WINDFLOW

Windflow Technology
Newsletter

Nº 28, December 2009

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CEO Introduction

As reported at the Annual Meeting last week, it has been yet another year with a lot of progress. The past year has seen us complete up to Stage 3 of the Te Rere Hau (TRH) wind farm (65 turbines). The turbines have been performing well despite this being our first substantial production run and all being installed over a short space of time. We have also started manufacturing the 32 Stage 4 turbines which are currently going into storage pending resolution on where they will be installed. The Independent Expert report we commissioned has confirmed that the last 48 of the 97 turbines ordered for TRH are effectively the same as the IEC design submitted in July and NZ Windfarms have subsequently resumed almost all payments.

On this note, we are hopeful of receiving IEC certification in the New Year when Lloyds Register is expected to complete the final part of their review. The process is exceedingly thorough and to date no significant issues have been raised so we are confident that it is a matter of 'when' not 'if' certification is received.

Another good milestone was being granted resource consent in October for all 25 turbines (12.5 MW) for the Long Gully wind farm near Wellington. Long Gully is a very windy site and would be a great example of a cost-effective, modest scale wind farm generating directly into the local network.

Our take on the recent Project Hayes decision is that smaller projects using New Zealand-made turbines will score higher in the 'public benefits' part of any cost/benefit analysis, so all else being equal, smaller wind farms using Windflow 500s are more likely to be granted consent than very large wind farms using imported turbines.

Our cost-effective, robust turbine continues to prove itself in the field (literally) which is increasing potential customers' confidence in the technology. Our business case is built on manufacturing in and for a windy, unsubsidised market and we are working towards building our pipeline in New Zealand and overseas in 2010.

We wish all of you the best for the holiday season and the New Year.

Geoff Henderson
CEO/Director

Te Rere Hau Update

The TRH team beside the last nacelle for Stage 3

65 turbines are now fully commissioned and operating, completing Stage 3 of the Te Rere Hau (TRH) wind farm. The 32 Stage 4 turbines continue to be manufactured under the existing order from NZ Windfarms but are being put in storage while NZ Windfarms seeks resource consent for an extension of the TRH site consisting of 56 additional Windflow 500 turbines. NZ Windfarms are intending to place the 32 Stage 4 turbines on this extension, as it has higher wind speeds than the Stage 4 turbine sites on the consented wind farm. The consent decision is expected early next year.

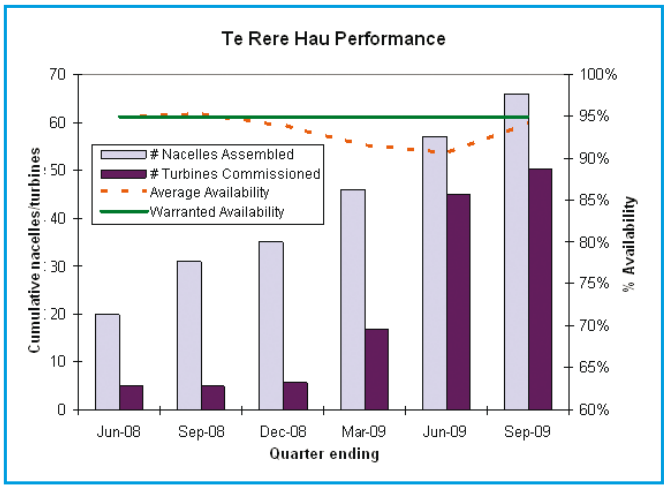
The turbines have been performing well overall. There was a backlog of installation and commissioning work arising from the delays in connecting the 33kV supply last year.

The graph at right shows the effect on our availability figures of installing and commissioning a large number of turbines last summer, and the improving performance as we worked through the teething issues. By contrast nacelle assembly has been much steadier.

An independent expert report confirms that the last 48 of the 97 turbines that have been ordered for the Te Rere Hau (TRH) wind farm, including the latest 16 of the 65 that have now been installed, are effectively designed to the same standard as the latest version which Windflow Technology Ltd expects to receive IEC Type Certification. The only difference is a component which is required for Class 1A design wind conditions but (as confirmed by an independent expert report) not required for the design conditions at TRH. We have offered this as an "optional extra" to NZ Windfarms but recommended that it would not be cost-effective for them to adopt it.

The components in the earlier TRH turbines which do not meet the IEC design standard will be either monitored regularly or in some cases may be upgraded. The worst case scenario could be a cost to the project of around $1 million over 20 years to replace affected components in the earlier turbines, so the actual cost is likely to be much less.

Windflow is focused on working towards resolving any remaining issues with NZ Windfarms.



