



**NEWSLETTER N° 7**  
**AUGUST 2003**

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## **Mission Statement**

"To become the leading  
supplier  
of wind turbines for  
wind power projects in  
New Zealand and Australia."



# Welcome to Windflow

## *Welcome to our seventh newsletter.*

Major developments have taken place since our last newsletter:

- The first Windflow 500 has been successfully built and commissioned at Gebbies Pass. Early data is exceeding our expectations, and the only blemish is a well-publicised noise issue for which we have now found some good solutions
- The Minister of Energy has officially opened the turbine in front of more than 250 invited guests
- We have begun our Stage 2 capital raising by making a pro-rata renounceable rights issue to shareholders. The capital raising will finish on Friday August 29<sup>th</sup>.
- We have made a series of public presentations in the 4 main centres, very well received by about 290 people.

In this same period that we have been recording some major triumphs, we have also been saddened by the death of our chairman, Dr Neil Cherry, on May 24<sup>th</sup>. We were fortunate that he was able to be on site the day that the turbine assembly was completed, one week before he finally succumbed to motor neuron disease. At his funeral I spoke of his remarkable courage:

*Neil's gentle exterior belied the great courage of the man. He had a great intellect. He had a great social conscience. His love for people came through in his gentle, mild manner. But like Clark Kent, he hid a man of steel under that gentle exterior.*

He is sadly missed.

But we are pleased to report that Barrie Leay has taken over as our Chairman of Directors and Vicki Buck is our new Deputy Chairman. Under their leadership, and with the support of our shareholders, we now look forward to proceeding with a batch of up to six Windflow 500's as part of our first wind farm project.

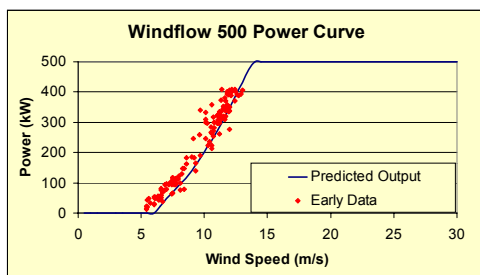
Geoff Henderson  
CEO and Director

# Early Running

# Opening Day

Following the completion of the turbine on site in mid-May, commissioning took place over the next few weeks. Particular attention was paid to the pitch control, speed control and safety systems. Power rating was ramped up gradually over several weeks to run the gearbox in. By July 9<sup>th</sup> the turbine was running nearly at maximum power, about 460 kW.

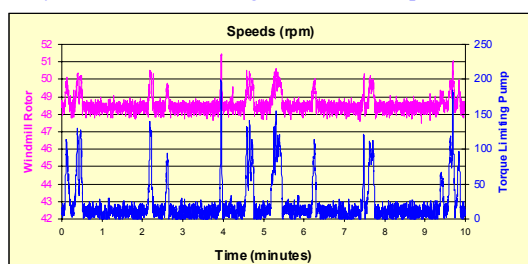
The following graph shows some early power curve data, with the predicted output being generally met or exceeded. This indicates that the gearbox is more efficient than expected.



The following five graphs show 10 minutes of operating data, and illustrate how well the TLG system limits the maximum output.



The bottom two graphs illustrate how the TLG system converts wind gusts into rotor speed



On July 9<sup>th</sup>, the Minister of Energy, Pete Hodgson, officially opened the turbine. First he was presented with a pair of Windflow overalls labelled “Pete”, and invited to climb the tower. Without hesitation he did so and was given a brief “tour” of the nacelle and rotor. An impromptu decision was made to run the windmill up to speed and to generate power while he and Geoff Henderson were still at the top. A feature of the design is that the teetering 2-bladed rotor provides a smooth ride, which the Minister was able to experience for himself as the windmill generated about 250 kW.

This put a big smile on the Minister’s face, as on descending, he said, “It was an experience to remember for years. We got the bloody thing going! It was amazing.”

