

# Complete Guide For Solar Power Alberta 2018

**Congratulations! You've found the ultimate guide for going solar in Alberta!**



**This guide is sponsored in part by [MiEnergy](#), a local solar energy provider.**

This page contains all available information about installing a solar power system in Alberta, as of 2018.

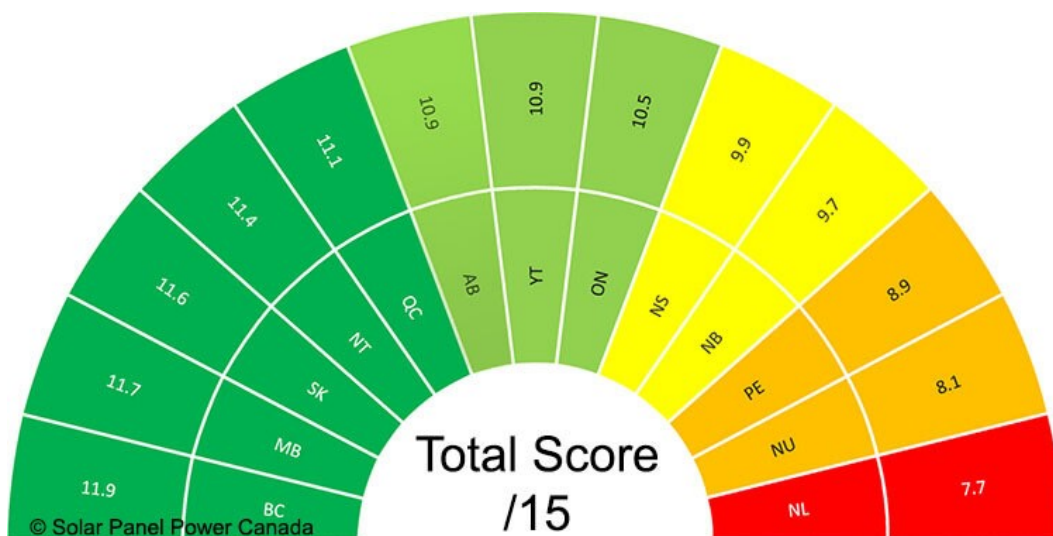
Alberta is the second sunniest province in the country, so let's not waste our awesome natural resource!

The page is broken into simple sections so you can easily find information about incentive & rebate programs, utility information, and relevant policies – depending on what you're looking for.

You can read from top to bottom, or simply click on a section to skip to it below:

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## Overall Solar Rating: B



We've ranked Alberta as being Canada's 6th best province for solar power. Alberta scores higher than most provinces because of the Alberta 30% Rebate Program, awesome solar solar panel installers, and for being the second sunniest province in country!

Calgary, Edmonton, Red Deer, and Strathcona are all leading the way when it comes to total installations. This explosion in consumer interest (and subsequent solar company start-ups) has driven the [cost of solar panels](#) way down! Solar panels in Alberta cost approximately 60% of what they do in [Saskatchewan](#)!

Curious to see how we rank our provinces? Check out our [Rankings and Rating Page](#) to find out more.

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## Basics of Solar Power in Alberta

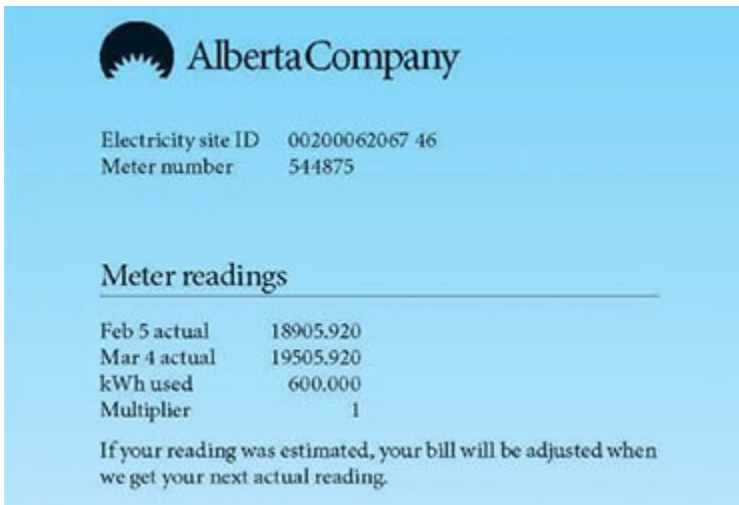
This section covers some of the basic information about switching to solar power:

If you already consider yourself a solar expert, you can skip ahead to the [Alberta Solar Incentives Section by clicking here](#).