IEC Certification - Update on Progress

As recorded in the annual report, we submitted the last of our documentation for IEC Type Certification to Lloyd's Register in July 2009. Lloyd's Register has completed its review of more than 90% of the drawings, 85% of the specifications, 60% of the calculations and six of the seven test reports. As expected, it has requested clarification and additional information which we have provided.

We are in weekly discussions on progress with the project manager in Aberdeen.

When Lloyd's Register is satisfied that all the requirements have been met, it will issue the Type Certificate for future production of the Windflow 500 in accordance with IEC Standard WT-01:2001. This includes a Class 1A Design Evaluation Conformity Statement, along with the other two outstanding requirements: the Manufacturing Evaluation Conformity Statement and the Type Testing Conformity Statement.

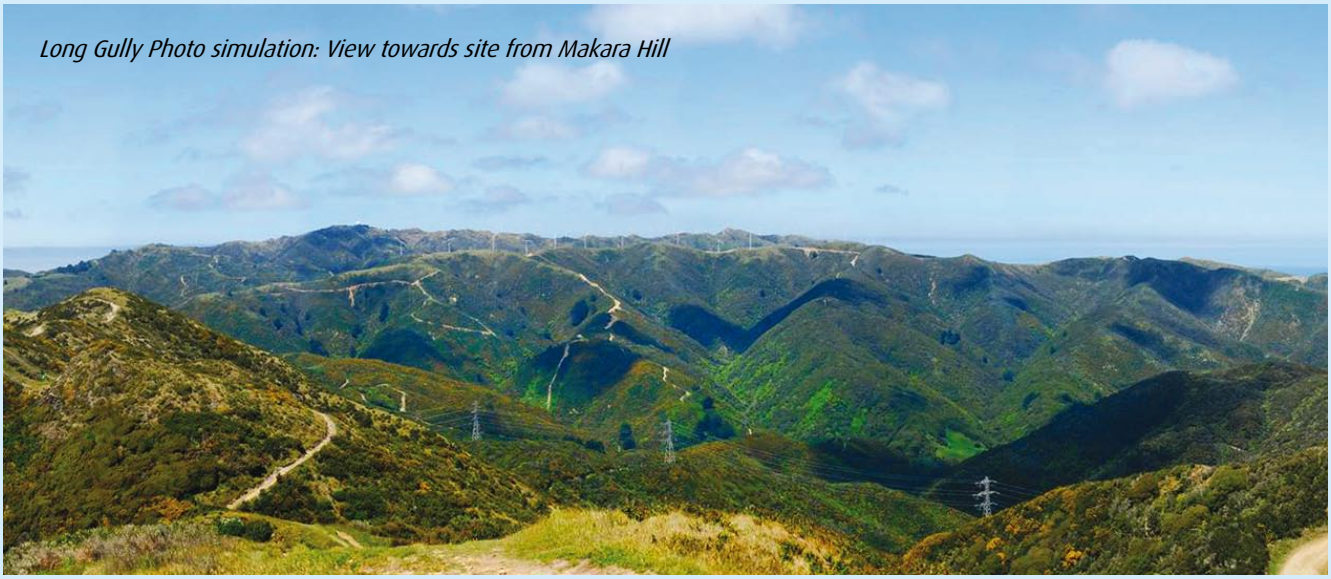
We have already met the fourth requirement for IEC Type Certification: ISO 9001 certification of the Quality Systems which Windflow applies to its engineering and business processes. Windflow received its ISO 9001:2003 certificate in June 2008 and in April 2009 was one of the first companies in New Zealand to have this updated to the latest version of ISO 9001:2008.

Long Gully Wind Farm Update

Following the hearing in August, the Wellington City Council granted resource consent for all 25 Windflow 500 turbines (12.5 MW) on the Long Gully wind farm site in October. There have since been two appeals lodged and Windflow is in discussion with the parties regarding their specific concerns on the decision.

The decision is pleasing and reflects an example of a smaller distributed wind farm in an appropriate place, close to load, which benefits the local community and the greater New Zealand public.

The wind farm would be based on Long Gully station, to the west of Brooklyn and south of Karori, and use New Zealand made Windflow 500 turbines, each about the same size as but with twice the power output of the nearby iconic Brooklyn wind turbine. It would provide electricity for up to 6000 homes and avoid approximately 29,000 tonnes of CO2 each year.



Long Gully Photo simulation: View towards site from Makara Hill

Project Hayes Decision

Project Hayes is a wind farm proposed by Meridian Energy to be situated approximately 70 kilometres north-west of Dunedin on the Lammermoor Range. The project would have up to 176 imported turbines of 3.6 MW, generating up to 630 MW and would reportedly have been one of the largest wind farms in the world. The wind farm proposal was originally granted consent by the local Central Otago District Council, but the decision was appealed by opponents. The Environment Court recently overturned the decision, and declined Project Hayes. Three of the four commissioners considered that the public benefits of the very large scale project did not outweigh the public costs. Landscape featured largely in the discussion. The Court also criticized Meridian for not providing likely benefits/costs of reasonable alternatives. Meridian has appeal the decision based on points of law.

