



# A Beginners Guide to Carbon Credits

Carbon tax, Carbon pricing, carbon credit, carbon offset. We hear these terms often but who understands them? Aside from some extra cash or another expense, the truth about carbon “anything” eludes the majority of us. Let us help by simplifying Carbon Credits!

Why? Well, **if you install solar, you will be generating carbon credits** and you might want to know the value of them.



## THE PURPOSE OF CARBON CREDITS AND CARBON OFFSETS...

### EACH YEAR YOUR BUSINESS HAS AN EMISSION BUDGET

Companies are given a set amount of carbon credits each year.



1 Carbon Credit

PROVIDES PERMISSION TO EMIT 1 TON OF CARBON EMISSIONS

Companies can sell unused Carbon Credits to other companies.

Carbon Credits



Excess emissions can be **offset** through environmental initiatives such as reforestation which removes pollutants from the atmosphere.

1 Carbon Credit

CREATED BY CARBON REMOVAL

Reduce carbon emissions by switching to renewable energy sources with substantially lower rates of pollution.

1 Carbon Credit

CREATED THROUGH CARBON REDUCTION



1 Carbon Credit



Purchase credits from others who have reduced our collective impact on the environment.



### Your Carbon Emission Balance

Carbon Credits | Carbon Emissions



The goal is balancing all credits and emissions.

First... carbon credits and carbon offsets are essentially the same thing.. “climate currency”.

A **Carbon Credit** is a free pass or permission for producing a single ton of carbon emissions or equivalent polluting byproducts.

**Carbon Offsets** are an equivalent permission slip. Carbon credits may be called carbon offsets when the credit is created by reducing carbon emissions in the atmosphere by 1 ton or preventing 1 ton of carbon emissions from being produced (“off-setting” carbon production).

In other words, carbon credits and offsets reward those who make an effort to reduce their greenhouse gas emissions. They function as a tool to set emission limits and baselines. Put simply, when you pollute less, someone else can purchase your carbon credits allowing them to pollute more. **BUT this isn’t just for businesses! With a carbon broker, private owners of renewable energy systems can earn money too!**

The over-arching goal of carbon credits and carbon systems is to reduce pollution and stimulate action on environmentally-conscious solutions.

< Fig. 1.0 Carbon Credit function in the Cap and Trade System



## REGULATING CARBON EMISSIONS...

There are 3 primary systems in place across Canada to regulate federal carbon emissions. These are...

1. Carbon Tax
2. Baseline and Credit
3. Cap and Trade

The **Carbon tax** is a tax applied specifically to fuel sources. Fuel sources with greater carbon emissions are assigned a greater carbon tax. This is visible when you fuel up your vehicle and notice that diesel is more expensive than gas. Diesel is a higher polluting fuel source.

The **Baseline and Credit** system sets individual baseline emissions levels for regulated industries. Those who reduce their emissions below baseline levels are awarded Carbon Credits. Credits can be sold to other organizations above their expected baseline emissions. However, penalties for higher emissions are not guaranteed in this model.

In the **Cap and Trade** program, maximum annual emissions are limited for all business regardless of industry. Each business receives yearly carbon credits determining the amount of pollutants they are allowed to produce as part of the national limit. These pollution limits collectively reflect the expected Nation-wide emission reductions each year. Maximum emissions allowances have steadily decreased since program initiation in line with Net Zero emission goals.

Carbon credit value is affected by supply and demand principles. The value is expected to rise over the next several years. This could raise operating costs for businesses not working to lower their carbon footprint. Ideally, all industries would reduce their emissions, but improvements in manufacturing and operations take time and money. Unfortunately, not all production processes have simple solutions.

## WHAT ARE CARBON CREDITS WORTH?

The value of carbon credits is rising. The Federal government has released their intentions to increase the cost of carbon pollutions by \$15/tonne per year from 2023 to 2030 starting at \$65/tonne in 2023. (Remember, 1 carbon credit permits the pollution of 1 tonne of carbon). These costs reflect the minimum amount each province is expected to charge for carbon credits.

Year	2023	2024	2025	2026	2027	2028	2029	2030
Minimum Carbon Pollution Price (\$ CAD/tonne CO2e)	\$65	\$80	\$95	\$110	\$125	\$140	\$155	\$170

## SO HOW MUCH CAN YOU MAKE?

As you might expect, a larger system has the potential to earn more because of a greater ability to produce carbon credits. However, there is still a financial gain with residential size systems.

EXAMPLE. A 10kW solar PV system can earn you between CA\$4,168 and CA\$5,359 after brokerage fees over your eligible term of up to 10 years. If we average this range to \$4,763.50 over 10 years, you could earn \$476.35 pocket change per year just by having a solar PV system.

After your solar system is installed, you must register it as a project with the Alberta Emission Offset Registry. Once registered, your system is assigned a Grid Displacement Factor for the next 10 years which will determine how many carbon credits you can produce. The current rate available for our clients is 0.55 credits for 2023 with our carbon partner, Solar Offset. The return for your clean electricity generation is calculated by Production kWh x Grid Displacement Factor x % of carbon sale. As the value of carbon credits increase, you will receive an increase on your return.

As a private owner of a residential Solar PV System, you could earn anywhere from \$1310 to \$12,862 through the sale of your carbon credits depending on your production. Visit our partners at <https://www.solaroffset.ca/how-it-works> for more information on how producing solar energy can provide you with another yearly paycheck.



## THE BIGGER PICTURE..

The Cap-and-trade system in place for businesses right now is the same system that was used to reduce sulfur pollution in the 1990s. We have evidence that this system can work.

The United Nations have agreed in unity to strive for lower greenhouse gas emissions, meaning that on a larger scale, each nation also has an allowance of carbon credits and systems in place to stimulate change.

## WHAT DOES THIS MEAN FOR YOU?

The value of carbon credits will likely keep rising because emission limits and baseline values are expected to decrease over the next 30 years. The push towards renewable energies and sustainable business practices is gaining momentum. The cost of renewable energy systems may increase to meet this rising demand.

Capitalizing on a solar PV system early is how our clients have positioned themselves to benefit from these government programs. Our new partnership with Solar Offset gives our clients a direct connection to discuss the credit potential of their new system.

Are you ready for a consultation?

Contact us through our [website](#) or email us at [info@solun.ca](mailto:info@solun.ca).



## Sources.

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