

## Report about the Canadian Solar Thermal Market Survey 2024

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Prepared for:

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### Part 1: Description of survey

#### Design of survey

This report provides the results of a survey of the solar thermal industry in Canada covering the calendar year of 2024. Figures from 2022 and 2023 have also been updated for some collector technologies. The survey was commissioned by CanmetENERGY of Natural Resources Canada (NRCan) and was undertaken by solrico, a German agency for market research and international communication in the solar thermal sector. This survey is a continuation of annual surveys going back to 2002.

It is the second year that the German agency solrico has conducted this survey. Therefore, the database of the surveyed companies remained largely the same than in the previous year. However, a new approach was adopted for swimming pool collectors and PVT collectors. Here, total shipping volumes to Canada for 2023 and 2024 were requested from manufacturers abroad. This means that the market is better covered than in 2023, when selected distributors and resellers of these technologies based in Canada were surveyed without any guarantee of completeness. The disadvantage of this approach is that stock levels at resellers at the end of the year cannot be recorded so well, which then leads to lower imports by international collector manufacturers in the following year.

International manufacturers of pool heating collectors such as Aquatherm and Magen Eco-Energy – both USA-based – have been added to the overview of surveyed companies in table 1. Also three international PVT manufacturers were invited to take part in this year's survey: DualSun from France, Naked Energy from UK and Abora Solar from Spain.

#### Description of the final company database

The updated database of relevant companies in the solar thermal sector for this year's survey includes 25 companies that received a questionnaire in January 2025. You find the final long version of the survey in the Annex (part 4). A short version of the questionnaire was created for the international manufacturers in order to record the collector areas shipped to Canada. The participating companies can be categorized as following:

- Four manufacturers of solar air heating systems
- Three manufacturers of flat plate collectors, of which one company abroad
- Four manufacturers / suppliers of concentrating solar collectors
- Four manufacturers of unglazed solar pool heating collectors, of which three companies abroad
- Four manufacturers of PVT collectors, of which three companies abroad
- Six importers/resellers of evacuated tube and/or flat plate collectors

| Company   | Prov | Website                     | Type of company                                 |  |  |  |
|---|------|-----------------------------|---|--|--|--|
| Manufacturer and supplier of solar air heating collectors |      |                             |   |  |  |  |
| Conserval<br>Engineering Inc.                             | ON   | https://www.solarwall.com/  | Collector manufacturer and project developer    |  |  |  |
| Matrix Energy   | QC   | www.matrixairheating.com    | Collector manufacturer and project developer    |  |  |  |
| Trigo Energies  | QC   | www.trigoenergies.com       | Collector manufacturer and<br>project developer |  |  |  |
| Aéronergie  | QC   | https://www.aeronergie.com/ | Collector manufacturer and<br>project developer |  |  |  |

| Flat plate collector manufacturer |           |                                     |  |  |  |
|-----------------------------------|-----------|-------------------------------------|--|--|--|
| Thermo Dynamics                   | NS        | http://www.thermo-<br>dynamics.com/ | Manufacturer of flat plate collectors  |  |  |
| Solcan Ltd.                       | ON        | https://solcan.ca/services/         | Manufacturer of flat plate<br>collectors and reseller of<br>unglazed swimming pool<br>collectors |  |  |
| Sunearth                          | USA       | https://sunearthinc.com/            | Manufacturer of flat plate collectors  |  |  |
| Supplier and manufa               | acturer o | f concentrating collector manufa    | acturer  |  |  |
| Rackam                            | QC        | http://rackam.com/en/               | Project developer and collector manufacturer   |  |  |
| Solarsteam                        | AB        | https://solarsteam.ca/              | Project developer and collector manufacturer   |  |  |
| Phoenix Solar<br>Therma           | ON        | https://phoenixsolarthermal.com/    | Project developer and collector manufacturer   |  |  |
| Maxun Solar                       | ON        | https://maxun.solar/                | Project developer and collector manufacturer   |  |  |
| Manufacturer and dis              | stributor | of unglazed collectors for pool     | heating  |  |  |
| Enerworks                         | ON        | https://enerworks.com/              | Manufacturer of unglazed<br>pool heating collectors<br>(Brand Enersol) and<br>importer           |  |  |
| Techno-Solis Inc                  | QC        | http://www.techno-solis.com/        | Distributor for solar pool<br>heaters  |  |  |
| Magen Eco-Energy                  | USA       | https://mageneco.com/us/            | US/Canadian/Caribbean<br>distributor of Magen Eco-<br>Energy with factory in<br>Israel           |  |  |
| Aquatherm                         | USA       | https://aquathermsolar.com/         | Manufacturer of solar pool<br>heating collectors   |  |  |
| Importer of PVT colle             | ectors    |                                     |  |  |  |
| Dualsun                           | France    | https://dualsun.com/en/             | Manufacturer of PVT collectors   |  |  |
| Naked Energy                      | UK        | https://nakedenergy.com/            | Manufacturer of PVT collectors   |  |  |
| Abora Solar                       | Spain     | https://abora-solar.com/en/         | Manufacturer of PVT collectors   |  |  |
| Hydro Solar                       | QC        | https://hydrosolar.ca/              | Reseller of PVT collectors   |  |  |