### Sizing Your System

In most cases, the first questions that come to a person's mind are, "how big does my solar power system need to be?" and "can I completely off-set my electricity usage?".

Answering these questions is as simple as knowing how much energy you use during the course of a year. Your monthly [Alberta power bill](#) will show your usage (in kWh) similar to the photo below:



You'll need to figure out how much energy you use in a year by adding up the amount shown for 12 consecutive months. Taking one month and multiplying by 12 won't work because your energy use fluctuates depending on the season!

After you know how much energy you use, you can easily calculate the size of the solar power system that you'll need by using the following equation:

Size of system needed = yearly energy use (in kWh) / 1,301h

(where 1,301h equals the annual average equivalent of full [sunlight hours in Alberta](#))

So let's pretend you added up your power bills and determined that you use 10,000 kWh in the course of a year, you would then do the above calculation and determine that you need a 7.69 kW solar panel system!

$$10,000 \text{ kWh} / 1,301\text{h} = 7.69 \text{ kW}$$

Keep in mind that this is only a rough estimate. The size of your system may change depending on the angle your panels are installed at, the amount of shading that your system receives, and the amount of sunlight that your specific city gets. But not to worry...



If you [get a free estimate](https://solarpanelpower.ca/alberta/), our partner installers can create a 3D model of your house, build in shading elements like trees or neighbouring buildings, and then use weather data from the closest weather station to calculate an extremely accurate estimate of how much energy your system will produce!



## System Location

Now that you know the size of your system, you'll want to determine the best place to put it. Most residential homeowners in Alberta put the solar panels on their roof, while most rural homeowners put them on the roof of their house, shop, or in their yard.

If you're putting solar panels on your roof, you should know:

- A south facing roof is best, east and west facing are good, north facing is just OK
- Output on panels are guaranteed for 25 years, so you may need to replace your shingles before installing
- If you're concerned about [snow](#), roof mounted panels are harder to clean
- Your roof's pitch (slope) is not the most optimal angle for solar production

If you're putting solar panels on the ground, you should know:

- These systems are more expensive upfront due to piling requirements, mounting materials, and power line trenching...
- ... But are cheaper in the long term because they are more efficient (see next point)
- They can be easily placed to avoid shading, to the optimal direction (south), and to the optimal angle (~45°)
- Systems can be much larger than roof mounted ones

## Cost of Installation

The final thing you'll want to know is an approximation of [how much your system will cost](#). To calculate this you'll need to know the [size of the system](#) you plan to install.

The rough calculation is simple, take the size of your system and multiply it by the cost per installed watt quoted by your installer.

*System cost = size needed x cost per installed watt*

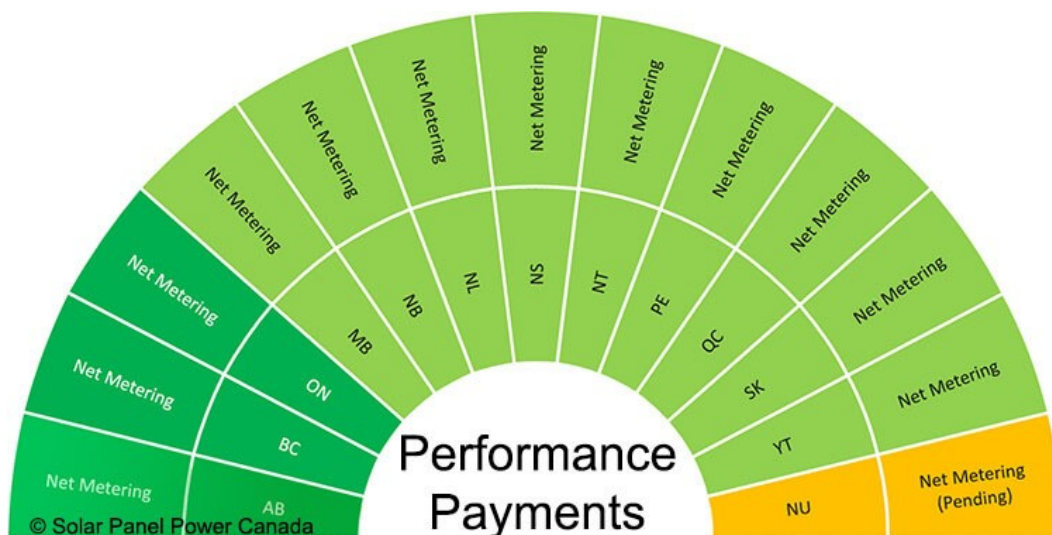
Generally, the cost per watt in Alberta is between \$2 and \$3. Variation depends on the size of the system you're installing, the location of your system, and which installer that you choose.