The decision has caused a lot of media attention and much discussion in the wind industry. The main concerns are that it seems to raise the bar for information required for wind farm and other large infrastructure consents. Future proposals may have to include far more consideration of visual impact, landscape values, and macro-economics if the standards set by the Project Hayes decision from the Environment Court stand.

For Windflow, the implications of the decision highlight the importance of maximising public benefit and minimising environmental impacts (costs) to increase the likelihood of gaining consent. Projects using NZ made turbines will create a factor of 10 public benefit over using imported technology, while using mid-size turbines can minimizes the environmental 'cost'.

The other implication is that of proportionality where the decision stated 'the evidence to be called needs to be proportional to the significance and size of the issues'. The decision implies that the scale of issues around 'Think Big' projects warrant greater analysis done, more information provided, and alternatives considered. Projects of a more modest scale therefore shouldn't require the same degree of analysis, but the decision is unclear on this.

The subjectivity of the resource consent process is the largest risk around wind farm projects gaining consent, and Windflow suggests that all else being equal, smaller projects using NZ made mid-size turbines minimises this consenting risk.

Windflow Annual Meeting

The Annual Meeting was held in Christchurch on 16 December and attended by around 80 people. All resolutions were passed and an audio webcast and copy of the presentation are available on our website www.windflow.co.nz.

Christmas Cheer and factory visit for supplier, shareholder and other stakeholders of Windflow.

Open Days at Gebbies Pass

We had the first open day at Gebbies Pass wind turbine on Sunday 6 December with approximately 25 people visiting the wind turbine.

- The next open day is scheduled for Sunday 7 February, 3 – 5 pm.
- Meeting point and car parking: Wheatsheaf Tavern in Teddington.
- Bus will leave 3pm, 3.30pm, 4pm and 4.30pm to transport you to the Windflow 500 turbine in Gebbies Pass.
- Bring some warm, wind-proof clothes and good shoes!

In case of cancellation due to bad weather on the day, please check: www.windflow.co.nz or ring Sheralee on 021-946-333. Anyone is welcome, it is free, and if you know of someone who might be interested, please tell them about it.

Welcome New Staff

Maree Richard

Maree joined Windflow in September when Jessie, one of our two Accounts Administrators, went back to China. Maree has previous experience working with Accredo in engineering manufacturing companies, and she spent eight years with Bellmor Engineering, followed by a temporary contract with Davin Industries before joining Windflow. Before that Maree spent twelve years in the US auditing for the gaming industry in Nevada. Maree is born and bred in Christchurch and has one daughter. She spends a lot of her spare time swimming and following rugby with her ten year old grandson.

Summer students

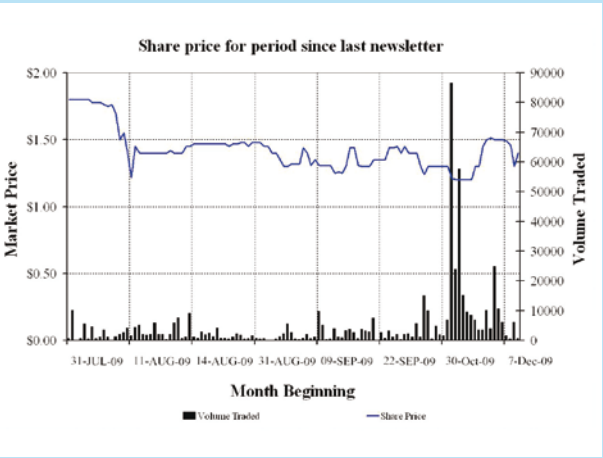
This year we have two summer students, Alex and Hoani, here seen climbing the Gebbies Pass wind turbine. Alex O'Keefe is a Mechanical Engineering student and Hoani Bryson is an Electrical Engineering student, both from Canterbury University. Alex is designing a test frame for endurance testing of various components. Hoani is making control diagrams for the PLC (control systems).

Hoani and Alex inside the Gebbies Pass turbine

Windflow-mo!

Windflow Development Engineer Jamie Wallace sports a Movember shaped as two wind blades (with aspect ratio perfect of course). Over half of the Windflow male staff participated in Movember and Jamie won the overall prize for his 'Windflow-mo'. In total the Windflow team raised $405 towards men's health initiatives, notably the Cancer Society and Mental Health Foundation.

Share Graph



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