Romanian wind power gathers pace

Joe Wilcox, Bucharest

Fueled by renewable energy development incentives and the lure of previously untapped resources, wind energy developers are poised to transform the composition of Romania's renewable energy sector in the coming years. As a result of enticement programs such as the country's green certificates market, which supplies a supplementary stream of revenue to renewable energy producers, some 2,900 MW of new installed wind generation capacity is planned over the next four years.

"The return you get for wind energy is equal to the average in Europe," Romanian Wind Energy Association (RWEA) Executive Director Dana Duica told Platts. "You get the price of energy plus two green certificates, which right now are at the maximum price of €55. In theory, this makes almost €140 per megawatt but in practice the law is not applied so producers still get only one green certificate at present. As more green certificates will be issued, the price will go down over time, but the mechanism will need to insure profitability in the long term."

These incentives have attracted investors from across Europe and include both well-known international energy giants as well as smaller Romanian participants. The largest project to come online this year will be the 250-MW wind farm developed by Czech energy company CEZ along with local partner Monsson Alma. With the first turbines already erected near the town of Fantanele in the Dobrogea region, the park will eventually boast 100 GE 2.5xl wind turbines upon completion. The Fantanele park is only the first stage in a larger €1.1 billion ($1.47 billion), 600-MW project which includes two more developments of 50 MW and 300 MW to be completed in 2011.

EDP Renovaveis (EDPR), the renewable arm of Portugal-based EDP-Energías Group, is also developing a number of large wind parks slated to come online this year in the Dobrogea region, including 190-MW and 90-MW developments powered by V90-3.0 Vestas turbines. EDPR entered the Romanian market in October 2008 by purchasing 85% of Renovation Power SRL and Cernavoda Power SRL, which in turn own several wind projects in various stages of development totaling 756 MW.

Other major European companies are involved in the earlier stages of large-scale wind parks throughout the country including Verbund of Austria with a 200-MW project to be completed in 2012 and Italy-based Enel with a 160-MW project also to be completed in 2012. Dutch wind power developer Global Wind Power has a 40-MW wind farm in Dobrogea scheduled to come online in 2010.

In addition, a number of smaller projects developed by local Romanian companies are scheduled to become operational in 2010. These include a 10-MW farm in the Tulcea region being developed by Blue Planet and four projects of Monsson Alma, ranging from 0.9 MW to 5 MW in the Dobrogea and Banat regions.

Gaining momentum

Although wind power generation has been negligible to date, with just 14.1 MW of installed capacity in the country as of 2009, this figure is expected to grow nearly forty-fold in 2010 alone to 553.1 MW, according to forecasts from the RWEA. This rapid growth is set to continue for at least the next three years as additional installed capacity is estimated to increase by 695.5 MW, 780 MW and 866.5 MW in 2011, 2012 and 2013, respectively.

With nearly 3,000 MW of new wind power capacity primed to be delivered over the next four years, the sector is already showing signs of maturity, as it enters a new phase of development.

"One of the things we've seen is an increase in the development of wind projects under 20 MW," Sebastian Enache, director of Monsson Alma's subsidiary Wind Power Energy, told Platts. "People are not looking to develop the larger 50-100 MW projects anymore."

Development of these wind farms has so far been primarily based in the wind rich region of Dobrogea in eastern Romania, which benefits from strong, steady winds coming in from the Black Sea. However, as the prime real estate becomes scarcer, developers are looking to new locations, such as the western and central regions.

"The trend is that they want to move away from the fully booked areas in Dobrogea where the authorization is more difficult and to go to areas where they find it easier," Duica told Platts. Other regions of interest include Moldova (particularly the counties of Iasi, Galati and Vaslui) and Banat in western Romania. Offshore wind generation in the Black Sea is also a possibility in the longer term, although this market segment is not expected to be tapped until the less-expensive onshore sites are depleted.

Carrot and stick

Historically dominated by Cold War era-hydro power, which still leads Romania's renewable energy power production (ERES), the country's green certificate (GC) system is now enticing developers to look into new renewable options. Since it was adopted in 2005, the country's renewable energy legislation and GC market have since undergone a series of amendments and alterations.

