

European Future Energy Forum And Investment Opportunities

Nov 10 2011, 16:10 | By Edward Schneider | Seeking Alpha | includes: [ALSMY.PK](#), [FAN](#), [GCTAY.PK](#), [GE](#), [HLXW.PK](#), [MY](#), [PWND](#), [RPWSF.PK](#), [SI](#), [VWSYF.PK](#)

I recently attended the European Future Energy Forum (EFEF) conference in Geneva. I listened to an overview on renewable energy, a wind energy panel discussion, another panel on emerging alternatives - geothermal, biofuels, and wave energy - and walked the exhibition floor. The clean-tech sector is currently out of favor, and attendance was on the light side.

The long-term renewable energy outlook is positive. Long-term demand will be driven by global population growth to 9 billion in 2030 versus 7 billion today, with high-energy consuming urbanites growing faster. Declining traditional energy infrastructure investment in oil, coal, and especially nuclear will not be able to keep up with this unsustainable demand, leading to a shift towards new energy sources. Furthermore, these new energy sources are renewable with a smaller carbon footprint.

The current demand-supply renewable energy picture is less rosy. Subsidized demand from governments has been cut back due to fiscal constraints. There is an oversupply of vendors stemming from a previous clean-tech investment bubble and China vendor subsidies that needs to consolidate more (especially on the solar side). A panel expert predicted renewable energy supply-demand will come back into balance in 12-18 months, but with a caveat that government balances and economic conditions improve.

Over the next three-to-five years, clean-tech should start experiencing better days. Technology advances and rising economies of high-scale production should lead to lower costs per watt of energy, which can then be partially passed onto consumers. This declining-cost innovation advantage is almost non-existent in traditional energy sources. Non-nuclear mandates from European countries like Germany and Switzerland, and rising Asia energy needs should boost demand. Thus, renewable energy supply and demand should come into balance within a few years - even if additional solar and wind capacity come on line.

The wind sector supply currently exceeds demand, with the minor consolation that solar energy's oversupply issue is even worse. 40GW of wind capacity was added in 2010, which was less than the previous year's increase. Global wind capacity is expected to increase 2.3x from 195GW in 2010 to 440GW of cumulative capacity by 2015. Given recent announcements by wind turbine vendors, some of those future capacity additions are now in doubt. Wind has the following pros and cons:

PROS	CONS
Low cost of energy per watt in good locations	Power variability in onshore locations
Low CO2 emissions	Noise and other aesthetic hindrances
Creates a lot of jobs	Not suitable for all geographies
Smaller systems can be low maintenance	High capital & maintenance costs for large units

One small company exhibiting at the EFEF conference, City Windmills (CYW.DE), appears to avoid most of these cons. CYW's small wind turbine design is cheap, vibration and noise

free, small-size with low maintenance, and produces energy at low speeds. But I will talk more about CYW later in this article. First, I would like to address the large wind market opportunity. As an investor, I prefer scalable business models and attractive valuations. I tend to shy away from project financing with large upfront costs. Thus, my preference would be to focus on the wind turbine vendors with technology and cost advantages, and to avoid the wind power utilities, many of which require dilutive financing before achieving hoped-for future cash flows down the road. That said, today, neither the large wind turbine vendors nor their wind-power generating customers have much visibility in the current weak market environment.

Quoted pure-play, large wind turbine vendors that have already made the massive investment for high-volume manufacturing include Spain-based Gamesa ([GCTAY.PK](#), GAM.MC), Switzerland-based Repower ([RPWSF.PK](#), REPI.SW), Denmark-based Vestas Wind ([VWSYF.PK](#), VWS.CO), India-based Suzlon (SUZLON.BO), and China-based China Ming Yang Power Group ([MY](#)). In addition, conglomerates that also compete in the large wind turbine market include U.S.-based General Electric's GE Energy division ([GE](#)), Germany-based Siemens ([SI](#), SIE.DE), and France-based Alstom ([ALSMY.PK](#), ALO.PA). Two exchanged traded funds are First Trust Global Wind Energy ([FAN](#)) and Power Shares Global Wind Energy ([PWND](#)).

