Rooftop wind power can generate half of household's energy requirements

Rooftop turbines can produce from 24kw (average consumption of a household) to nearly a full MW for the larger building sized units. These units can easily provide enough energy to run the lighting for the entire home when using low energy bulbs providing not only a considerable savings on the monthly utility bills but also greatly reducing your carbon footprint, something we should all be considering these days.

These units when used in conjunction with solar panels can provide a home with its entire energy requirements completely off the grid as a self-contained personal power station.

## How does a rooftop turbine work?

Past smaller units like this were not efficient enough to be a viable source of power. But with new products coming onto the market today, like the Liam F1 turbine from a new company called [The Archimedes](http://dearchimedes.com/portfolio-view/kleine-windmolens-opmars-nos-journaal/), the potential that smaller rooftop turbine units have is ever increasing. These smaller units can provide about 1500kwh annually, and after the initial cost of installing the unit, this power is basically free.

## What is a typical household energy requirement?

Generally speaking Canada and The United States use about the same amount of energy per household, which is two to three times the amount as the next highest two countries in Europe, France and the UK.

Based on numbers from 2010, Canadians and Americans use about 12,000kwh annually, while France uses about 7,400kwh and the UK uses about 4,500kwh. China comes in at around 1,300kwh annually and the world average is about 3,500kwh. Based on these numbers Canadian homes would need a rooftop turbine that is capable of generating about 6,000kwh annually in order to provide half of the required energy to run their home.

## How does it cut energy in half?

These units have the potential to significantly reduce your dependency on utility companies and reduce your monthly utility bills. The amount of this savings depends on the output of the turbine unit. If you are already energy conscious and try to use as little as possible, depending on several factors like the size of your home and the temperature that you maintain, what light bulbs you use, etc. you may still use 8,000kwh annually.

A unit that produces 2,000kwh annually would reduce your monthly bill by 25%. In order to gain the benefit of 50% savings you would need to have a wind turbine that is capable of producing half of your energy needs or use multiple units. Using these wind turbines along with solar panels increases your energy production and so cuts back more on your usage of the power grid and thus your monthly bill.

## How much power can a rooftop turbine produce?

The power output of the individual unit depends on the size and wind speed. For example; a 300mm SET turbine with an 8 MPH wind produces a mere 2 watts, but the same unit with a 40 MPH wind produces 600 watts.

The new units on the market today are so small they are hardly noticeable, and some units, like the SET are designed to look like something else, in this care a chimney.

## What is the bottom line on cost?

The startup costs of some of these units can be rather affordable for some, yet still out of reach for others. To gain a significant benefit in monthly bill reduction you may need to initially invest several thousand dollars. The benefit is long-term. Over the years your savings will cover the costs of the unit and the added benefit of a reduced carbon footprint is priceless.