

Who we are

GreenBug Energy is a privately owned company located in Norfolk County in Southern Ontario. We develop micro hydro-electric projects at small dams as low as one metre in head. We also produce custom designed systems for domestic and international distribution.

Our System

Our proprietary system is based on the historic Archimedean Screw invented around 200 B.C. Applications are typically between 1 kW and 100 kW in size and are well suited for generating electricity to supply the grid, for off-grid use and for net metering purposes.

Ontario's Energy Supply Mix

Waterpower is an important element of Ontario's energy supply mix. Currently, hydro-electric generation is expected to account for 20% - 25% of the total electricity generation second to nuclear at 50%. Like nuclear, waterpower provides base load.

Small Dams

There are thousands of small dams in Ontario and the rest of Canada. These dams are typically owned by farmers, municipalities and conservation authorities. While most dams are measured in terms of megawatts (MW) which is 1,000 times greater than a kilowatt (kW), a 1 kW system when operating all 8,760 hours in a year will generate enough electricity to power a small home. Again, we focus on systems between 1 kW and 100 kW.

Advantages of micro hydro-electric systems

The key advantages are –

- a. Our systems make low-head, micro hydro-electric projects viable in Southern Ontario, the rest of Ontario and Canada and around the world especially in developing countries.
- b. Our installed systems have a very small footprint and low environmental impact.
- c. Our systems are not dependent on new or existing transmission lines. Most if not all of the electricity generated is consumed locally.
- d. Our systems are flexible in their use. They can be used in three ways – selling to the grid, net metering and off-grid use.
- e. Our systems are substantially manufactured off site thereby eliminating the need for significant on-site construction time.