Name	Ticker	Price	YTD chg	Mkt Value	Net Debt	LTM Sales	EV/Sales
Gamesa	GCTAY.PK, GAM.MC	\$0.90	-41%	\$1.11B	\$0.74B	\$4.07B	0.5x
Vestas Wind	VWSYF.PK, VWS.CO	\$2.77	-55%	\$2.95B	\$1.45B	\$10.19B	0.4x
Repower	RPWSF.PK, REPI.SW	CHF305	-28%	\$1.12B	\$0.12B	\$2.66B	0.5x
Suzlon	SUZLON.BO	INR35.70	-35%	\$1.27B	\$2.22B	\$4.22B	0.8X
Ming Yang	MY	\$2.67	-77%	\$0.33B	\$0.20B	\$0.95M	0.1x

While large wind turbine vendors have been profitable, that is quickly changing, which is why I left out EBITDA and EPS numbers in the above table. In general, cyclical companies with high-fixed costs should be viewed on a EV/Sales, P/BV, or Price-to-cyclical-peak earnings basis. Also, these companies should avoid high debt levels, given their cyclical cash flows.

Highlights from a recent announcement from Denmark-based Vestas Wind sums up the current dismal state of affairs:

- confirmed third-quarter losses and a weakened full-year outlook given in a profit warning late last month, jettisoned its 2015 targets.
- "Due to the expected weak economic growth in the OECD area, Vestas does not expect to be able to reach the earlier announced ... ambition of 15 billion euros (\$21 billion) in revenue and an EBIT margin of 15% in 2015," Vestas Wind Systems said.
- aimed to cut fixed costs, including job cuts, by at least 150 million euros (\$207 million), with full effect from the end of 2012, to boost efficiency and help offset price increases on some components.

- in the medium term it aimed to reach a high single-digit EBIT margin with a normalized US market and to increase its market share. however,
- Vestas is preparing for the US market to remain abnormal in 2012-2013 because of the expected expiry of energy production tax credits and lack of visibility on whether those will be replaced with a new scheme, which puts 2013 US revenues at risk.
- The Spanish turbine market had come to a standstill, and no recovery was expected there for the next few years, and other southern European markets are also weak due to the sovereign debt crisis.
- "Even the Chinese market...has in 2011 turned out to be quite challenging".
- warned that a delay in commissioning a generator plant in Germany had forced it to postpone delivery of a number of projects mainly in Europe, causing a third-quarter loss and weakening full-year prospects.
- confirmed a third-quarter operating loss of 92 million euros against a profit of 271 million in the same quarter last year.
- The stock plunged 24% on Monday, October 31, after the company's weekend profit warning, and is down 55% this year.

Judging by the numbers alone, Ming Yang appears to be relatively more attractive than its large wind turbine peers. Ming Yang is the cheapest, is the only company above with a net cash position, and has exposure to the faster-growing China market. One caveat is that China-based companies have a history of questionable accounting practices, and while being NYSE-listed lowers that risk, it does not eliminate that risk.

In the long run, those large-turbine wind manufacturers focusing on offshore windmills should post above-average growth rates. Offshore windmills are a nominal part of the market today, but are expected to grow dramatically in coming years. Offshore wind is more complex and expensive to set up, but it avoids some of the pitfalls of onshore (i.e. land-based) wind. Specifically, power variances are much less than onshore wind, and no land zoning constraints from locals due to noise and aesthetic issues. Vestas Wind and PNE Wind (PNE3.DE) announced a large offshore wind project earlier this year. In general, Vestas Wind is very competitive in terms of economies of scale and technological know-how.

Renewable energy adoption will be aided by US government renewable energy market penetration targets, irregardless of whether or not the U.S. Government reinstates its energy production tax credit in 2013.

Year	2005	2010	2015	2020	2030
Mandated	2%	8%	14%	22%	30%
Actual	1.2%	3.8%	-	-	-

There is a lot of room for renewable energy to move up the adoption curve in the future. This adoption-driven opportunity is for small wind as well as large wind turbines.

