners: n = 2,421
The survey sample with quotas: n = 1,199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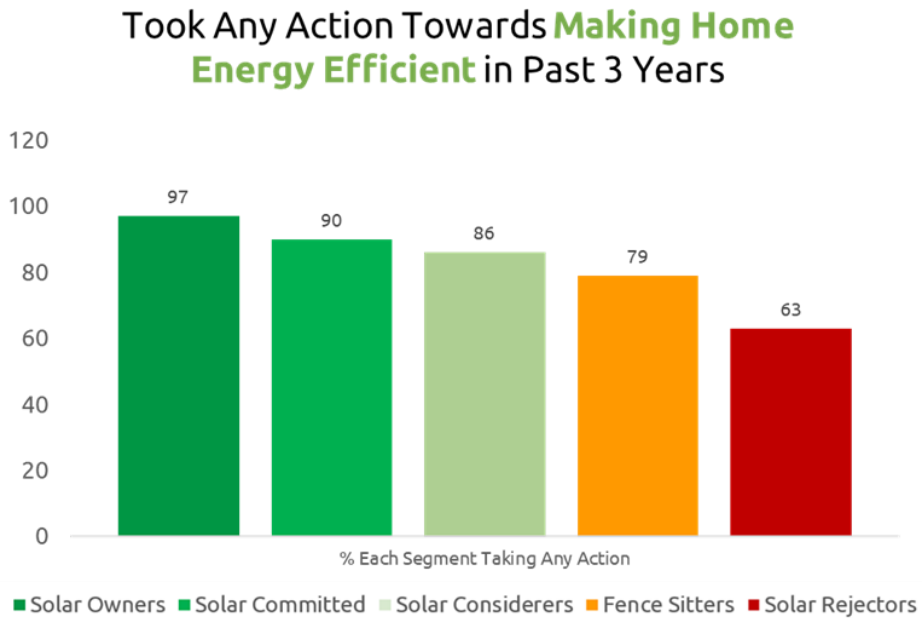
Solar Trends & Behaviours

All segments have taken action to optimize home energy usage

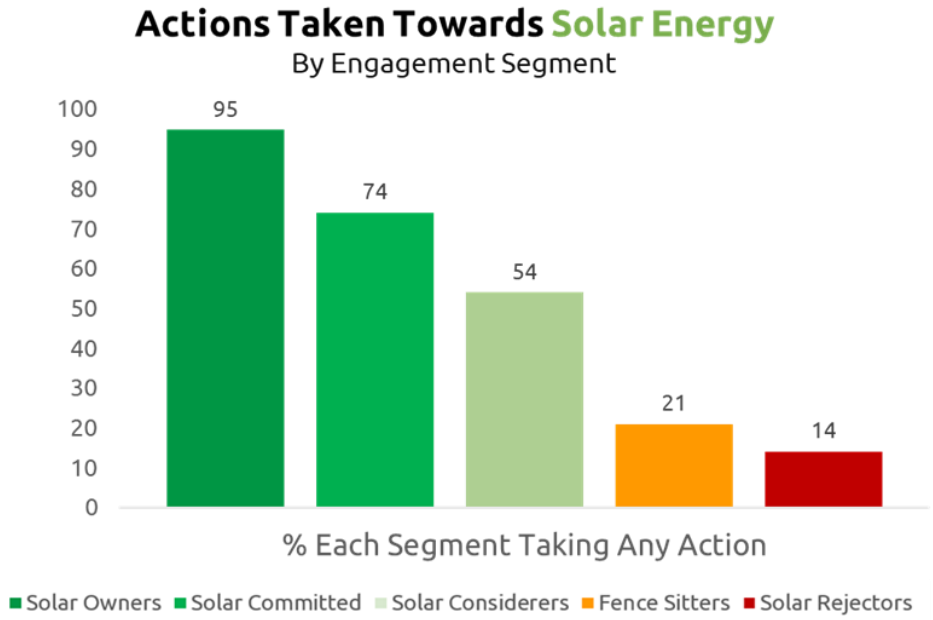


Some Possible Actions Include:

- Added higher R-rating for insulation in walls or attic
- Changed most bulbs to LED
- Conducted an energy audit
- Improved weather-stripping/caulking around windows/doors
- Installed a geothermal heat pump
- Installed a smart thermostat
- Put in a high-efficiency furnace
- Switched appliances from gas or propane to electricity

