

**HANDOUT:** Efficient Reading: Solar Power (3 pages)  
Skill Builders: Key Words & Phrases, Skimming, Scanning

**IN THE WORKPLACE:** People read text for different purposes. Whatever the reason for reading, being able to quickly and accurately find and understand the information you need makes reading both more pleasant and more efficient.

Refer to the excerpt from the text **Introduction to Solar Panels** to complete the tasks and locate answers to the questions.

Being able to predict content from titles and sub-titles in a document is an effective strategy to make it easier to understand the content and read faster and more efficiently.

1. **Before** reading the text, and just thinking about title, list 2 things you think will be mentioned in the text.

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2. **Before** reading the text, look at the information below about the author. What do you think the author's purpose in writing will be? Write it in 1 sentence.

Author: No author is mentioned by name. The article appears in the education section of a company website. The company has been manufacturing and selling solar panels for over 20 years.

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3. **Next** reading the text, what is the author's intent in writing? (For example, the author is writing to warn, inform, persuade...) Write your answer in 1 sentence.

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4. What is 1 question you could ask that the text answers?

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5. What is a related question that the text does NOT answer?

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6. Using another source, find the answer to the question you identified in number 5. Identify the source.

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7. Does the excerpt want you to read more of this text or a similar one? Why or why not?

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## Excerpt from Introduction to Solar Panels

The first solar panels, that resemble today's technology, appeared in the 1950s and were primarily used for space applications. Following the 1970s energy crisis, more R&D and commercial development helped to further the deployment mostly for off-grid applications. In early 2000, Germany was one of the first countries to implement what is called a "fee in tariff" (FIT). FIT is a policy mechanism designed to encourage the adoption of renewable energy sources. As of 2018, over 60 countries had adopted FIT programs including parts of Canada.

### FAQ about Solar Panels

*Why haven't we seen more solar technologies used in the world today?*

The market has been expanding rapidly all over the world. This being said, the initial investment is still relatively expensive. The cost has significantly dropped over the last 15 years and can be, in some cases, cost effective compared to traditional distributed power such as coal, gas, nuclear and hydro especially where grid tied power systems are driven by financial incentives that makes solar panels a very lucrative investment.

*What can we power with solar energy?*

Solar energy can be used to power all appliances that require electricity. When the system is tied to the grid, the solar energy is exported to the grid. The meter counts the energy "in" and "out". An average Canadian home consumes between 30-50 kWh/day therefore it would take at least a 7-8 kW array to fulfill that energy requirement.

*How much does it cost?*

The answer is simple; the more you consume energy the more it will cost you. By managing your consumption you can greatly reduce the size of your system and thus, the cost of your system.

However, the cost of your system is dependent not only on your consumption, but also varies depending on the country and the latitude where it will be installed. For a grid tied system without batteries, cost varies around \$7-10/watt and around \$10-25/watt for an off-grid system with batteries.

*What are some of the advantages to using solar energy?*

- The energy required to fabricate a solar module is produced and paid back within the first year of use. Solar modules are made of materials that are recyclable.
- Solar modules do not pollute or produce any noise and have a life expectancy of more than 25 years.
- It is relatively easy to predict the number of sunlight hours for any given region on the globe.
- For grid-tied installations in urban areas, solar modules produce energy during the peak demand period (9am-5pm and summer cooling) and help to offset this high energy demand.

Ref: Ramatek Energie. (n.d.). About solar PV (solar panels). <https://rematek-energie.com/eng/energy-101/solar-pv.php>