[Click here](#) to get a free solar power estimate.

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## Alberta Incentives

### Solar Performance Payments: A



**Programs:** Net Billing

**Selling Price:** Retail Rate

**Expiring:** None

**Excess Buyback:** Wholesale Rate

**Size Limit:** Up to 150 kW

**Anniversary Date:** Annual

Alberta's [Micro-Generation Regulation](#) program allows you to earn money for the energy that you produce with your solar system. The process is simple: you earn money for the energy that you produce at the same retail rate that you buy it for. The money is then used automatically to offset your power bill. If you produce more energy that you use, you get a cheque in the mail at the end of the year for the difference!

All of this might sound intuitive, but Alberta's 'Net Billing' system is actually superior to many other provinces. The main difference is that in Alberta, you can actually get paid for the excess energy that you produce. Whereas in other provinces like [Saskatchewan](#), excess power is kept by their utilities!

**Keep in mind that net metering is a necessary component of your solar system because without it – you would need batteries to store your excess energy!**

**Solar Power Rebates**

Province/Territory	Rebate Amount	Rebate Type
BC	\$800/kw	None
NS	\$1.00/Watt +	None
ON	20% Total Costs +	None
NL	33% Total Cost	None
NB	\$0.75/Watt or 30% Total Costs	None
PE	20% Total Costs	None
NU	20% Total Costs	None
YT	20% Total Costs	None
MB	20% Total Costs	None
QC	20% Total Costs	None
NT	20% Total Costs	None
AB	20% Total Costs	None
SK	20% Total Costs	None
Nanaimo Only +	Solar Heating Only	None

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**Savings:** 30% or \$0.75/watt

Following suit of the old [Alberta Municipal Solar Program](#) and the [On-Farm Solar PV Program](#), the government of Alberta recently announced a [\\$36 million solar rebate plan](#) for both residential and commercial solar systems.

This plan aims to create over 900 solar related jobs in province and will be equivalent to taking over 100,000 cars off the road. Great job Alberta!

Here is a summary of what the [Alberta Rebate Program](#) means for you:

- You get a one-time cash rebate paid on a ‘per watt’ basis (this means that the larger the system you install, the more money you will get back)
- The rebate cannot exceed 30% of your total system cost OR \$10,000

- The size of the system cannot exceed 15kW

## Here are some sample numbers based on the average residential solar system:

- Some Albertans can offset their power consumption with a 5 kW system (5,000 watts)
- **(5,000 watts) x (\$0.75/watt) = \$3,750**
- This will get you a total cash rebate of \$3,750

