WIND CHIMES

NEWS LETTER OF GWPL FAMILY

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CEO TALK

Dear all

I hope all of you enjoyed the festive season of Ganesh Chaturthi immensely and are looking to the upcoming festivals of Durga Puja, Ayudha Puja and the festival of lights, Deepavali. I wish you and your loved ones much happiness, joy and celebration during the days ahead. I would also like to remind you all to ensure your children take care while bursting crackers during Diwali.

This is a busy season for us at the organisation as well. We have a interesting year ahead of us and I am confident that each and every member understands the above, realises their importance and will strive their utmost to ensure the same.

All of you are already aware of the turbulent global economy at present, with most of Europe under threat of credit default and the world's biggest economy, USA, besieged by increasing unemployment and plummeting growth rates.

At this time, our company, one of India's foremost business groups, is in a position to lead from the front and ensure that we rise to every challenge that is in our way. With careful steps at every point of our growth plan, I believe that we will pass these trying times with flying colours. We are also fortunate and lucky to have confirmed orders in hand, which emboldens us to look ahead with assurance. At the same time, experienced Members of every department are keen to guide and support staff and the company in giving and achieving our best.

I urge you all to make this festive season all the more enriching by working hard to achieving our targets and adding a touch of satisfaction to our celebrations.

Warm Regards
M. N. Sudhindra Rao

Low Wind Projects and Technology Flourish

Ros Davidson, Windpower Monthly Magazine, 25 August 2011.

As the number of available prime wind locations has dwindled, developers are looking to lower-speed sites and manufacturers are responding with new turbine models. This growing market presents both challenges and opportunities.

In a growing trend, low and medium wind-speed sites across the globe are being targeted for development. In the US, as well as in southern Europe, China and India, it is particularly prevalent. Low wind speeds are common in many parts of the world. In the US, for example, only around 10% of the country has high winds, while some 50% has low wind.

For wind development, a low wind speed, or Class III, is generally defined as 6.5-7 metres per second (m/s) on average and a medium wind speed, or Class II, is 7-8.5m/s.

Many of the windiest or Class I sites with crucial transmission access have already been developed, notably in the US and coastal Europe. Power-purchase agreements for sites near high-load centres — such as cities — in more moderate wind resource areas can be easier to clinch and more lucrative per kilowatt hour due to the laws of supply and demand.

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Wind technology has advanced to the point that turbines can now offer a 20-30% production gain compared with a year or two ago, making lower-wind sites in Class II and III areas more economically feasible. A typical low-wind machine might have more efficient and longer rotors — perhaps containing carbon fibre — a modestly sized generator and a higher hub height. It could also have a lower noise profile, making it better suited for more populated areas.

Steady progress

According to Matt DaPrato, a wind analyst at IHS Emerging Energy Research, the technological advances that have enabled the trend, have been part of a steady stream of improvements, rather than a breakthrough in technology, with blades increasing incrementally in size. Jesse Broehl, an analyst at Make Consulting, notes that a 5-metre increase in rotor diameter for a 1.5MW machine with a 77-metre rotor diameter, the annual energy produced (AEP) at a medium wind-speed site will increase 5-7%, and by 8-9% at a low wind-speed site.

But for all the benefits of Class III sites, a number of challenges remain. The main one is the obvious lack of wind resource, notes Dan Bernadett, chief engineer at renewable-energy consultancy AWS Truepower. Indeed something like 20-30% more wind resource can be harvested at a Class I wind site, says Gamesa's Diaz. Hence the constant stretching of blades — a limit has not yet been reached technologically, says Bernadett — and also of tower height. Extreme wind gusts can challenge turbines designed for lower wind-speed areas, especially in an area with hurricane potential such as the south-eastern US. "Big rotors also capture more wind when you don't want them to," says Bernadett, whose company produces an extreme wind map.

Other challenges include the transportation to the site of larger towers — with wider and/or heavier bases — and longer, heavier rotors. If a blade is more than 40 or 45 metres long, a truck can only carry one rather than two as is usually the case, says Broehl. That will increase a developer's transport costs.

Because of the size of low-wind towers, possible solutions are being considered such as concrete bases cast in place, a steel-concrete hybrid, a three-legged "tripod" base and a six-sided bolt-together tower. Another option is the "Hi-Jack" technology developed by GE subsidiary Wind Tower Systems allowing the nacelle and hub to be installed on the towers without the need for large cranes. Construction of a low-wind project may also require, for example, larger cranes.

The larger blades can also be a problem. They can be so cumbersome when transported by road.

Uncertainties

Local opposition can be stronger for low wind-speed sites if they are closer to built-up areas, notes Alonso of EDPR. And wind-resource prediction at proposed sites for taller turbines can be more uncertain, says Clint Johnson, a senior vice-president at renewable-energy consultancy GL Garrad Hassan North America. That is because more extrapolation of data is needed to measure wind generation from a higher hub height or larger rotor diameter. Remote sensing measurements, such as sonic detection and ranging or light detection and ranging, have the potential to mitigate some of the uncertainty as the industry adapts to incorporate remote-sensing data into assessment methodologies, he says.

In contrast, servicing of the turbines can actually be easier in lower-wind sites, says Cukurs. "It's easier to maintain than on a mountain when the wind is screaming all the time." This in turn makes it easier to have higher reliability, he adds.