Base : n = 1,199
Solar Committed n = 589, Solar Considerers n = 405
Fence sitters n = 53, Solar Rejectors n = 152

Three-quarters of Committed and half of Considerers have taken actions toward solar



Some Possible Actions Include:

- Checked out solar installations in my neighbourhood
- Exchanged info with a rep from a solar energy company
- Looked into grants/incentives/rebates
- Requested a quote from a solar energy company
- Requested info from a company
- Researched online
- Spoke with friend/family/colleague
- Visited social media/forums/discussion groups
- Visited a solar energy provider's kiosk or display

Base : n = 1,199
Solar Committed n = 589, Solar Considerers n = 405
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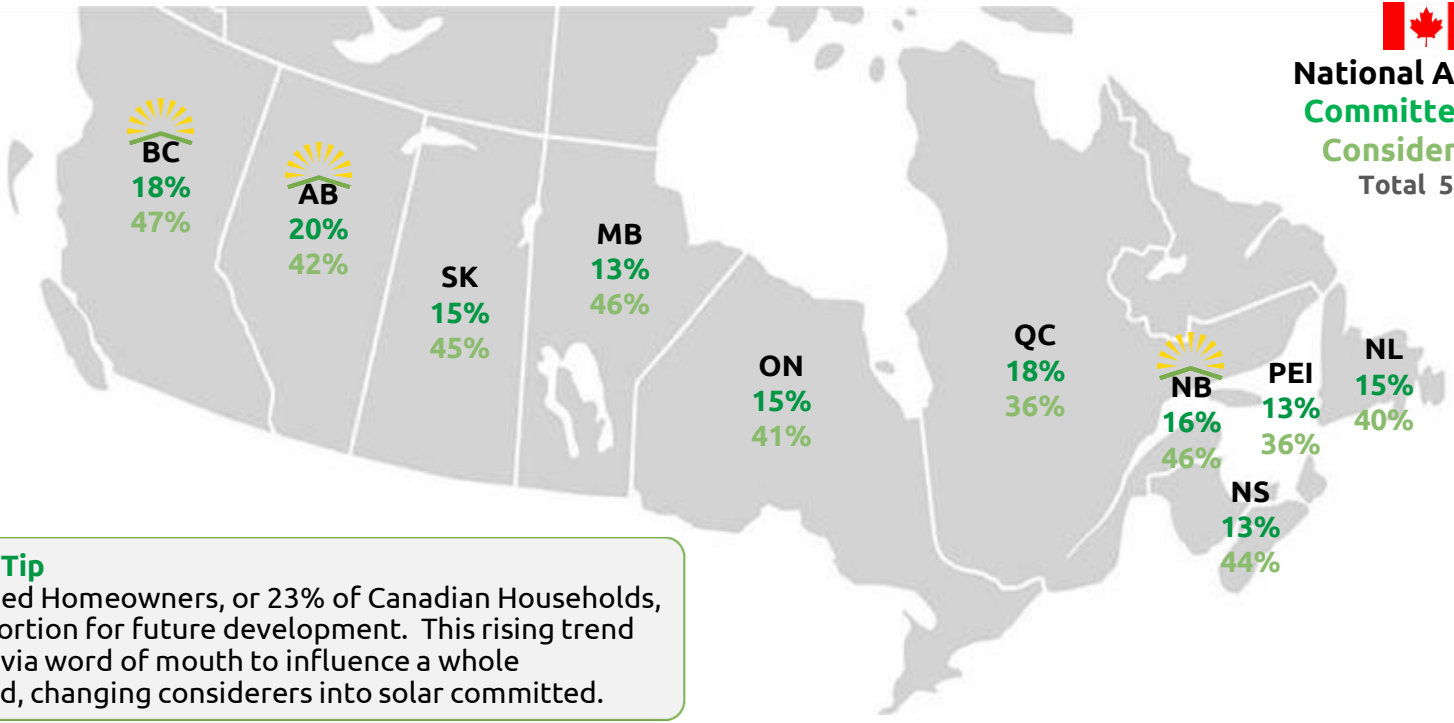
Solar Positives:
Committed and
Considerer Segments

Nationally, 57% are considering solar in the next 3 years. The highest by province are BC, Alberta, and NB, and lowest are QC and PEI.

