ICE's Net-metering Pilot Project

FAQ - Frequently asked questions:

1) How does net-metering work under the ICE Pilot Program?

A) When a client with solar panels or a wind turbine produces more electricity than they are currently consuming, for instance when the family is away from home at work and school, or even on vacation, but the sun is shining brightly, or wind is spinning their turbine, the excess electrical energy they produce is exported to the grid. Literally the consumer's digital or electro-mechanical meter spins backwards!

Then, when the family returns to their home and begins to turn on appliances, ie when electrical demand again exceeds instant energy production, the energy they have stored on the grid during the day (or night in the case of wind turbines) is the first energy they consume.

Credits accumulate on a 1:1 ratio per kWh and can be carried forward from hour to hour, day to day, week to week, month to month until the end of a twelve month 'energy year'. Any remaining credits which may exist at the end of the year are retired (lost) and the consumer begins a fresh year.

2) What does it cost to participate?

A) ICE does not charge a fee to apply for participation. Completing the application process will take some time and effort, but there are no fees, and your energy provider may do the majority of the paperwork for you.

ICE is also taking responsibility for replacing billing meters when required, ie replacement of the consumer's existing meter with an 'intelligent' or bi-directional meter capable of measuring electricity flow in both directions and then netting the flow.

For larger industrial scale projects, fees may be introduced when appropriate if ICE's engineering resources and inspection work are required to accommodate the consumer's electricity. ICE is not required to invest in reinforcing its network to receive more power than a large consumer's interconnection currently allows. However, they may be willing to reinforce their network voluntarily based on the project's potential to export power.

3) What is the benefit of participating for me?

A) If you are one of the many consumers who are interested in exploring auto-generation with clean, renewable energy technologies like solar and wind, then you'll be pleased to know that recently the government enacted legislation exonerating all import duties and

taxes. Even the 13% sales tax normally applied to all purchases is eliminated for qualifying renewable energy equipment.

The positive economic impact of the Net-metering Pilot Project is even greater than the tax exoneration, because for the next 15 years (at least), anytime your system produces more energy then you're consuming, you will still receive the full retail value of those kWh's you've generated.

And, because you don't need to invest in expensive and environmentally hazardous batteries to store your excess generation, or buy expensive charge controllers to manage them, the entire renewable energy system investment is less both 'up-front' as well as during its operating life. (Without batteries you are still subjected to power interruptions).

4) What is the benefit to ICE and the environment?

A) ICE acknowledges that the country is facing a significant shortage of power generation capacity. Every time a new business opens, or a new home is built, the shortfall is exaggerated. Meanwhile the new 200 MW Garibito Power Plant near Puntarenas is coming on-line in stages this year. But this newest power plant, which will also be the largest power plant in the country, will be burning heavily polluting, low quality bunker grade oil. Basically bunker oil is like tar.

So by exporting power to the ICE grid during the daytime, especially in the summer months when hydro resources are diminished, you are feeding power to the grid when daytime/summertime electrical demand from business and air conditioning load is highest. This is often when ICE is burning oil to generate power.

So, by investing in clean, renewable energy, you are helping….

- to reduce your family's and our nation's total carbon emissions
- ICE to meet their electrical demands (likely while burning less oil)
- helping to improve the quality of power on local distribution grids by stabilizing voltages (your system will export clean, perfect voltage power into the local grid)
- helping to reduce congestion constraints on transmission and high voltage distribution networks (because you're producing power where it is needed, not hundreds of kilometers away)
- helping reduce wear and tear on local transformers, ie reduce outages and maintenance expenses (again because you are producing and consuming locally)
- helping Costa Rica achieve a better international balance of trade (because we'll import less foreign oil)
- helping to create more jobs in Costa Rica
- helping to create more economic security in Costa Rica, ie less dependence upon oil

- and ultimately, when more and more Costa Rican home, business and farm owners generate their own power, we will reduce, or at least postpone, the pressure for the construction of future power plant, or dams blocking our rivers, or overhead electrical transmission lines and pylons to support them

And of course, you will be taking action to reduce not only your carbon footprint, but to also help Costa Rica move closer to achieving its Carbon Neutrality goal in 2021.

5) How do I get started? How do I get a price quotation and or site assessment?

A) We generally begin the process by asking a prospective client to provide us with some basic information about their facility and intentions, this includes :

- Description - property location, type, size, etc.
- Needs - annual electricity consumption and demand levels, and
- Objectives - energy savings, energy independence
- Resources - solar, wind, etc.

Then, if the project sounds feasible, depending upon the size of the project we may ask the client to provide the following information to help us better understand their needs and resources:

- 12 months of historical electricity invoices
- photos
- architectural and MEP drawings
- Google Earth image

At this point we may either provide a preliminary quotation, or, especially in the case of a wind project, schedule a site assessment.

After conducting a site assessment a better estimate can be prepared of the generation potential at the site and of the cost of a renewable energy system. If a wind project is anticipated, the next step may be to plan a wind assessment program using a tower, anemometers and wind direction sensors with a data logger device. In some cases the wind resource is so evident, that no assessment is conducted.

Please be aware that every project has unique resources and design aspects, in other words it is impossible to offer first time callers with 'an average sized or priced' system that will meet their needs. These are still expensive technologies, and best suited for those businesses and homeowners thinking of making a long-term investment.