| Importer of flat plate and/or evacuated tube collectors |     |                               |   |  |
|---|-----|-------------------------------|---|--|
| Aalborg CSP   | USA | https://www.aalborgcsp.de/    | Project developer of larger,<br>commercial solar thermal<br>plants  |  |
| Digital Solar Heat                                      | AB  | https://digitalsolarheat.com/ | Importer of vacuum tube<br>collectors and developer<br>for a new control unit for<br>complex renewable<br>heating systems |  |
| Northern Lights Solar<br>Solutions / SolarTubs          | MB  | https://www.solartubs.com/    | Importer of flat plate and evacuated tube collectors  |  |
| Simple Solar Heating<br>Ltd                             | AB  | https://www.simplesolar.ca/   | Importer of flat plate and evacuated tube collectors  |  |
| Lightfors Canada  | NB  | https://lightfors.ca/         | Importer of evacuated tube collectors   |  |
| Viessmann<br>Manufacturing<br>Company Inc.              | ON  | www.viessmann.ca              | Importer of flat plate collectors   |  |

## Table 1: Overview of the 25 companies sorted by portfolio that were invited to takepart in the survey in January 2025

#### Analysis of the response rate

The survey was sent out to the 25 companies first by email in individual emails and then a follow-up was done by phone. In the first feedback round three companies were excluded from the survey because of various reasons:

- One international technology provider did not have any sales activities in Canada in 2024
- One company had a restructuring and was not able to respond to surveys in this period
- One company stopped offering solar thermal solutions

Among the remaining 22 companies, which are still active in the field of solar thermal, 19 companies took part in the survey – a response rate of 86 %, significantly higher than last year (76 %). Only three companies did not provide responses to the survey during the two month period.

However, the intensity of participation in the study varied greatly, as the following list shows:

- 7 companies filled in the full 4-page survey
- 6 companies filled in the short 2-page survey
- 6 companies provided sales figures by email without using the form

In general, it can be observed that fewer companies are willing to complete the long questionnaire. The number of companies that completed the entire questionnaire fell from 9 in 2024 to 7 this year, although the total number of companies that responded rose from 16 (2024) to 19 (2025). One reason for this is that companies are largely dissatisfied with the solar thermal business development.

### Part 2: Executive Summary



New-built firehall south of Montreal with a south-facing solar air heating wall for preheating the incoming fresh air during the heating season. Photo: Matrix Energy

Solar air heating has been again the main application for the solar thermal industry in Canada. 90 % of the newly installed collector area in 2024 were glazed and unglazed air collectors. Good funding conditions in the province of Quebec drive the market. However, the peak year 2023 with 28,054 m<sup>2</sup> of newly installed solar air collectors (1.96 MW) could not be achieved. The market volume of air heating declined by 7 % compared to 2023, but was still significantly higher than in 2022 (20,336 m<sup>2</sup>; 1.42 MW). The second strongest segment of the Canadian thermal market, solar pool heating, experienced a severe decline of -63%, so that the market across all applications shrank by 17%. The market survey took place in January and February 2025. 19 companies reported sales figures.