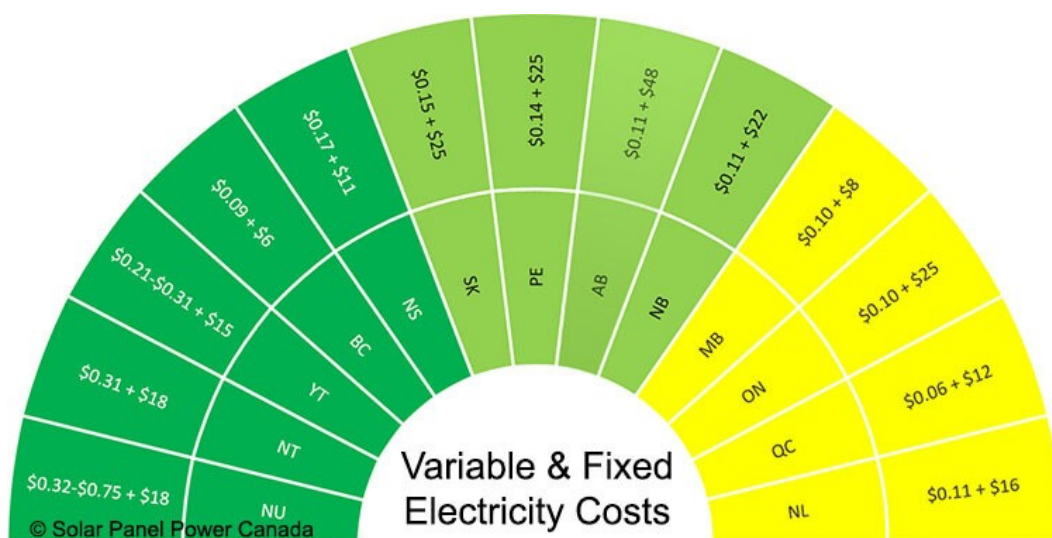
**Do you own a farm?** Alberta also has the [On-Farm Solar Photovoltaics Program](#) which is available to any farm owner. The program is similar structure to the program above, however the \$0.75/watt rebate can be used for systems up to 100 kW in size. Keep in mind that there is also a Federal Tax incentive whereby if you purchase the system through your farm (i.e. a business) – you can depreciate the cost of the system at an accelerated CCA rate of 50%!

**Remember,** Solar Panel Power Canada also has a special Cash Incentive. It's not huge – but it's easy to claim, just send us a picture of your installation with one of our preferred installers! See the [SPPC Cash Incentive Page](#) for full participation details and terms.

Ready to get started? [Click here to request a free estimate for your home.](#)

## Utility

### Electricity Costs: B



**Main Provider:** Many



**Average Rate:** \$0.10628/kWh

**Average Fixed Cost:** \$48/mo

Alberta has relatively low variable electricity rates and the highest fixed billing rates in the country. Both of these are bad news for solar power because:

- The lower the variable rates, the lower dollar amount that you can potentially offset
- The higher the fixed rates, the more you will pay even if you're generating your own electricity!

The only way to effectively remove your fixed rates is to move completely off the grid (most solar power owners don't do this but it's certainly possible). Ultimately you'll want to [get a personal estimate](#) so that you can see exactly how much of your bill you will offset, and how much money you can save in the long run.

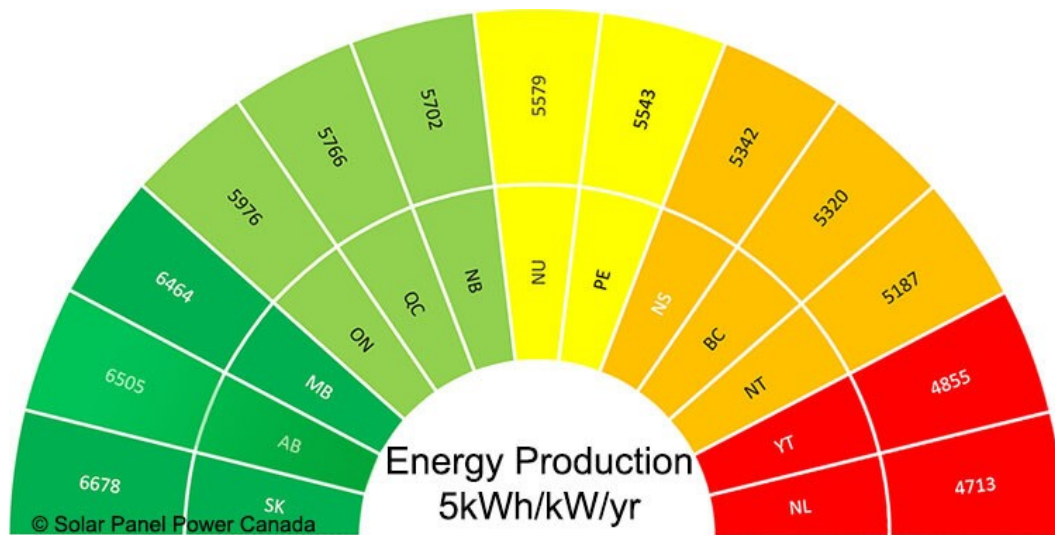
However, it's not all bad news. Alberta's Micro-generation Regulation dictates that you don't need to pay for an interconnection study or a net meter when you switch to solar power. This is opposed to most provinces like [Saskatchewan](#) and [Manitoba](#) where interconnection and net meter fees can reach over \$1000!