Later, while addressing more than 250 invited guests, Pete Hodgson set out his vision for the growth in electricity generation to be provided in the main by renewable energy – “and a big chunk of it, some hundreds of megawatts, will be wind. So I want to close with this question – if there will be that much wind power being installed in New Zealand over the next two decades, how much of it is going to be built in New Zealand. [Windflow Technology] today has begun to answer that question.”

Many other speakers paid tribute to the achievement of Windflow Technology and its founder, Geoff Henderson. Speakers included Rod Donald MP, Bob Parker (Mayor of Banks Peninsula), Leonid Itskovich (Christchurch City Energy Manager), Roger Sutton (Orion CEO) Ken Swift (Bremca) and Peter Brooking (Wind Blades). Speaking for Windflow, Barrie Leay and Geoff Henderson paid tribute to the shareholders who had made it possible through their investment.



The Minister of Energy with Geoff Henderson at the top of the turbine



The turbine running at about 250 kW on Opening Day

# Stage 2 Capital Raising

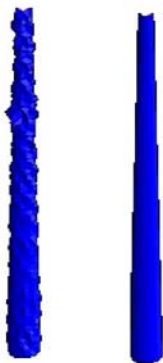
## Noise Issue

There has been considerable media coverage of the fact that the windmill at Gebbies Pass has exceeded the noise limit of its Resource Consent. Our monitoring has identified sound levels in McQueens Valley of about 35 dBA; this is above our 30 dBA allowance.

For comparison: a household clock may 'tick' at about 30 dBA; a household refrigerator will run at 40 to 50 dBA and bird-calls are about 50 dBA.

In applying for the Resource Consent, we identified a particular noise issue. McQueens Valley is very sheltered from the wind and therefore has very low background sound levels even when the windmill will be running in 12-20 knot winds. So we agreed to a sound level lower than the District Council's normal night-time requirement of 40 dBA.

The primary problem is that the steel tubular tower acts like a bell to magnify any mechanical noise from the windmill. The following image from our finite element analysis shows how the plate steel of the tower can act like a speaker when subject to acoustic frequency vibrations.



We have met with the neighbours to discuss the problem and potential solutions.

STOP PRESS: We have implemented (19/8/03) a solution to stiffen the tower plates to minimise its noise emission. Early indications are promising but measurements have yet to confirm desired 5 dBA reduction.

Windflow's Renounceable Rights Issue is proceeding, with the Short Form Prospectus having been registered by the Company Office. This is a 1 for 1 Rights Issue to existing shareholders at \$2.00 per share. The total proceeds of the Offer will be \$5,492,890 if fully subscribed.

The funds raised will be used for the purposes set out below:

- On going engineering work on the Windflow 500, both the installed unit at Gebbies Pass and future units to be built, estimated at \$400,000, including IEC certification.
- Construction of up to six production turbines, estimated at \$4.5 million.
- Market development activities, in particular preparatory work and issue expenses for a separate wind farm company, estimated at \$200,000.
- Paying issue expenses, estimated at \$100,000
- Developing Windflow's systems, IP ownership and composition of staff to more effectively meet the company's growth strategies, estimated at \$300,000.

The Chairman, Barrie Leay, wrote in his letter introducing the Prospectus:

"Stage 2 requires a new funding round as anticipated in the 2001 Prospectus and as was also outlined to, and supported by, the shareholders at last November's Annual General Meeting.

Our Chief Executive Officer and Director, Geoff Henderson, and his team have successfully turned the concept and designs for a superior wind turbine for New Zealand conditions into the reality of the Company's first working turbine, in operation now at Gebbies Pass on Banks Peninsula .... The significance of this should not be underestimated .....

As a Board it is gratifying to have a body of shareholders who had the vision to anticipate the exciting future for wind power only now being more widely recognised. We commend this rights issue to you as an opportunity to build on your existing investment in that future."