The mood among suppliers of flat-plate collectors and vacuum tube collectors has worsened. Demand has continued to decline, as solar water heaters are not explicitly mentioned as one of the eligible technologies within the national Greener Homes Grant Program. Without subsidies for residential solar water heater systems and with the clear focus of the national energy policy on PV and heat pumps, market participants do not expect any improvement here. Two companies have already ceased their sales activities of residential solar thermal systems. One company focuses only on solar pool heating, the other on export.

"Solar air heating represents the cornerstone of Canada's solar thermal market, demonstrating strong potential for continued growth. We have also seen growing interest in concentrating solar heating solutions for industrial applications, even though this is at early stages of market development. Solar air and concentrating collectors are good examples of 'made-in-Canada' solutions that can support emissions reductions and local clean jobs," said Lucio Mesquita. He is a Senior Research Engineer at CanmetENERGY Ottawa/Natural Resources Canada and commissioned the study. He also noted the concerning outlook for residential solar water

heating and swimming pool heating and added: "We have seen continuing decline and market withdrawals by equipment supplier in those segments."

#### New opportunities emerge

Sales of PVT collectors rose sharply in 2024, however still on a low level and not for all suppliers. Uncovered PVT collectors, which serve as a heat source for the heat pump, were popular, while sales of covered PVT collectors were not necessarily satisfactory.

An estimated 238 m<sup>2</sup> PVT collector were sold in 2024 mainly for emblematic projects supported by local authorities or state governments.

No new systems were reported with concentrating collectors in 2024. However, in mid-February it was announced that the Canadian company Solarsteam would receive a grant of CAD 2.8 million from the Government of Alberta to build the first demonstration project using its enclosed parabolic trough technology. The project is to be built for water treatment at a factory in Alberta. Once completed, this plant would be one of the few major concentrating collector plant in Canada.

#### Assessment of certain policies

The survey was also used to ask companies from the solar thermal sector to assess certain policies and their impact on solar thermal sales. Nine companies completed this part of the questionnaire. A clear majority agreed with the two statements that "Green building rating programs, such as LEED, have a positive impact on solar thermal sales" and "A number of subsidised large solar process heat demonstration plants would stimulate demand for such solutions".

The two statements on the impact of carbon pricing and Clean Technology Investment (CTI) tax credits were part of both, the 2025 and 2024 surveys. This year, significantly more companies agreed that carbon pricing has a positive effect on solar thermal sales figures. The approval rate rose from 27% to 50%. The mood has also changed somewhat with regard to CTI tax credits. This year, 44% of companies agreed that it would have a positive impact on sales figures, compared with just 36% last year.

### Part 3: Analysis of the results

This chapter includes selected results from the survey. The questions from the questionnaire are marked in dark blue. The 4-page questionnaire is included in the appendix (page 17).

#### Were you satisfied with your solar thermal sales in 2024?

13 companies answered this question, eleven companies with "no" and only two with "yes". The two companies answering "yes" come from the solar air heating business and experience a growing demand and governmental support.

On the other hand the companies that ticked "not satisfied" name the lack of financial support for solar thermal and the high attention for PV and heat pumps because of incentives as the main reasons. Selected reasons for "not satisfied" are listed in the following:

- Lack of interest in solar thermal solutions in Canada have inspired us to look overseas for sales
- Slow decision-making process extending project development timeline and market uncertainty affected by the US federal elections
- Low solar thermal interest due to large number of government incentives and promotion for solar PV
- Lack of incentives from federal government & its promotion of heat pumps as only solution to displace fossil fuels
- Nationally, negligible visible promotion of residential solar thermal while great promotion of PV and heat pumps with incentives.

## How high were your revenues associated with sales of solar thermal products and services in 2024?

7 companies reported a turnover in CAD for the year 2024 related to solar thermal products and services. The turnover of the 7 companies added up to CAD 5.828 million related to sales on the national market plus export business. This is in average a turnover of around CAD 832,651 per company. Four of the companies that reported turnover also export solar thermal products and the total turnover of the exported solar thermal products is CAD 621,050. That means that 13 % of the turnover of these four companies is made by exports.

