



NEWSLETTER N°1  
DECEMBER 2001

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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



Geoff Henderson,  
Chief Executive Officer

*This is our first newsletter* since the successful closure of our share offer. We plan to publish at least four newsletters each year, to report on progress with our exciting venture.

In the past two months, we have decided the size of our first windturbine, and made significant progress in setting up our office and the design team to build the first unit.

## Windflow 500

*A key decision* was taken at the first board meeting (October) following the close of the Stage 1 prospectus. It was to build the first Windflow turbine with a 33 metre rotor, to produce 500 kW. We had signalled in the prospectus that the rotor diameter of the first turbine might be 40-50 m. However the directors took the view that the rewards of such a development did not justify the increased risk, including the risk of exceeding our budget and delaying the programme. A considerable amount of preliminary design work has been done on the Windflow 500. This will facilitate the Stage 1 design-build process.

## Share Allocation Process

*The share allocation* took place in accordance with the Stage 1 Prospectus with a total of 2,646,645 shares being issued (cf. 2,942,500 projected):

- 1,656,985 shares for subscribers in the public offering (cf. 1,942,500 projected)
- 800,406 shares for the acquisition of Wind Torque Ltd (as projected)
- 114,254 shares for the providers of issue expenses (cf. 124,594 projected)
- 75,000 shares for the five directors (15,000 each) for services rendered (issued at incorporation).

In addition it is expected that 57,500 shares will be issued to advance subscribers, Bremca Industries Ltd and EBL Ltd, in lieu of cash payment for components to be provided for the first Windflow turbine.

BK Registries mailed out share statements to shareholders as the various formal directors' resolutions and certificates were completed.

**All shareholders should have received their share statements by now.**

# Project Engineering Progress



Much of our effort since August-September has concentrated on establishment activities.

Engineering procurement work has focused on three main orders, which need to be placed as early as possible in the programme.

## Blades

We have had two project meetings with the Auckland company EBL Ltd, who is one of

our advance subscribers under the prospectus. A contract is currently with EBL for their consideration and we expect to be able to sign that contract, formally getting that job underway, before Christmas.

In addition we have been researching the use of locally-grown radiata pine as the main blade material, instead of African mahogany, which has previously been used. As a result we are very comfortable with the use of radiata,

with obvious benefits in terms of cost and environmental sustainability. In addition, we can tap into the considerable depth of expertise that exists in New Zealand regarding the use of radiata as an engineering material.

## Blade bearings and yaw bearing

These are typically long-lead items, which need to be imported from Europe, U.S.A. or Japan. We have received proposals in the past from three major suppliers and we are finalising the technical specification with two of these, and expect to place the order before Christmas.

## Gearbox

We are in discussions with two potential gearbox suppliers, one in Australia and one in New Zealand. We expect to be able to place this order early in the New Year.

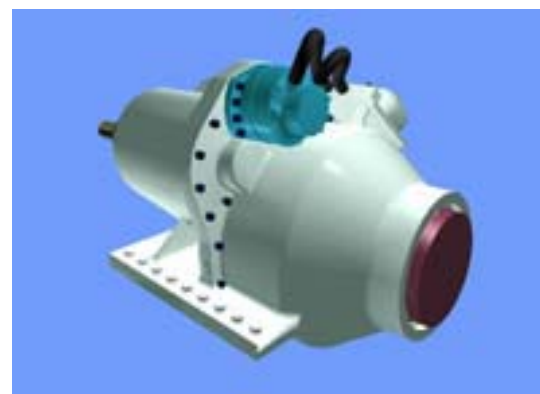
## Site planning

This has been another major project engineering task. An informal arrangement has been made with the owner of our preferred site, and this is presently being formalised.

We have engaged Connell Wagner to assist with the planning, survey and resource consent work. Legal issues about road access have been resolved and an estimate for road upgrade work has been obtained that is within our budget.

Cabling access has been more problematic from a budget point of view, and our new electrical engineer, Wernher Roding, has been sorting through the different options to come up with an affordable solution that the various landowners will be happy with. Christchurch-based Bremca Industries Ltd (one of our advance subscribers), Orion NZ Ltd and an electrical contractor have also helped with this work.

Preliminary work has been done on the resource consent process, including a meeting and a site visit with the planning officer from the local district council. Connell Wagner has also obtained proposals from a number of landscape architects and we have selected Chris Glasson for the work. We will be consulting with local interest groups in January and filing our consent application as soon as possible thereafter.



# Staffing

We now have four staff members and a fifth starting in the New Year.

In addition to the Executive Director, Geoff Henderson, we have:

## **Design Engineer – Marina Roman**

Marina has a BE (Mechanical) and experience as a research engineer and design engineer. She is skilled in 3D computer aided design (CAD) work, including parametric modelling, and is experienced in document control for ISO 9000 certification.

