

GreenBug Energy

Micro Hydro



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Micro Hydro Site Developer
Archimedes Screw Products & Services
Co-Development Options for Site Owners

GreenBug Energy Inc.

Making micro hydro possible and driving positive change.

About GreenBug Energy Inc.

GreenBug designs, manufactures, installs and maintains Archimedes screw generators for low head micro hydro waterpower sites and related industrial energy recovery applications.

We provide custom designed micro hydro systems for use on low head dams or leats, as low as one meter, typically owned by farms, municipalities and conservation authorities.

We do not advocate the construction of new dams but where decisions have been made for them to exist we believe they should all have micro hydro installations in order to maximize their positive impact.

For more about our Mission and Goals please visit our website, www.greenbugenergy.com

What We Do

Range of products and services:

- **Grid-Tied Screw Generators**
- **Off-Grid Screw Generators**
- **Site Assessment Services**
- **Approval Services**
- **Installation Services**
- **Maintenance Services**
- **Monitoring Services**
- **Co-Development**

Our Micro Hydro System

Our micro hydro system is based on the historic Archimedes Screw invented around 200 BC by the Greek mathematician and engineer, Archimedes.

Archimedes screws are used heavily by industry as pumps particularly in waste water treatment applications because of their robust design and ability to handle debris. These attributes make the Archimedes screw attractive for micro hydro applications.

Our micro hydro systems are typically designed for 1 - 500 kW sites, and are well suited for supplying electricity to the grid, for off grid use and for net metering purposes.

A small 1 kW system working all 8,760 hours of the year can generate enough electricity to supply a small home.

Why Do Micro Hydro

For Off-Grid applications micro hydro is an obvious choice because of the reliable and constant supply of power. Hydro power is always on.

For Grid-Tied applications Net Metering makes sense if you can use all the power you produce because you always have grid power if you need it, the implicit rate earned per kWh can be higher than the FIT price paid for waterpower and it's a perfect hedge against potential increases in electricity rates.

If you can't use all the power you would produce you would need a FIT contract in order to sell power to the grid. The good news is that FIT contracts provide a guaranteed revenue stream over the life of the contract and these contract periods can be for a longer period of time (40 years in Ontario, Canada).

Why Choose an Archimedes Screw System

The last thing you want is for your new "micro system" to turn into much more than micro job. But in many cases this is exactly what happens. Most micro hydro systems are maintenance prone and require constant attention due to fouling caused by small nozzle sizes and fine screens that need cleaning. The Archimedes screw does not have these issues.

Why Choose GreenBug

GreenBug Energy is making micro hydro possible and driving positive change. Our system and business processes now make micro hydro projects financially feasible.

Through use of our proprietary WaterWatts model and vertical integration we have removed costs and provide an attractive rate of return on your investment.

In addition to an attractive return you can help us in our mission to make global energy production and use sustainable. By many small actions made locally on a global scale we believe significant change can be accomplished.

Imagine hundreds of millions of people around the world producing their own sustainable distributed energy in their homes, factories and farms and sharing it with each other in an "energy internet" just like we now create and share information online.

We believe micro hydro implemented well has a role to play in this new future.

For more complete information on GreenBug Energy products and services, visit us on the web at www.greenbugenergy.com

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