The reported turnover is not representative of the sector's turnover because only 7 of the 21 companies surveyed provided turnover figures.

#### Gross collector area sold in Canada in 2024

Across all collector types a total of 29,255 m<sup>2</sup> collector area (2.05 MW) was installed in Canada in 2024, a decrease by 17 % compared to 2023, when 35,068 m<sup>2</sup> collector area (2.45 MW) was sold and installed. A large majority of the collectors are produced in Canada (68 %). A high share of the air collectors and some swimming pool absorbers are produced domestically.

Uncovered swimming pool absorbers are largely imported from the USA, PVT collectors and unglazed air collectors with selective coating are imported from Europe.

|      | Domestically<br>produced and<br>sold collector<br>area | Imported<br>collector area | Totally<br>installed<br>collector area | Share of local production |
|------|--|----------------------------|--|---------------------------|
| 2024 | 19,862 m <sup>2</sup>                                  | 9,393 m <sup>2</sup>       | 29,255 m <sup>2</sup>                  | 68 %                      |

| Table 2: Share of domestica | ally produced co | llector area in 2024 | 4 |
|-----------------------------|------------------|----------------------|---|
|                             |                  |                      | • |

Table 3 shows the breakdown of the installed collector area according to collector type and the change compared to the previous year.

In the air collector sector, there appears to be a shift from unglazed air collectors to glazed air collector systems, the sales volume of which more than doubled in 2024 compared to the previous year. Overall, the air collector market declined by 7 %. This appears to be due more to an unusually good year in 2023, because the air collector area sold in 2024 is significantly higher than in 2022 (19,991  $m^{2}$ ; 1.4 MW).

Sales of glazed collectors continued to decline in 2024, a trend that was already evident in 2023. Collector suppliers blame this on government rebates and promotion for solar PV. The downward trend has now intensified in 2024 because two system suppliers have stopped importing glazed collectors altogether due to low demand.

2024 was an extremely bad year for solar pool heating systems in Canada. Sales more than halved from 5,976 m<sup>2</sup> in 2023 to 2,294 m<sup>2</sup> in 2024 (0.42 MW in 2023 to 0.16 MW). However, these figures are largely based on the shipping data of international manufacturers. It was not taken into account here whether Canadian resellers still had stocks of pool heating collectors at the end of 2023, which were then installed in 2024, so that correspondingly less was purchased from international suppliers last year.

The reasons given for the falling demand for solar pool heating solutions are the high interest rates on building loans according to suppliers, which make construction expensive, so that people are saving on the pool. There were also pull-forward effects during the coronavirus period, when people spent the summer at home and invested in pools. Now they are spending their money rather on summer holiday travels.

Sales of PVT collectors rose sharply in 2024, but from a rather small level and not for all suppliers. Uncovered PVT collectors, which serve as a heat source for the heat pump, were popular, while sales of covered PVT collectors were not necessarily satisfactory. However, one PVT supplier warns that "the PVT market will not be very demanding if the conventional energy prices are kept low, and PVT technology is little known in a market that is not very focused on energy innovation apart from a few emblematic projects supported by local authorities or state governments."

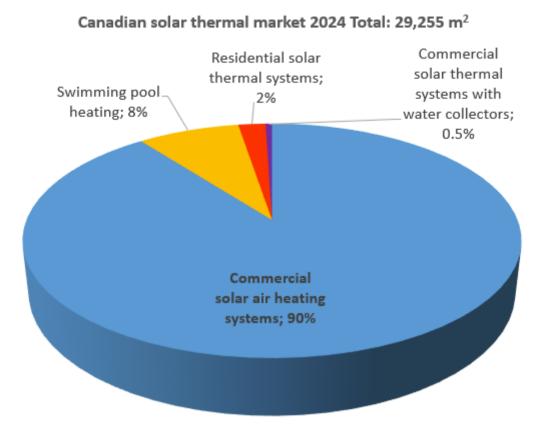
No new systems were reported with concentrating collectors in 2024. However, in mid-February it was announced that the Canadian company Solarsteam would receive a grant of CAD 2.8 million from the Government of Alberta to build the first demonstration project using its enclosed parabolic trough technology. The project is to be built for water treatment at a factory in Alberta. Once completed, this plant would be one of the few major concentrating collector plant in Canada.