The small wind turbine market is less mature with higher growth potential than its large wind turbine brethren. Small wind turbines most realizable market opportunity are commercial building rooftops. Just in the U.S. market, there are 139 million active workers in US buildings or factories, each consuming 1800 kWh per year. With 35% of office buildings that can be served by small windmills (on a flat rooftop or surrounding land), 87.5 million MWh needs to be supplied. The potential small wind market for US corporate buildings is 14.5

million small windmills, in order to meet this 87.5 million MWh target. At \$12,000 to \$15,000 per windmill, this is a \$180 billion renewable energy market opportunity in the US market alone. This \$180 billion opportunity would then be cut-down by inertia, wind sharing this market with solar panels, and several small wind competitors. But even a 5% market share provides cumulative revenues of \$9 billion from the US corporate market for anyone company is quite attractive. So the potential market is there, and it becomes more of an execution story. The key is which small wind turbine company will win the land grab, and become the low-cost provider.

Small-wind turbine competition is fragmented. All companies are small, including 35 commercially-viable ones in the US and about 100 worldwide with product today. Quoted small wind turbine peers include US-based Sauer Energy ([SENY.OB](#)) and Helix Wind ([HLXW.PK](#)), and Canada-based Cleanfield Alternative Energy (AIR.V). Currently priced at \$0.47, SENY has a market cap of \$36 million, no revenues, and a negative LTM EBITDA of -\$1.2 million. HLXW had its market cap wiped-out by a death warrant spiral that left the company with 2.65 billion shares and cut the price down to only \$0.0001, leaving a current market cap of just \$265k. HLXW's LTM sales were \$99k, after peaking at \$1.2 million in 2009. LTM EBITDA was -\$2.1 million, and HLXW just defaulted on some promissory notes. Currently priced at C\$0.06, AIR.V has a market cap of \$2.5M plus \$1.5M in net debt. LTM revenues were \$0.5M, and LTM EBITDA was -\$1.6M. Judging strictly by the numbers, CYW has less debt, lower cash burn, and/or a lower enterprise value than its peers.

Name	Ticker	Price	Mkt Value	Net Debt	LTM Sales	LTM EBITDA
Cleanfield	AIR.V	C\$0.06	\$2.5M	\$1.5M	\$0.5M	-\$1.6M
Helix Wind	HLXW.PK	\$0.0001	\$0.3M	\$0.7M	\$0.1M	-\$2.1M
Sauer Energy	SENY.OB	\$0.47	\$36.1M	-\$0.2M	none	-\$1.2M
CityWindmills	CYW.DE	€0.10	\$1.5M	-\$0.2M	none	-\$0.3M

In addition, CYW has a low-cost manufacturing facility agreement that gives it a cost advantage over other wind turbine manufacturers. Thus, CYW's payback period is 2 years (with advertising on its panels) or 5 years without advertising, versus 7 to 8 years for other wind energy peers, and 12 years for the average solar PV installations. CYW can very profitably sell a unit at \$12,000, which is half the price of competitors.

CYW's manufacturing support comes from a U.S. government-funded, non-profit manufacturing group. The CEO, Roland Bopp, has worked with this group in the past, and helped establish a \$200 million solar module venture. CYW is now leveraging Mr. Bopp's relationship with this group to achieve potentially similar results. A Teaming Agreement was already signed in August 2011, and a Production Agreement is being finalized currently. For a young company like CYW, the competitive advantages of this particular manufacturing partner are huge:

- Manufacturing facility is paid for (\$15 million in savings)
- Low labor costs - providing a blended rate of \$10 to \$15 per hour depending on volume.
- Raw materials are currently under discussion in the Production Agreement, but there is a decent chance of shared raw materials costs, at least until CYW becomes larger. In

any case, CYW will benefit from the very low material costs that this \$1 billion revenue group extracts from its suppliers.