Solar Positives by Province



Homeowners Tip
57% of Qualified Homeowners, or 23% of Canadian Households, is a huge proportion for future development. This rising trend can be spread via word of mouth to influence a whole neighbourhood, changing considerers into solar committed.

Base : n = 994
Solar Committed n = 589, Solar Considerers n = 405

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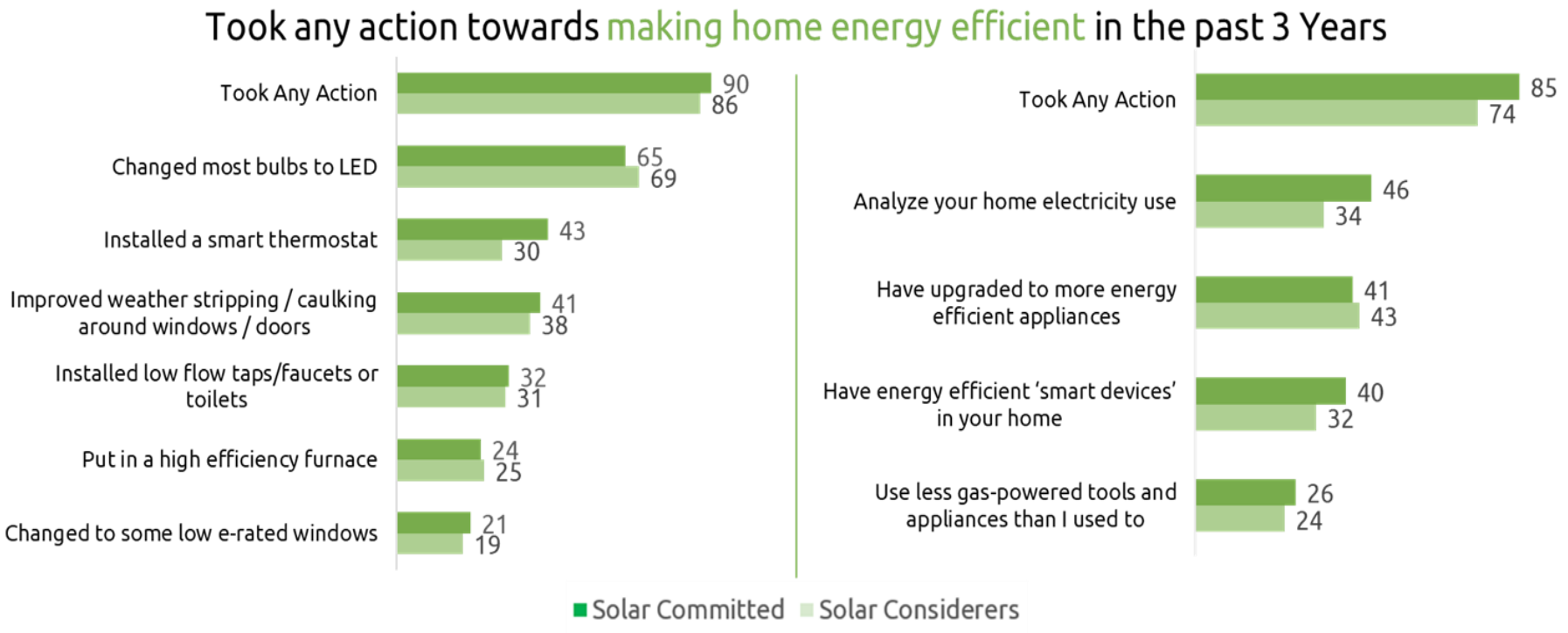
Almost all have taken steps for home energy optimization, as the first step prior to going solar, among Solar Positives