|  | Sold area according<br>to collector type [m <sup>2</sup> ]<br>in 2023 | Sold area related<br>to collector type<br>[m <sup>2</sup> ] in 2024 | Growth<br>2023/2024 |
|--|---|---|---------------------|
| Total sales in unglazed air collectors     | 25,939  | 21,395  | -18%                |
| Total sales in glazed air collectors       | 2,115   | 4,808   | 127%                |
| Total sales of flat plate collectors       | 782   | 318   | -59%                |
| Total sales of evacuated tube collectors   | 216   | 202   | -6%                 |
| Total sales of unglazed water collectors   | 5,976   | 2,294   | -62%                |
| Total sales of PVT collectors              | 40  | 238   | 495%                |
| Total sales of parabolic trough collectors | 0   | 0   |                     |
| Total                                      | 35,068  | 29,255  | -17%                |

Table 3: Gross collector area sold in Canada in 2023 and 2024 according to collector type. Figures for 2023 were updated using new data from international manufacturers shipping to Canada.

| Application  | Sold collector<br>area in 2023<br>[m <sup>2</sup> ] | Sold collector<br>area in 2024<br>[m <sup>2</sup> ] | Growth<br>2023/2024 |
|--|---|---|---------------------|
| Commercial solar air heating systems                   | 28,054  | 26,203  | -7%                 |
| Swimming pool heating                                  | 6,207   | 2,294   | -63%                |
| Residential solar thermal systems                      | 435   | 615   | 41%                 |
| Commercial solar thermal systems with water collectors | 371   | 143   | -61%                |
| Total  | 35,067  | 29,255  | -17%                |

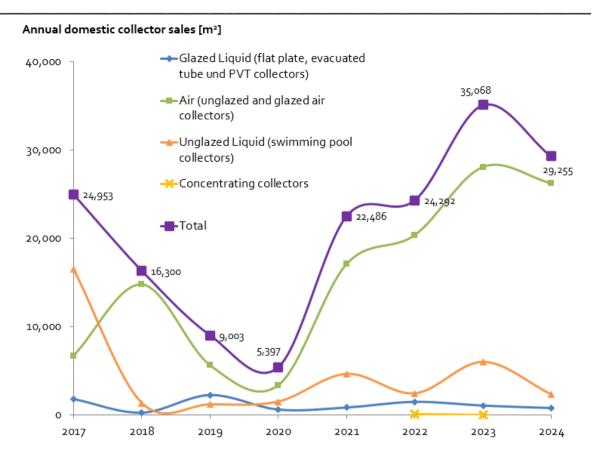
Table 4: Gross collector area sold in Canada in 2023 and 2024 according to application. Figures for 2023 were updated using new data from international manufacturers shipping to Canada.



## Figure 1: Gross collector area sold in Canada in 2024 according to application [Total 29,255 m<sup>2</sup>; 2.05 MW]

Figure 3 shows that the absolute dominating application is the commercial solar air heating market (90 % of the newly installed collector area in 2024). Swimming pool heating accounts for 8 %. Residential solar thermal systems and commercial solar thermal systems only play a minimal role.

Figure 4 shows the market development of different collector types between 2017 and 2024. The pandemic certainly played a large role in the temporary decline in sales. If 2023 is interpreted as an unusual peak year, than there is still a clear upwards trend since 2020 at least in the overall market volume.



#### Figure 2: Domestic sales of different collector types between 2017 and 2024.

From the deployment rates of the different collector types the total number of direct <u>and</u> indirect jobs in the Canadian solar thermal industry can be calculated using the methodology of the international study Solar Heat Worldwide (SHWW) (see table 5). Here, factors are determined as to which newly installed collector area is necessary to create one full-time job.

| Country with  | Factor: Newly installed<br>collector area<br>per full-time job |
|---|--|
| high labour cost, advanced automated collector and storage tank production, and mainly pumped systems                         | 133 m²/job   |
| low labour cost, advanced automated production of evacuated tube collectors and heat storage, and mainly thermosiphon systems | 87 m²/job  |
| mostly manually produced flat plate collectors and low labour costs   | 87 m²/job  |
| unglazed swimming pool absorbers and air collectors   | 200 m²/job   |

