



NEWSLETTER N° 19

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## Mission Statement

"To be a global leader in wind turbine technology innovation."



From left: Rt Hon Helen Clark, Geoff Henderson and Derek Walker (NZ Windfarms Chairman)

# Spring

## Gearing up for Rapid Growth

It has been a very busy quarter for the Windflow Technology team with the biggest highlight being the official opening of Stage One of NZ Windfarms' Te Rere Hau wind farm. It was a blustery 80 km/hr (22 m/s) when the Prime Minister, Rt Hon Helen Clark, pressed the button that started the five turbines in front of more than 200 guests at the opening on 15 September. It was a fantastic day and a significant milestone in the Windflow Technology journey. Some highlights and photos from the day are included on page 3.

Having more turbines up and running is strengthening our track record. In the light of recent publicity about problems with Danish turbines in the Manawatu, we are looking forward to being able to contrast our turbine, which has been designed to minimise fatigue loads in high-wind, turbulent sites, with theirs. We are implementing company wide quality procedures and continuing to collect and compile data and documentation which we expect to submit by the end of the year for International Electrotechnical Committee (IEC) certification. This independent verification of the design is of particular importance to potential customers worldwide and is often a prerequisite to making the turbine supplier shortlist for wind energy projects.

As the demand for wind turbines increases, we are receiving more enquiries for supply of the Windflow 500. It is important for us to grow the production capacity of the company rapidly over the next year to be able to deliver orders for Te Rere Hau and elsewhere in New Zealand and abroad.

I have recently completed a 10 day visit to the USA. The first leg in Hawaii was aimed at setting up a team and identifying some potential sites for a demonstration Windflow 500. We now have a preferred site and a highly experienced local wind energy consultant, Warren Bollmeier, working his way through the preliminaries for us. The second leg in San Francisco was aimed at briefing potential investors on the merits of the Windflow turbine. In this I was joined by Chris Freear who was exploring capital raising opportunities for NZ Windfarms Ltd. We were both struck by the new mood in the US which was focussing on renewable energy as the new mainstream rather than something on the fringes. Al Gore's outstanding movie "An Inconvenient Truth" seems to be precipitating a real change in attitudes on climate change policy. As Churchill said, "You can count on the Americans to do the right thing, but only after they have exhausted every other possibility". (The same quip can be made regarding all nations).

As one who has espoused real action on climate change since 1988, I find it heartening to see this taking place in the USA, New Zealand and around the world, although there is still much progress to be made towards correctly pricing greenhouse gas emissions so that there is a level playing field for renewable energy in general. But investment in wind power is becoming mainstream. And Windflow is assured of a successful future. It is now just a question of how successful!

Geoff Henderson  
CEO and Director

# AGM Report

# IEC Certification

Approximately 100 people attended the 5th Windflow Technology Annual General Meeting in Christchurch on 25<sup>th</sup> October.

Another 60 listened to the live webcast. Given its popularity last year, we utilised the webcast again and also included a technical session where shareholders were able to phone in with questions.

All of the resolutions were passed, including the special resolution which approved novating the Turbine Sale and Purchase Agreement for Te Rere Hau to the new Joint Venture (NZ Windfarms/ NP Power - Babcock & Brown).

## AGM WEBCAST

A copy of the audio and slides webcast is available on our website

[www.windflow.co.nz](http://www.windflow.co.nz)

Frank Henderson  
1921-2006

*I came like Water,  
and like Wind I go.*  
(Omar Khayyam)



Geoff's father, Emeritus Professor Frank Henderson, passed away on August 25<sup>th</sup> at the age of 84. He was one of the outstanding scholars of his generation, making major contributions in the field of fluid mechanics and water engineering, especially open-channel hydraulics. He designed the first single-stage axial-flow jet boat in Christchurch in 1954, about 5 years ahead of the team which is usually credited with that invention.

An early environmentalist, he gave expert evidence to Parliament in 1960 against the flooding of Lake Manapouri, 12 years before the government finally did the right thing and protected it.

And in 1976 he steered Geoff towards a career in engineering as being the profession in which one could "actually do something about renewable energy".

Needless to say, he was a Windflow shareholder.

Work continues on gaining IEC certification for the Windflow 500 turbine to Class 1A, for strongest winds and turbulent conditions.

The process includes:

- Design evaluation – in progress
- Manufacturing evaluation – in progress
- Type testing (includes load measurements, blade test, power performance, safety and function test, acoustics) - in progress
- Final evaluation report
- We applied for and received a grant of \$250,000 from NZ Trade and Enterprise towards the cost of this process.

We expect that all the necessary data will be collected and the final evaluation report submitted to certifying body Lloyds Register by early 2007. With certification in hand, the Windflow 500 product will become more commercially acceptable to markets both within New Zealand and internationally.



*Strain gauge calibration*

## WELCOME NEW STAFF MEMBERS



### **Nicola Catchpole - Accountant**

Nicola is a Chartered Accountant who has 16 years experience. She worked as a Financial Controller within the Banking Industry in London and Amsterdam for 7 of those years and more recently in Christchurch for a software company. She is currently employed on a part time basis while raising two young children.

### **Jules Ganley – Procurement Manager**

Jules is taking over the role of Procurement Manager from Alan White who is winding down for retirement. Jules has a broad range of experience in production management in the apparel, publishing, telecom and electronics industries. Before joining Windflow he was Production Manager for TL Jones Ltd, controlling production in Christchurch and Shanghai and has experience in managing global logistics and procurement. Jules has a B. Tech (Manufacturing and Industrial) and has travelled extensively.