- Account receivable financing will be provided by CYW's manufacturing partner.
- A sales pipeline into the US Federal Government market (with big potential as shown above). This partnership includes joint marketing and sales efforts to the Federal Government customer agencies located in the United States and overseas. In fact, one of the largest U.S. agencies that purchased solar panels in the above-mentioned venture through Mr. Bopp, already expressed an interest in small wind turbines to augment their solar installations.

Unlike competitors, CYW is not forced to make large facility outlays or expensive outsourcing contracts to create initial revenues. Consequently, CYW has a low cash-flow breakeven point of \$5-to-\$10 million in revenues (depending on how fast management wants to plan for future growth), requiring just \$3 million in funding to reach breakeven. The only large capex outlay being passed onto CYW is for a specialized computer numerical control machine for metal cutting and shaping that costs \$250k.

The commercial sector business, however, will require another production source outside of its U.S. government-funded manufacturing partner. Management is currently exploring production sites in New York and Eastern Europe. Management also plans to add advertising on the panels, mainly to the commercial market, which is not currently being offered by competitors. Commercial sector and advertising revenues, however, are not needed for CYW to reach breakeven.

CYW has risks. The company has not generated any revenues yet. Management needs to complete a financing round to produce units to meet demand. While the CEO is solid, the team is too small and needs to expand. Even though CYW has an efficient small vertical access design and patented breaking system, pricing is the primary demand driver. But these risks are more than priced in. At a current price of \$0.14 (€0.10), CYW only has a \$1.5 million (€1.1 million) market cap.

Below are financial projections reflecting about a 50% haircut compared to those of management and a fairly thorough [research report](#) from Silvia Quandt Research (a German institutional broker).

\$, millions (excl. units, EPS)	2011	2012	2013	2014	2015
total windmills units sold	1	1,350	3,500	10,000	16,000
US Govt.	1	1250	2500	6000	9000
Commercial	-	50	500	3000	5000
Advertising	-	50	500	2000	3000
US Govt. Revenues	-	12.500	25.000	54.000	72.000
Commercial	-	0.675	6.75	36.000	55.000

Revenues					
Advertising Revenues	-	0.675	6.75	24.000	33.000
Total Revenues	-	13.850	38.500	114.000	160.000
Gross Profit	-	4.848	13.668	41.040	58.400
% of Revenues		35.0%	35.5%	36.0%	36.5%
Cash Opex	0.500	3.865	10.523	23.024	32.800
EBITDA	-0.500	0.983	3.145	18.016	25.600
% of Revenues	NA	7.1%	8.2%	15.8%	16.0%
Depreciation	-	1.300	2.300	3.300	4.300
Pretax Income	-0.500	-0.317	0.845	14.716	21.300
Taxes	-	-	0.296	5.151	7.455
Net Income	-0.500	-0.317	0.549	9.565	13.845
% of Revenues	NA	-2.3%	1.4%	8.4%	8.7%
EPS	-\$0.04	-\$0.02	\$0.03	\$0.52	\$0.75
Shares	11.2	17.2	18.2	18.4	18.5

These financial projections should be taken with a grain of salt as CYW is at an early stage of development today. Still, responses from potential customers, including commercial groups such as IKEA and U.S. government agencies, have been positive. If management executes anywhere close to these numbers, then this stock would be a ten-bagger. On the other hand, if the company never gets out of the gate and cannot raise capital, then we're at zero. So, the return spectrum is barbell-shaped, but with a very attractive risk-reward ratio at today's miniscule valuation.

Everything in life is timing. Not too many years ago, a renewable energy start-up would have had a market cap of over \$100 million with investors fighting to get into the deal. We have profited over the last few years from shorting certain hyped clean-tech companies. Now nobody wants to touch clean-tech start-ups because of the awful market environment. But that is the best time to start the business, and be the first-mover when the market turns. And ironically, that is also the time for an investor to get the most value and earn the highest returns.

Disclosure: I have no positions in any stocks mentioned, and no plans to initiate any positions within the next 72 hours. I may initiate a long position in CYW.DE.