Base : n = 1,199
Solar Committed n = 589, Solar Considerers n = 405
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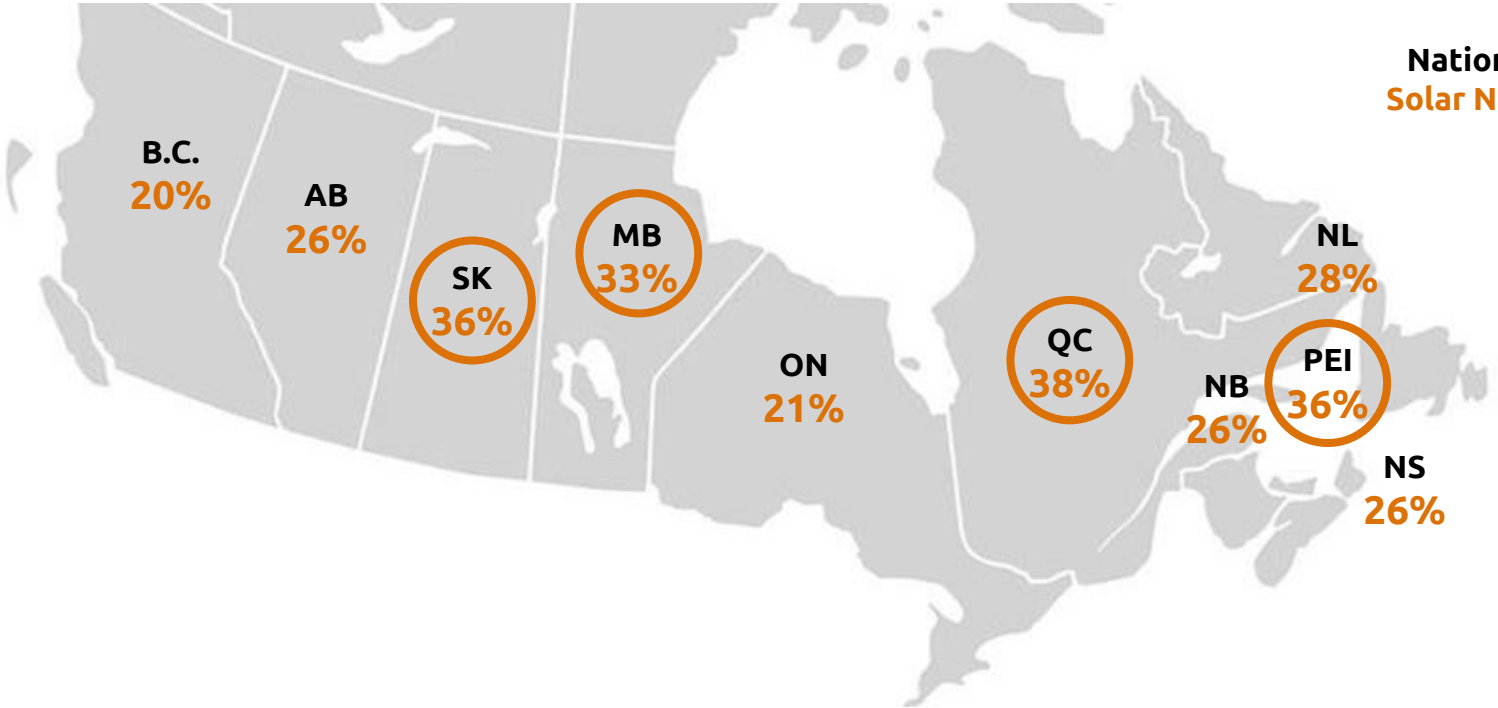
Solar Negatives: Overcoming Barriers

Que, PEI, SK and MB have the highest proportion of Solar Negatives

The low percentage of Solar Negative in ON and BC brings the National average down to 27%