Lower power but for longer

A lower specific power ratio — the relation between power rating and rotor-swept area — on these newer models means that they can produce more full-load compared to older models of similar megawatts. This in turn produces a higher capacity factor — the measure by which the industry rates a turbine's output.

According to industry insiders there is another, less well-known motive behind the trend for large rotor blades. It is also designed to enhance competitiveness by offering improved lifecycle performance. This strategy, popular with established European and US suppliers, is said to be partly fuelled by fears of increased pressure from lower-cost Asian suppliers. Technically, lowering turbine- specific power ratings offers several additional benefits such as improved utilisation of the electricity distribution system. It also contributes to higher grid network base-load levels, providing substantial savings on required (fossil-based) reserve power capacity.

In practical terms, rotor diameters of 2MW turbines have increased from about 70-80 metres a decade ago to around 90-100 metres today. Power values for wind turbines at the turn of the century were typically 0.40-0.50 kilowatt per square metre, which is significantly more than the 0.19 kW and 0.31kW given for a number of the newly introduced or announced Class III turbines.

Courtesy: Wind Power Magazine

INDUSTRY NEWS

An Important Decision by MNRE

F.No.51/55/2011-WE
Ministry of New and Renewable Energy
Wind Energy Division

Block – 14, CGO Complex,
Lodhi Road,
New Delhi 110 003
Date 01.08.2011

Subject : **Wind Power Density criteria for development of wind power projects – removal regarding.**

This Ministry vide its circular dated 27.6.2002 had issued a guideline to consider Wind Power Density (WPD) of 200 watt/m2 at 50 m. hub height as the minimum requirement for suitability of wind power project development. After detailed discussions with Wind Power experts and policy makers, it has been observed that this provision did not hold relevance any longer and with change in wind turbine technology and better efficiency, even the lower and regime have become exploitable.

2. In view of the aforesaid opinion of experts, it has been decided that **hereafter, no restriction will exist of Wind Power Density criteria as far the development of wind power project is concerned.**

s/d
(G.UPADHYAY)
Director

MY JOB TALK

By **Ms. Shwetha Bandekar,**
Company Secretary

"One of the symptoms of an approaching nervous breakdown is the belief that one's work is terribly important." - **Bertrand Russell.**

On a serious note,I have been asked to share my experience at Global Wind Power Limited, so here it goes…

Have to admit that, save the first couple of days when I'd joined in, I have never been given to feel that this was a new place that I had come to. People have very warmly accepted me.

Albeit the only lady in office at the time of joining, I never had any kind of insecurities. This was a big relief as I had major apprehensions of blending in here.

I have experienced many things out here - beginnings of beautiful friendships, bombarding of deadlines (not very beautiful), easy ambience to work in, independence to work and a lot of thought provoking events.

They say that as you move ahead in life, all that you have gone through contributes to your personality. I am going to have a huge contributor in all of you.

All those whom I have interacted with, have been extremely patient and understanding with me in all respects, be it explaining an assignment or follow up.

I take this opportunity to thank each one of you to have made my journey through this phase in my life so memorable.

Ending this on a lighter note, would want to quote Albert Einstein's absolutely practical words - "If A equals success, then the formula is A equals X plus Y and Z, with X being work, Y play, and Z keeping your mouth shut."

JOKES CORNER

1

Teacher: Which book has helped you most in your life ?

Student : My Father's cheque book ..

2

A man wanted to sell his Dog ...
A buyer asked him : Is this dog faithful ?
The man replied : Yes , I have sold him three times but he returns to me ...

3

A boy prayed : Oh god, give me one bag full of money, a job, one big vehicle and many girls !
God : Your wish is fulfilled He became a CONDUCTOR in a Ladies bus!!!

By : Ms. Balambika, HR Team, Chennai.

4

Must help the wife

Keshav goes to see his supervisor in the front office.
"Boss," he says, "we're doing some heavy house-cleaning at home tomorrow, and my wife needs me to help with the moving and hauling of stuff."
"We're short-handed, Keshav" the boss replies. "I can't give you the day off."
"Thanks, boss," says Keshav" I knew I could count on you to help her instead of me. !"

By :
Mr. Bijaya Muduli, Admin Team, Silvassa.

GLOBAL WIND POWER LTD.

e-newsletter - October 2011

Start of 2.5 MW Tower despatch from Silvassa

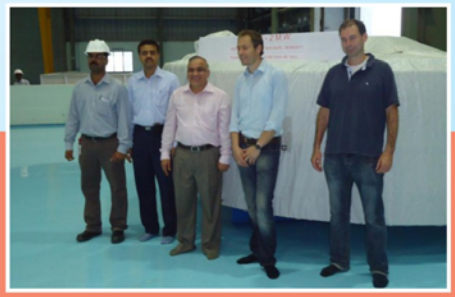
2.5 MW Tower creators

Flag hoisting at Silvassa on Independence Day 2011

Salutation to Mother Nation on Independence Day 2011

International Delegation from CWET visited our Silvassa Plant and appreciated our Facilities and hospitality

Lagerway Technicians working at our 2 MW Plant



Lagerway Team with our CEO and Sr. Vice President

Our Silvassa 2 MW Team and Lagerway Team with the CEO