

Alternative **Energy**

Alternative energy, sometimes also referred to as renewable energy is green technology that focuses on using safe, healthy and sustainable means of harvesting energy as opposed to the irreparable effects of burning fossil fuels. These technologies in conjunction with exceptional insulation, and sealed building envelope and an adequate HRV system will go a long way towards reaching net zero for your home.

Micro Hydro

Micro Hydro is an exceptional source of renewable energy in which flowing water is converted to energy to produce hydro power. Micro- Hydro could be effective in a small seasonal creek – as long as the flow is strong enough and steady enough to convert the water into power.

Wind Power/Energy

Wind turbines are available in various sizes and many are mounted on tall towers as wind speed increases with height above the ground. Turbines convert wind into energy with their propeller-like blades. For example, this rooftop-mountable Swift turbine is designed for urban and suburban homes, starting up in 8-mph winds. It can produce 1,900 kWh per year at a 13.4-mph average wind speed, and is never louder than 35 decibels.



Solar Irradiance from the Sun Solar Panel(s) Electric Current Current Controller AC Power DC Power

HARNESSING THE SUN

To generate solar power, a consumer can use photovoltaic (PV) cells, which produce electricity from sunlight. PV modules can be installed on rooftops. The sun is the most readily available form of energy. As prices continue to fall, solar energy is increasingly becoming an economical energy choice for homeowners. Making sure your home solar electric or photovoltaic (PV) system is sized, sited, installed, and maintained correctly is essential for maximizing its energy performance. (See "Building Solar Ready' Spreadsheet for more information)

NET ZERO SYSTEMS

- -Energy production through Solar photovoltaic
- -Small wind energy generation
- -Energy management system for optimizing energy consumption
- -High Efficiency Energy Star appliances
- -High efficiency CFL, LED and OLED lighting
- -Exceptional thermal insulation in walls, roof, floors and basement
- -Multiple passive heating and cooling principles
- -Energy optimized Windows and doors
- -Airtight building envelope with heat recovery ventilation