**Alberta homeowners are still treating solar power as an investment! Low installations costs and a strong rebate mean a relatively short payback period. [Get a free estimate for your home today!](#)**

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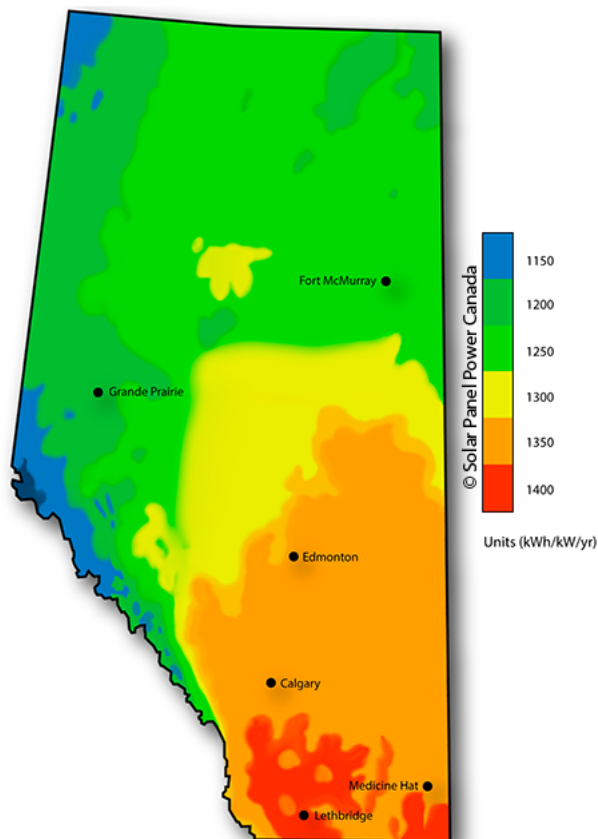
## Geography

### Solar Potential: A



**Average Production:** 6505 kWh

**Variation:** Medium



Energy production per kW solar capacity per year. See [Solar Maps Page](#) for more info.

Alberta has the second highest potential to produce solar energy in all of Canada, receiving more solar irradiation than any other province or territory other than [Saskatchewan](#)!

**According to a data collected in 2007 by [National Resources Canada](#), the average solar system (5 kW) in Alberta can produce approximately 6,505 kWh of electricity per year!**

This yearly average decreases as you move north and west in the province and increases as you move south and east. For example:

- A 5 kW solar system in Medicine Hat would produce about 6,838 kWh/yr
- A 5 kW solar system in Calgary would produce about 6,454 kWh/yr
- A 5 kW solar system in Edmonton would produce about 6,222 kWh/yr

**For comparison, here is what a 6 kW solar array looks like in Calgary:**



This guide is sponsored in part by [Solar YYC](#), a local solar energy provider.

This means that the average Alberta resident can completely offset their yearly power usage with a solar system. You can figure out what size system by following the [instructions on this page](#)!

**Pro tip: You should aim to install enough panels to offset 110% of your energy bill. This ensures that you will always producing enough energy to cover your costs, as regular solar panels degrade 0.5% to 0.7% per year.**

# Renewable Energy Policy

## Portfolio Standards: D



**Renewable Energy Goals:** 30% by 2030

**Solar Energy Goals:** 10,000 homes by 2020

Alberta is almost dead last when it comes to renewable energy goals, pledging a measly [30% of total energy production by 2030](#). Recent [news about pipelines](#) in the province indicate that things are unlikely to change anytime soon. However, Alberta residents seem to be excited about solar power! (and they should be)

In 2017, Alberta saw an explosion in solar projects bringing the province's total solar capacity to over 22.5 MW, that's enough power for 22,500 homes! While most of this production is at the utility and commercial scale (which we don't like), about 2,300 personal solar systems are owned by residential and rural home owners.

**For more about our mission towards 100% community energy generation in Canada, see [our About Page here](#).**





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## Solar Power Alberta: Summary

Because of Alberta's 30% rebate, net metering program, and awesome solar resources, – **we rank Alberta as being the #6 province in the country for switching to solar power.**

Are you ready to get started? [Click here to get a cost estimate today!](#)

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## Want to Stay Informed?

We'll email you twice per year or less, and only for the good stuff.