Provincial Breakdown of **Solar Negative**



National Average
Solar Negative: 27%

Base : n = 205
Fence Sitters n = 53, Solar rejectors n = 152

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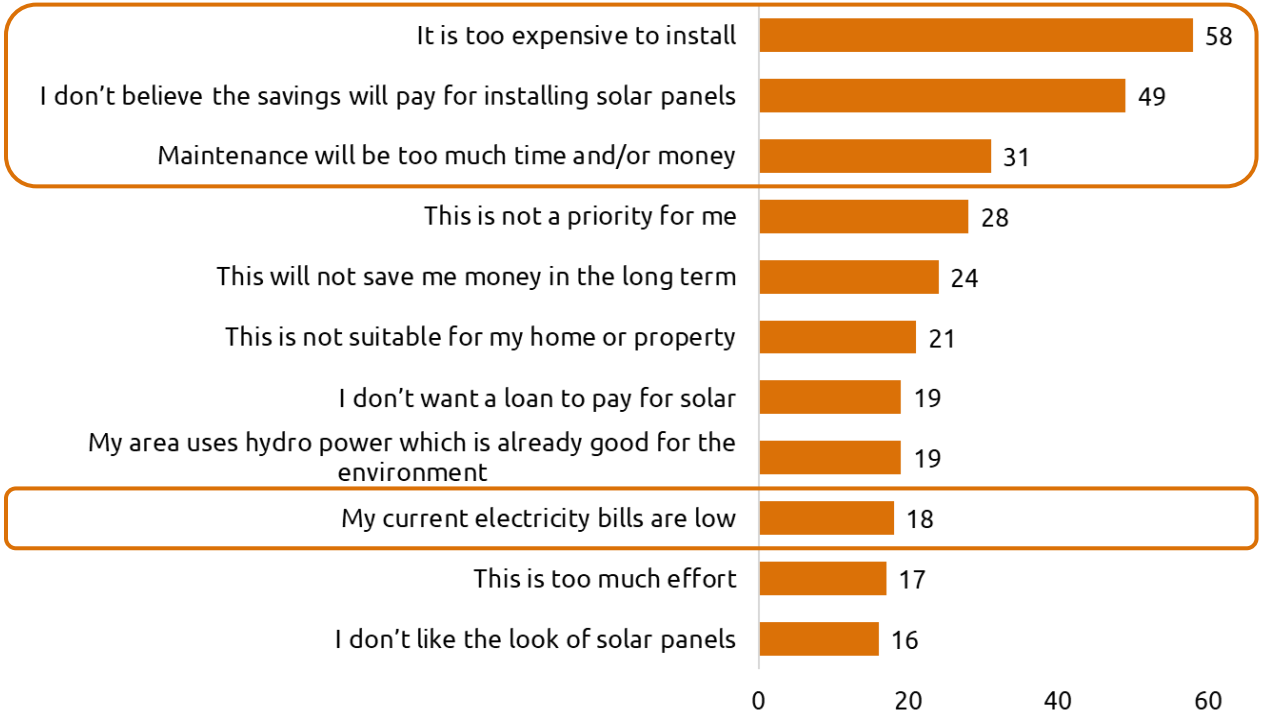
The biggest barriers for Solar Negative are short-term and long-term costs

Savings, panel maintenance and current electricity bills are the main reasons for solar negatives

Solar Negatives: Reasons for not Considering Solar



The top three barriers to adopting solar are cost-related. Increasing awareness about incentives and long-term savings could increase interest.

Homes with inexpensive hydroelectricity are less interested in solar. This is prevalent in Quebec

Base : n = 205
Fence Sitters n = 53, Solar rejectors n = 152

The Maritimes and SK have higher solar installation costs

Cheap and available hydro electricity may lead to the large proportion of Solar Negative in QC and MB

Average Solar installation cost per Watt in each province (2021) - Highest to lowest cost (in Canadian dollars)			
Rank	Province	Solar install ($/Watt)	Electricity Cost (c/kWh)
1	NewFoundland	$3.92	13.8c
2	Prince Edward Island	$3.03	17.4c
3	New Brunswick	$2.95	12.7c
4	Saskatchewan	$2.93	18.1c
5	Manitoba	$2.77	9.9c
6	Quebec	$2.70	7.3c
7	Alberta	$2.64	16.6c
8	British Columbia	$2.62	12.6c
9	Nova Scotia	$2.56	17.1c
10	Ontario	$2.47	13c

Average Solar Installation Cost per Watt by Province (2021)

Hydroelectric Generating Capacity

National Average Installation Cost $2.66/Watt

Source: Energyhub.org

Two of the biggest barriers are array installation and maintenance costs, and low hydroelectricity cost

Cost & Changing Technology

- High installation costs are a significant barrier in Saskatchewan, PEI and Newfoundland
- Solar negatives tend to be older, less tech-savvy than Solar Interested
- Constantly improving technology makes some ultra-hesitant buyers wait for the best model.
- Distrust/unfamiliarity to solar technology is a common issue

Homeowners Tip
Cost will always be a barrier to solarizing, but continued efficiencies, government incentives and rising costs of electricity may push previous Solar Negatives to reconsider.