 
 Table 5: Job calculation factors in different countries used by Solar Heat Worldwide on a global level Source: <u>news article on solarthermalworld.org</u>
 If you now apply the factors to the collector surface installed in Canada in 2024, you get 152 jobs.

|   | Sold collector area in 2024 | Job factor | Total jobs |
|---|-----------------------------|------------|------------|
| Glazed Liquid (flat plate,<br>evacuated tube und PVT<br>collectors) | 758                         | 200 m²/job | 4          |
| Air (unglazed and glazed air collectors)                            | 26,203                      | 200 m²/job | 131        |
| Unglazed Liquid<br>(swimming pool<br>collectors)                    | 2,294                       | 133 m²/job | 17         |
|   |                             | Total      | 152        |

 Table 6: Calculation of total direct and indirect FTE jobs in the Canadian solar thermal sector using the job factors of Solar Heat Worldwide

#### List two key factors that have <u>positively</u> impacted your solar thermal business in 2024

Among the seven companies that have filled in the complete questionnaire, only five have given factors that positively impacted their sales. Among the factors are internal factors that have to do with their portfolio and R&D activities, but also external factors that could trigger more demand:

- Growing uncertainty of electrical grid reliability and energy price increases.
- Long-term stability of existing subsidy programs. Addition of solar air program at electric utility level
- Zero carbon emissions from solar thermal systems
- Length of time in the industry; our excellent reputation amongst our customers and those that specify our solar technology
- R&D to develop a solar-powered DC heat pump system, good for -30 °C outside and A/C in summer (indirect solar)

#### List two key factors that have <u>negatively</u> impacted your solar thermal business in 2024

Seven companies have listed factors that have negatively impacted their business. The most cited argument here has been again as last year the lack of support for solar thermal energy compared to the good support for heat pumps and PV.

- Cheap natural gas and no subsidy for solar thermal
- Removal of incentives and any reference to solar thermal collectors for residential customers.

- Lack of interest in solar thermal due to government rebates and promotion for solar PV
- Uncertainty with US new presidency and impact on business from energy policy changes
- Lack of incentives and competition from heat pumps.

## How do you believe the Canadian solar thermal market will develop in the next 5 years?

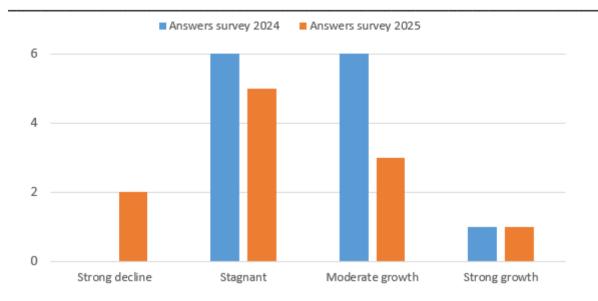
11 companies answered this question: 1 ticked "strong growth", three ticked "moderate growth", five ticked "stagnant" and two company expects strong decline (see figure 3). A comparison of the responses from this year with the survey at the beginning of 2024 shows that the overall mood has deteriorated. Fewer companies expect long-term growth in the solar thermal market as of January 2025. For the first time, suppliers also expect a sharp decline in the coming years.

#### Quoted reasons for moderate/strong growth:

- Looking to invest more in growth in Canada (view of an international collector manufacturer)
- Staying positively optimistic based on general market interest in North America (view of an international collector manufacturer)
- Increasing interest in alternative green energy combined with insecurity regarding the electrical grid. Rising energy costs.