# Te Rere Hau Stage One Opening

On a blustery Friday 15 September in the shelter of the Novotel in Palmerston North, NZ Windfarms Chairman Derek Walker welcomed over 220 guests to the official opening of Te Rere Hau Stage One. These included shareholders, wind farm contractors, turbine component suppliers, industry representatives and local and national dignitaries: Prime Minister, Rt Hon Helen Clark; MP and Minister of Research, Science and Technology, Hon Steve Maharey; Minister of Energy Hon. David Parker; Green Party Co-Leader Jeanette Fitzsimons; and Palmerston North and Manawatu mayors, Heather Tanguay and Ian McKelvie.

Mr Walker recognised all those involved over the years. "It has been the loyalty and faith shown by those who have invested in our company that has made today possible, and for many that commitment can be traced back to the original capital raising of Windflow Technology."



From left: Energy Minister Hon David Parker; Research, Science and Technology Minister Hon Steve Maharey; Prime Minister, Rt Hon Helen Clark

"This first stage completion is a tribute to good old Kiwi determination and genuine engineering expertise. Not only has the design been completed here but almost all of the turbines and ancillary equipment has been built in New Zealand including the blades, gearboxes, towers and nacelle. This is truly a New Zealand wind farm in every sense, and everyone who has been involved can be very proud of what has been achieved – and achieved on very limited budgets and resources. Virtually all the people involved have come from small companies, and it has been more than a job for them, they have all had a sense of ownership in the final product. On behalf of NZ Windfarms, I thank everyone that has put in that extra effort that has been needed to make this happen."



Derek Walker, NZ Windfarms Chair

During her official opening speech, the Prime Minister recognised that Te Rere Hau is the first wind farm in New Zealand to be built using New Zealand designed and manufactured turbines, and congratulated both NZ Windfarms and Windflow on those achievements. She stated "It's good to see local capability being built in the supply of wind energy projects".



Jeanette Fitzsimons, Green Party co-Leader and Chris Freear, NZ Windfarms CEO

Jeanette Fitzsimons then acknowledged Geoff Henderson's professionalism and dedication over the years that finally resulted in the vision of New Zealand made turbines on a New Zealand wind farm being realised. To commemorate the occasion, Geoff was presented with a framed photo of the five Windflow 500 turbines spinning at Te Rere Hau in the sunset.

The howling 80 km/hr westerly on site sandblasted the crowds that watched the Prime Minister press the button and the five Windflow 500 turbines spin into action.

NZ Windfarms presented six native trees which have now been planted in the QEII covenant area at Te Rere Hau; five representing the first five 'native' wind turbines on the site, and one in commemoration of Rod Donald, former Green Party co-leader who passed away in November 2005. Rod was a champion of both wind energy and "New Zealand made".

All in all it was a fantastic day and memorable celebration of a significant milestone in the Windflow Technology journey.



Geoff Henderson, Windflow Technology CEO/Director





# Flying the Flag

A shareholder recently enquired what Windflow Technology was doing to promote wind power, particularly to the Government. The company has always been an active advocate of wind energy and we continue to submit on relevant policy, consultations, as well as personally showing politicians the inside of a real NZ made wind turbine.

## Government

We have had personal visits with many politicians to lobby the wind power and Windflow case and have also given input to or submitted on recent consultation documents:

- Parliamentary Commissioner for the Environment
  - The future of wind power in New Zealand
  - Distributed energy: going local
- Electricity Commission
  - Big Picture
  - Tactical Project & Wind Generation Investigation Project
- Ministry of Economic Development
  - Facilitating Distributed Generation

## General public

Windflow presents to interested parties on request, holds open days and submits articles to various magazines, newspapers and electronic newsletters to raise awareness of the benefits of wind power. We have also been involved in events which profile wind energy:

- International Science Festival, Dunedin
- Buy NZ Made showcase, Wellington

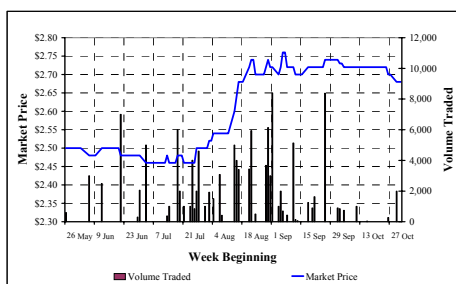
## Wind energy industry

Wind energy has come a long way in New Zealand and has certainly moved into the mainstream. Rather than having to be convinced that wind energy is a viable proposition, companies are realising the business opportunities for themselves. Three of the five main generator/retailers operate wind farms (and the other two are investigating wind farm sites). Lines companies such as Eastland Infrastructure, Unison, MainPower, and WEL Energy are also entering the market along with independent wind farm developers. Windflow has been keeping all of these companies informed of progress with the Windflow turbine and representatives of most of these companies came to the Te Rere Hau opening to see the turbines operating. In addition we are a regular presenter at conferences of:

- The NZ Wind Energy Association
- The Australian and American Wind Energy Associations
- Global WindPower (March 2004 in Chicago and September 2006 in Adelaide)

## NZAX – Share Trading History

The line graph shows the market price while the columns show the volume of shares being traded.



To view this graph daily go to:

<http://www.nzx.com/nzxmarket/nzax>

and search for stock code WTL

(There is also a link on our website.)

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### Wind Energy Facts

- Wind generation is the fastest growing form of power generation in New Zealand and has an average annual market growth rate of 28% worldwide.
- New Zealand has 170 MW of wind powered generation installed, 200 MW under construction and over 2,000 MW of projects either consented or proposed.