Hydroelectricity

- Ontario and Quebec are Canada's largest hydroelectricity producers, but QC has the combination of very low $/kWh electricity and higher solar cost
- A large portion of electricity is still generated from other carbon-heavy sources in Canada
- Efforts should be made to inform this segment about the carbon offset available, and that savings are still possible with solar.
- In addition, by optimizing household energy usage before solarizing, makes for a stronger business case

National Average Installation Cost $2.66/Watt
Source: Energyhub.org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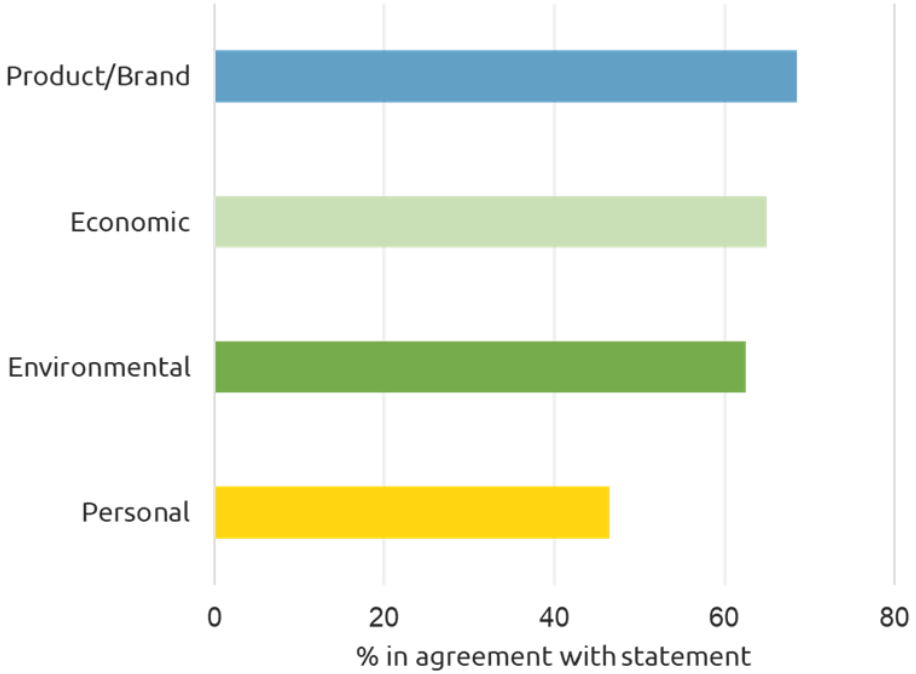
Future Demand for Solar Innovations in Canada

The quality of panels is the top consideration for solar customers

Trust in the solar company/brand and installer, savings, environmental impact are also critical



Product / Brand (68%)
Key factors: quality of the system, trust towards the installer and company, lifetime maintenance & warranty

Economic (65%)
Key factors: Annual, long term & monthly savings

Environmental (62%)
Key factors: Reducing carbon footprint & greenhouse gases, wanting clean air

Personal (46%)
Key factors: Being socially responsible, keeping the power on, helping the community