#### Reasons for stagnant/declining market development:

- The trend is going towards heat pumps and not solar heating
- We see no rationale for growth. In general environmental concern is less a priority of government or business.
- No clear leadership exists neither at government level nor industry level in Canada. Market is sparse and uneven across the country.
- The market will not be very demanding, if the conventional energy prices are kept low, and PVT technology is little known in a market that is not very focused on energy innovation apart from a few emblematic projects supported by local authorities or state governments.
- Lack of government acceptance for commercial and domestic solar heating with inter-seasonal storage and/or lack of incentives even though 40 % of Canadian emissions are related to heating of buildings.
- Pro-electrification agenda pushing solar PV



# Figure 3: Number of companies assessing different growth paths in the next five years for the Canadian solar thermal market

## Do you agree or disagree with the following statements regarding trends in the Canadian solar thermal market?

This survey was also used to ask companies from the solar thermal sector to assess certain statements. Nine companies completed this part of the questionnaire. The answers were summarised as "strongly agree" plus "agree" and also the answers "strongly disagree" and "disagree" were added up, so that a three-way split of the answers could be made for each question (see figure 4).

The statement that "Solar air pre-heating of large buildings is a most cost-effective solar thermal application" got a lot of approval, but two companies did not feel competent to answer this question.

A clear majority agreed with the two statements that "Green building rating programs, such as LEED, have a positive impact on solar thermal sales" and "A number of subsidised large solar process heat demonstration plants would stimulate demand for such solutions".

The picture is not quite so clear with regard to Carbon pricing and the new Clean Technology Investment Tax Credits. Hier only half of the companies agreed that these two policies will have a positive impact on sales of solar thermal systems.

The two statements on the impact of carbon pricing and Clean Technology Investment tax credits were part of both, the 2025 and 2024 surveys. The comparison of the results can be found in Figure 5. This year, significantly more companies agreed that carbon pricing has a positive effect on solar thermal sales figures. The approval rate rose from 27% to 50%.

The mood has also changed somewhat with regard to CTI tax credits. This year, 44% of companies agreed that it would have a positive impact on sales figures, compared with just 36% last year.

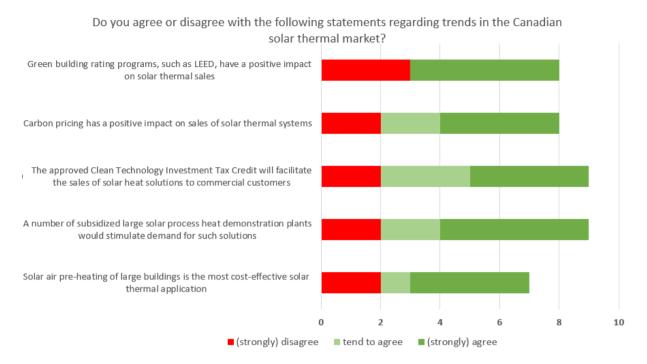


Figure 4: Number of companies that agreed or disagreed with the given statements

Do you agree or disagree with the following statements regarding trends in the Canadian solar thermal market?

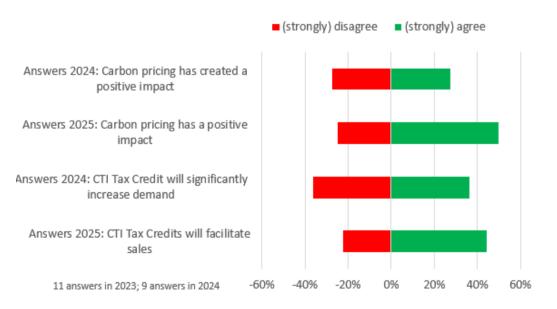


Figure 5: Comparison of the number of companies that agreed or disagreed with two statements that were asked in the 2025 and 2024 surveys.

### Part 4: Annex

### 4-page version of the questionnaire

### Market Assessment of Canadian Solar Thermal Market 2024

You are being invited to participate in a study of the Canadian solar thermal industry commissioned by Natural Resources Canada (NRCan) and undertaken by solrico, a German market research agency dedicated to the solar heating sector. This questionnaire is being sent to more than 20 collector manufacturers, project developers, importers, and resellers of solar thermal systems in Canada to obtain comprehensive and reliable information on market size and industry trends.

#### Term of use of confidential information

The only person from solrico that is involved in the data gathering is the director Bärbel Epp. She will keep the provided data strictly confidential and will not share it with any third party. There will be no publication of specific sales or company data. The data will be shared with NRCan only in an aggregated form, meaning that the data provided will be pooled with all respondents such that the risk of personal identification is nearly eliminated. If there are too few respondents for any question, and there is a reasonable chance that data could be used to identify a respondent, we will not publish that data.