Originally from Minsk in Belarus, she has lived in Christchurch for 6 years and is a NZ citizen. She has a son who also lives in New Zealand. Until joining Windflow she was working as design draughtsperson for another local technology company, Whispartech.



Marina began at Windflow on November 19<sup>th</sup> and has been busy producing drawings, evaluating 3D CAD packages and setting up document control procedures.

## **Electrical Engineer – Wernher Roding**

Wernher has a BE (Electrical) from Auckland and an MSc from Durham University where his thesis was on a generator design for wind turbines. Recently returned from the UK, he was available to start immediately and joined Windflow on November 19<sup>th</sup>. He has been working on site cabling and grid-

connection issues and will be handling all electrical aspects of the turbine design and build.



Originally from South Africa, Wernher has lived in Auckland most of his life.

## **Mechanical Engineer – Warwick Payne**

Warwick has a BE (Mechanical) from Canterbury and has particular expertise in computer-based stress analysis, especially finite element (FE). He is presently working for a consulting firm in Christchurch and will be joining Windflow on January 7<sup>th</sup>. He hails from South Canterbury and has lived in Christchurch for 7 years.

## **Office Manager – Heather McNaughtan**

Heather has many years secretarial experience, and has also worked as a health worker for THAW (The Health



Alternatives for Women) and a research assistant for Conservation Management Ltd. Heather has a BA (majoring in Political Science and Sociology) and is married with two adult children and a 12 year old son. She has been and continues to be very active in various environmental organisations.

Heather has been working since mid-August setting up the office and has taken over many administrative tasks including routine correspondence, banking, financial record-keeping, maintaining our shareholder database and keeping the website up to date. She has a great sense of humour and is an infallible guide to the Victoria St coffee houses.

## Office Setup

## Activities

After looking at several office rental options in Christchurch, we found a spacious but well-priced office suite at 87 Victoria St. With 3 separate offices, a large open-plan area and a kitchenette, it totals 130 square metres, large enough for us to grow into at Stage 2. We have a one-year lease at a significant discount to prevailing rates that has enabled us to stay within our Stage 1 budget.

At the same time we interviewed Heather McNaughtan and employed her as Office Manager. Heather was able to start right away, and worked from her home for the first few weeks, helping with the share issue correspondence and office establishment activities.

Heather and Geoff moved into the office at the end of August and we were able to have a full board meeting there on September 4<sup>th</sup>.

*(Continued next page)*



## Season's Greetings

2001 has been a landmark year for this venture and we look forward to moving ahead as a company, to bring to fruition the vision you have all invested in.

Thank you for your continued support. We wish all our shareholders and your families the very best for Christmas and the New Year.

### LET A FRIEND KNOW

Pass this onto a friend or email us their information and we will send a copy to them.

Have we got your correct address details? If not, let us know.

Please contact us if you prefer to have the next newsletter sent only by email (colour version).

This newsletter will be posted on our website.

WINDFLOW TECHNOLOGY LIMITED

PO Box 25 131

Christchurch

Phone 03 365 8960

Fax 03 365 1402

email [info@windflow.co.nz](mailto:info@windflow.co.nz)

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

# Quality Management

An important aspect of Windflow's business plan is setting up quality management systems, in particular to meet certification requirements for the wind turbine design.

IEC (International Electrotechnical Committee) Standard WT 01:2001 is the recognised international standard for wind turbine design. This newly-released document refers to the IEC's previous standard for wind turbine generator systems, IEC 61400, that has at least seven Parts, each bringing a comprehensive set of requirements to the wind turbine design certification and proof-testing process.

In addition the IEC standard requires ISO 9001 certification or similar quality

management systems to be in place.

Tim Armitage, who provided PR services for the Stage 1 share issue, has shown real versatility (being a good engineer) by assisting with the quality management certification process. This is a line of business he has been developing in recent years, and he has already researched the requirements of the certification process in the New Zealand context.

Like many things we are doing, this is new territory for New Zealand (and Australia). Thus we do not expect to necessarily achieve IEC certification at Stage 1, but we do intend to put the processes in place to enable certification at the earliest opportunity.



### *(Office Setup continued)*

Setting up the office has involved buying office furniture, a phone system, fax machine, a "Jetstream" internet connection, computers, an A3 printer/copier and whiteware and crockery for the kitchenette.

Thanks to Alan White, one of our shareholders, the office has been painted throughout. Alan, a friend and supporter

for many years, also built the windmill model seen in the foreground (the apparent lean on the tower is due to the wide-angle lens, not the model!)

We have also bought a 1996 Suzuki Vitara as a 4WD company vehicle to enable visits to the windmill site. It has already proved its worth in getting up to the high ridge-top site we have in mind!