

A Utility-Scale Wind Turbine for Barrie

Who are WindCatchers?

WindCatchers are a "project" of **Environmental Action Barrie** (also called **LivingGreen Barrie**).

EAB has been active in Barrie for over 20 years. We have mounted many environmental projects. Examples: "**Be Green Barrie**" – In 1994, in partnership with The City, Consumer's Gas, Ontario Hydro, the Province of Ontario, OCWA (Ont. Clean Water Agency), and others, EAB organized a campaign to inspect houses for energy efficiency, install energy efficiency devices, install water saving devices and distribute (on behalf of The City) home composters.

"**Alternative Recycling Depot**" – In 1992, EAB operated an alternative recycling depot which collected and sorted hard plastics and plastic bags, egg cartons, polystyrene, and other materials which The City's blue box did not take. The plastics filled a 16 tonne (8' x 30') van (*borrowed from a local business*) used to deliver to various companies who were able to use the materials.

On an ongoing basis, we have – for many years – mounted a twice-yearly cleanup of Queens Park downtown and of parts of the Barrie waterfront.

We helped get "**Transition Barrie**" off the ground – now a thriving organization.

We continue to sustain "**Nifty Thrifty**", a free clothing store providing basic clothing to the poorest Barrie families. This activity not only helps poor citizens, but it also keeps these items out of our landfill.

On an ongoing basis, we screen films with an environmental message – our "Green Screen" events.

On an ongoing basis, we have speakers come to Barrie to talk about environmental issues, locally, in Canada, and abroad.

What is it?

Our wind turbine project wishes to spearhead the installation of a **2MW wind turbine** on the Barrie Landfill site. To that end we have been collaborating with The City for several years. A wind monitoring tower was erected on the site in October 2008 and taken down in November 2009. The Report – compiled by Genivar – indicated that we could expect an average wind speed of 6.1m/sec.

According to calculations based on Genivar's report, it should generate **4,400,000 kilowatt-hours of zero-emissions electricity per year**, or enough to supply **350-400 houses**.

Why Should Barrie Have a Wind Turbine?

This wind turbine will supply a trivial percentage of annual City electricity consumption. What it will do is to give you – the City Council – a talking point.

When asked "Why does Barrie have a wind turbine?" you have the opportunity to highlight all of the many environmental initiatives your City has mounted over the years. The list is long and impressive – and I suggest you find out, but these initiatives are largely invisible.

Very few Barrie citizens – and no outsiders – are aware of their existence. Yet it is exactly that kind of thing which might persuade a business to set up in Barrie.

The wind turbine – over 100 metres tall – will serve as the largest, most visible, and most positive advertisement the City will ever have!

How Much Will this Wind Turbine Cost The City of Barrie?

Actually, WindCatchers is not asking the City for any money at all!

Our preference is for the wind turbine to be operated as a citizen's co-operative. So the money to build it could come entirely from Barrie citizens buying shares (of \$500 - \$1000), and perhaps some money borrowed commercially.

However, The City would be welcome to buy into the project, either itself, or through the municipally owned utility PowerStream.

How Much Would the Wind Turbine Cost?

We anticipate that the wind turbine should cost less than \$5,000,000, ready to run.

Those of you who are quick with the calculator might estimate that revenue from the wind turbine should pay for the capital cost in 10-12 years – there is no fuel cost. The time to repay the capital cost depends on distributions to shareholders. (*Running & maintenance costs for wind turbines are quite low.*)

Other Advantages to Having a Wind Turbine

- I see the principal advantage as being a perpetual, positive advertisement for the City of Barrie.
- Georgian College warmly endorses this project because it would be a very strong “attractant” for the Wind Turbine Technician course they hope to mount. The turbine will be a physical “laboratory” for their students, and the data stream (wind speed, temperature, direction, power output, etc) will be an invaluable resource to their instructors.
- Having such a turbine within the City Limits would demonstrate to rural residents that cities are willing to do whatever they can to help supply the energy they use.
- Directly involving Barrie Citizens in this project will raise awareness of energy issues – something Canadians desperately need.
- The City is planning environmental displays for citizens and schools at that location. The wind turbine would be a centerpiece of this initiative.
- Wind turbines have been a tourist attraction. Ours would be no different in that respect.

Will there be Objections to the Wind Turbine?

Our group polled the neighbourhood door-to-door in 2008 and found no negative opinions from the approximately 35% of residents who were in. We left leaflets with the other homeowners announcing a Public Information session at City Hall. Several weeks later, at this a public information session we again heard no negative opinions.

Before we go ahead with this project, we will have to mount another neighbourhood poll, and public information session.

Are there Health & Safety Issues Associated with Wind Turbines?

This is an important question – particularly since “Wind Concerns Ontario” has been complaining loudly about health effects and property values.

Property Values

A study mounted by the Lawrence Berkeley National Laboratory in California recorded the sale price of 7500 homes in 9 states to find out whether proximity to a wind turbine affected house prices. They found that homes less than 1.5km from a wind turbine sold for no less on average than did homes 8km away. The study was published in mid 2009, and based on data collected before the 2008/9 crash in house prices.

Health Effects

The Province of Ontario mounted a study on “Wind Turbines and Health: a Review of the Evidence” by Ray Copes and Karen Rideout. This found no effects whatever.

<http://www.oahpp.ca/resources/documents/presentations/2009sept10/Wind%20Turbines%20-%20Sept%2010%202009.pdf>

I have 2 books from the American *National Academies Press* at home on renewable energy: “Electricity from Renewable Resources” & “Hidden Costs of Energy”. In their chapters on Wind Energy, both of these books state that *no negative health effects of wind have been substantiated*, but by displacing coal power, it can be anticipated that positive health effects exist.

In Europe, where there is (a) far, far more wind power than exists here and (b) the population density is far greater, there have been almost no complaints against wind turbines. One likely reason is most European wind turbines are owned by citizen co-operatives, or by local municipalities and relatively few are owned by “absentees” from far away. *In other words, most wind turbines bring wealth into a community and few remove it!*