#### 1. General Company Data

| Company name   | Web page |  |
|--|----------|--|
| Full name of the person completing the questionnaire | Position |  |
| Your mobile number for enquiries                     |          |  |

| Were you satisfied with your solar thermal sales in 2024?     | Yes | No |  |
|---|-----|----|--|
| Please give reasons for your satisfaction or dissatisfaction. |     |    |  |

| How high were your revenues associated with sales of solar thermal products and services in 2024? | CAD\$ |
|---|-------|
| Percent of revenues from domestic sales of solar thermal products and services                    | %     |
| Percent of revenues from export sales of solar thermal products and services                      | %     |

#### 2 Relevant Collector Sales Data

| Do you purchase all or a certain share of your sold collectors from a Canadian company? | Yes | No |  |
|---|-----|----|--|
|   |     |    |  |

Please report total gross collector area sold in Canada and exported by type of collector.

|  | Collectors sold in Canada in 2024<br>(m²) |                                   |  |  |
|--|---|-----------------------------------|--|--|
| Type of Collector                              | Manufactured by your company              | Imported directly by your company |  |  |
| Liquid-based flat plate collectors             |   |                                   |  |  |
| Liquid-based evacuated tube collectors         |   |                                   |  |  |
| Liquid-based unglazed collector (pool heating) |   |                                   |  |  |
| Glazed air collectors                          |   |                                   |  |  |
| Unglazed air collectors                        |   |                                   |  |  |
| PV-Thermal collectors                          |   |                                   |  |  |
| Concentrating collectors                       |   |                                   |  |  |

| Collector Type                                  | Exported in 2024<br>[m³] |
|---|--------------------------|
| Liquid-based flat plate collectors              |                          |
| Liquid-based evacuated tube collectors          |                          |
| Liquid-based unglazed collectors (pool heating) |                          |
| Glazed air collectors                           |                          |
| Unglazed air collectors                         |                          |
| PV-Thermal collectors                           |                          |
| Concentrating collectors                        |                          |

Please report domestic sales by gross area according to the type of application. Only report systems sold directly to final customers (not to distributors or dealers).

| Type of Application  | Collector area sold in Canada 2024 (m²) |
|--|---|
| Swimming pool heating  |   |
| Domestic hot water systems for single family houses  |   |
| Large domestic hot water systems (multi-family houses, tourism and public sector)                |   |
| Solar combi-systems (domestic hot water plus space heating in the residential sector)            |   |
| Other commercial installations (Solar district heating, solar process heating and solar cooling) |   |

#### 3 General Market Trends, Barriers, and Opportunities

| List two key factors that have <u>positively</u> impacted<br>your solar thermal business in 2024 |  |
|--|--|
| List two key factors that have <u>negatively</u> impacted your solar thermal business in 2024    |  |

#### How do you believe the Canadian solar thermal market will develop in the next 5 years?

| Strong growth                       | Moderate growth | Stagnant | Moderate decline | Strong decline |
|-------------------------------------|-----------------|----------|------------------|----------------|
|                                     |                 |          |                  |                |
| Please give reasons for your choice |                 |          |                  |                |

## Do you agree or disagree with the following statements regarding trends in the Canadian solar thermal market?

|   | Strongly<br>Agree | Agree | Tend to agree | Disagree | Strongly<br>disagree |
|---|-------------------|-------|---------------|----------|----------------------|
| Solar air pre-heating of large buildings is the most cost-effective solar thermal application i                               |                   |       |               |          |                      |
| A number of subsidized large solar process heat demonstration plants would stimulate demand for such solutions                |                   |       |               |          |                      |
| The approved Clean Technology Investment Tax Credit will facilitate the sales of solar heat solutions to commercial customers |                   |       |               |          |                      |
| Carbon pricing has a positive impact on sales of solar thermal systems  |                   |       |               |          |                      |
| Green building rating programs, such as LEED, have a positive impact on solar thermal sales                                   |                   |       |               |          |                      |

Thank you very much for your support!