## Don't Do Nothing!

A "rights issue" is a new concept to many of our shareholders, so needs some explanation. Here's an example for a shareholder with 2,000 shares. He or she will have received a copy of the prospectus and a letter of entitlement giving him or her 2,000 "rights" to buy more shares at \$2.00 each. He or she has four choices - **we don't recommend the fourth:**

- exercise all his or her rights by August 29th, investing \$4,000 into the Company
- sell\* all his or her rights by August 27<sup>th</sup>, so that by August 29<sup>th</sup> someone else may invest \$4,000 into the Company. In the process he or she will receive the value of the rights. If the rights are worth 20c each, he or she will receive \$400, less any brokerage fees (typically \$60), so \$340 net
- sell some rights by August 27th and exercise others by August 29<sup>th</sup>
- do nothing by August 29th, in which case the rights will lapse, he or she loses value, and the Company loses investment funds.

\* Note: Windflow's shares have been traded through the Unlisted Securities Market of the NZ Exchange since May, 2003. The trading code for the shares is WTL and for the rights is WTLRA (until Wednesday August 27th, when rights trading finishes).

**Closing Date for Exercising Rights – Friday, August 29<sup>th</sup>, 2003**

**Last Date for Selling Rights – Wednesday, August 27<sup>th</sup>, 2003**



## Share Sales

Nine parcels of Windflow shares were traded prior to the rights issue.

Date:	Number	Price (NZ\$)
13/4/02	2,011	\$1.85
28/5/02	2,000	\$2.10
9/12/02	34,000	\$2.26
11/4/03	2,000	\$2.50
9/5/03	2,008	\$3.00
6/6/03	1,246	\$2.80
6/6/03	2,500	\$2.80
9/6/03	2,000	\$3.005
10/7/03	3,500	\$3.75

Since July 28<sup>th</sup>, the rights (1 for 1 at \$2.00) have traded between 16c and 95c each.

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Have we got your correct address details, including current e-mail address? If not, please let us know.

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# Public Presentations

We have made a series of public presentations in Christchurch, Dunedin, Auckland and Wellington. These have been very well received. A highlight of the presentations has been the screening of our new video, outlining the building of the first Windflow 500. In addition there has been a Powerpoint presentation highlighting the potential for wind power, showing some early results from the first Windflow 500, and outlining the rights issue.

The presentation itself has taken about 45 minutes, with questions taking another 45 to 75 minutes! In Christchurch and Auckland attendance was about 80 people, in Dunedin 35, and in Wellington about 95 people, totalling 290 people for the four centres.

A fifth presentation will take place in Nelson on Friday August 22<sup>nd</sup>.

## Note: change of time/venue for Nelson!

The Nelson presentation will be at 6:30 pm at the Trafalgar Park Pavilion, Trafalgar Rugby Park, Hathaway Terrace, off Trafalgar Street. The venue has changed because of the likelihood of increased numbers beyond Greenslades' capacity. The time has changed to minimise a clash with a Celebrity Debate later that same evening.

## Videos for Sale

The 16 minute video which has been screened at the presentations will be available to shareholders and members of the public. The video tells a great story about laying the foundations for a new manufacturing business in New Zealand. In order to recover the copying costs, Windflow will be charging \$25 for the DVD version or \$20 for the VHS tape version. A \$10 discount will be available to shareholders for either version. Please contact Terry Moon (Ph. 03-365 8960 or email [terry@windflow.co.nz](mailto:terry@windflow.co.nz)) to order.

## Minimum Shareholding

The minimum holding set out in the Constitution is 2,000 shares, though the Directors have discretion as to whether to reject smaller holding. The Directors have resolved not to exercise this discretion in respect of holdings above 1,000 shares, and will seek a change to the Constitution at the next general meeting to reduce the minimum to 1,000 shares.

## Staff Changes

There have been some staff changes at Windflow with our Office Manager, Heather McNaughtan, leaving in early August. And Marina Roman is leaving at the end of August to take up a specialised position with WhisperTech. Windflow would like to thank Heather and Marina for their excellent contributions over the last two years.

Terry Moon has replaced Heather as Office Manager and is doing a fine job in this position. Terry has a background in the banking sector in Lending and Customer Services. She has recently completed a Bachelor of Information and Communication Technology at Christchurch Polytechnic. Originally from Christchurch, Terry has 3 daughters aged 17, 20 and 23.