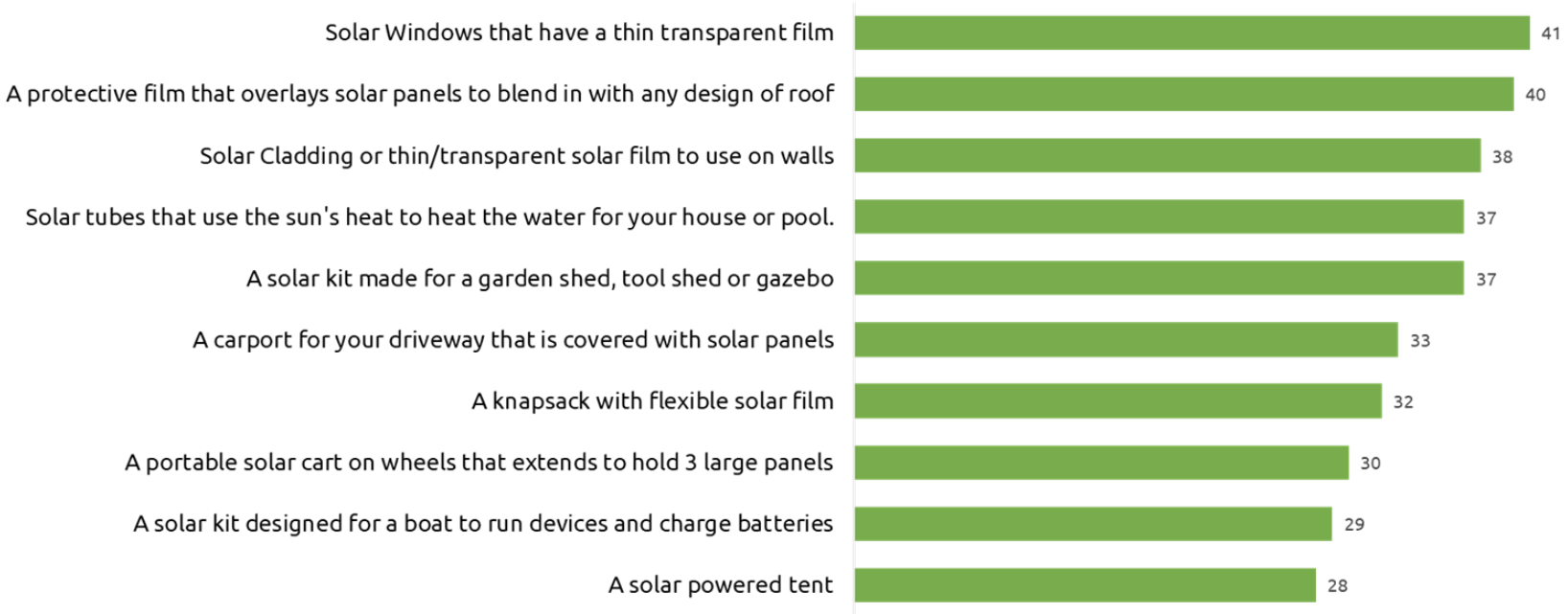
Base : n = 1,199
Solar Committed n = 589, Solar Considerers n = 405
Fence sitters n = 53, Solar Rejectors n = 152

Solar Positives show high interest for future solar across more uses

Solar windows, invisible panels and cladding are mostly likely to be purchased

Definitely/ Very **Likely to Purchase**

Among Committed/Considerers



Base : n = 1,199
Solar Committed n = 589, Solar Considerers n = 405

What's up next from the Canadian Solar Landscape Study?

- Introduce Solar buying personas
- Working session on implications for industry sellers
- Schedule a Webinar series
- Launch Wave 2 study in Spring '23
- In-person presentations, upon request
- Expand beyond solar into more renewable energy topics

Solr Solvr will introduce these projects soon,

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Appendix

Canadian Solar Landscape Study: Detailed Sample Frame

Regions	Western Canada				Ontario	Quebec	Atlantic			
Solar Positive **n = 1000**	300				300	200	200			
Solar Positive, by Province	BC 100	AL 100	SK 50	MT 50	300	200	NFL 40	NB 60	NS 60	PEI 40
Solar Negative (capped at **n = 200**)	50				50	50	50			
Solar Negative, By Province	BC 15	AL 15	SK 10	MT 10	50	50	NFL 10	NB 15	NS 15	PEI 10

Study Sample Frame:

- **Target:** Canadian House owners with HH income of $50k+, aged 25-74. National sample of n=1200; Provincial and regional quotas
  - n=1000 General Population Homeowners across the 4 regions who "consider Solar Energy as a possible solution for home energy"
  - MAX n=200 "Solar-rejecters", defined as "Do not consider Solar Energy as a possible home energy solution"
- Note: Kept count of natural fall out of non-solar interested terminates, in order to provide actual Canadian statistics, on slides 10-12.

Based on the following question:
Q13.How likely are you to consider Solar Energy as a possible home energy solution in the future? If Yes…
Q14. How likely are you to consider installing solar panels – with or without a battery to store your home electricity - in the next three years?
1.1. Scale
1.1.1. *Definitely*
1.1.2. *Very likely*
1.1.3. *Somewhat likely*
1.1.4. *Somewhat unlikely*
1.1.5. *Very unlikely*
1.1.6. *Definitely will not*