

## Wind power arrives at Sky Tower

SKYCITY has installed a Swift micro wind turbine on its tower as part of a trial undertaken by multi infrastructure company Vector to test the latest technology in urban micro-wind generation.

The trial explores what part micro-wind turbines can play in the changing energy environment, particularly in the area of renewable distributed power generation.

SKYCITY are participating to help increase the acceptance and adoption of the technology. Vector is fully funding the project, with SKYCITY purchasing the electricity generated which is being used in our lighting circuitry, in particular the same supply that lights the outside of the Tower pod, the aviation lights, the public area and the stairways.

A remarkable aspect of the Swift micro wind turbine is the quiet operation. Standing a few metres away the sound levels are almost indiscernible; although this location's awesome view does tend to distract you from the quiet purr of the alternator, and the flutter of the blades.

Our commitment was to install a safe renewable energy resource in a very difficult environment and to achieve considerably more power from the unit than average. We are keen to see how much power this quiet turbine will put out. As the wind is stronger at height, we anticipate from the NIWA weather data to be producing power for 92% of the time, with the turbine in the NW quadrant.

The Researcher in charge of the Project, Aaron Clarkson, is now responsible to analyse the actual output of the micro wind turbine, mounted 5.5m above the roof of our Sky Deck, 225m above the street. He will compare this to the theoretical output and will be able to improve the theoretical modelling and provide more insight into the operation of wind turbines generally. In the NW position, the prevailing SW and NE winds will be injecting their energy into our electricity circuits in proportion to the wind speeds. While the maximum output of the turbine may only be sufficient to run up to eight domestic fridges, it will provide us with information that may turn out to be more valuable than we realise.

The installation is now complete and it is anticipated a representative from Renewable Devices in Scotland (manufacturers) will travel to New Zealand to complete final commissioning in the near future for this special project.