Romania's current ERES legislation utilizes a green certificates market as the primary incentive for green energy development rather than a feed-in-tariff system employed by many other EU countries. Under this process, power suppliers must purchase a certain number of green certificates in order to fulfil their annual quota, the amount of which is determined by how much power is supplied to end consumers in a year.

Conversely, ERES producers are granted a certain number of GCs for each MWh of energy they produce, which they can subsequently sell through the centralized green certificate market or through bilateral contracts. Although current legislation allocates each ERES producer one green certificate per MWh produced, amendments to boost these values are currently making their way through the Romanian and EU decision-making bodies.

The mandatory quota for electricity produced from ERES sources as a percentage of total electricity supplied to end consumers for 2010-2012 is 8.3%, after which it will increase each successive year until it reaches 16.8% in 2020. Unfortunately, the annual quota has so far yet to be met due to the vast undersupply of GC producers.

Grid connection permits issued for wind power generation

	Company/Investor	Project Name	Location (County)	Installed Capacity (MW)	Issue Date
1	SC Mw Team Invest Srl	Fantanele Est	Constanta	90	14.04.2008
2	SC Tomis Team Srl	Fantanele Vest	Constanta	255	14.04.2008
3	SC Ovidiu Development Srl	Cogealac	Constanta	255	14.04.2008
4	SC Romwind International Srl	Mihai Viteazu	Constanta	29.9	18.02.2009
5	SC Neg Proiect 1 Srl	Pantelimon	Constanta	1.6	06.03.2009
6	SC Romwind Srl	Pantelimon	Constanta	2.4	12.03.2009
7	SC Romwind Srl	Ciocarlia	Constanta	4	12.03.2009
8	SC Neg Proiect 2 Srl	Mihai Viteazu	Constanta	2.4	12.03.2009
9	SC Energii Alternative Srl	Mihai Viteazu	Constanta	0.8	12.03.2009
10	SC Neg Proiect 1 Srl	Mihai Viteazu	Constanta	3.2	12.03.2009
11	SC Energii Alternative Srl	Biruinta	Constanta	2.4	12.03.2009
12	SC Blue Line Energy Srl	Valea Nucarilor	Tulcea	1.7	05.02.2009
13	SC Eviva Energy Srl	Babadag 2	Tulcea	8.4	20.02.2009
14	SC Electricom Sa	Casimcea	Tulcea	10	14.04.2009
15	SC Intertrans Karla Srl	Casimcea	Tulcea	5.85	27.04.2009
16	SC E.K.W. Energy Srl	Fagarasu Nou	Tulcea	6.69	22.04.2009
17	SC Dinamic Agro 99 Srl	Fagarasu Nou (Magurele)	Tulcea	10	22.04.2009
18	SC Light Energy Srl	Nalbant	Tulcea	0.6	22.04.2009
19	SC Eol Power Company Srl	Murighiol	Tulcea	7.5	01.04.2009
20	SC Eco Power Wind Srl	Mireasa	Constanta	10	14.05.2009
21	Chimconsult Srl	Fagarasu Nou	Tulcea	3	29.06.2009
22	SC Wind Stars S.R.L.	Silistea	Constanta	5	25.06.2009
23	SC Holrom Renewable Energy S.R.L.	Baia	Tulcea	5	07.05.2009
24	SC Blue Energy/blue Line Impex Srl	Corugea-cismeaua Noua	Tulcea	70	17.07.2009
25	SC Blue Line Impex Srl	Agighiol-valea Nucarilor	Tulcea	70	17.07.2009
26	SC Blue Valea Nucarilor/ Blue Line Impex Srl	Agighiol-valea Nucarilor	Tulcea	70	17.07.2009
27	SC Blue Line Impex Srl	Agighiol-valea Nucarilor	Tulcea	25	17.07.2009
28	SC Electro Grup Srl	Agighiol-valea Nucarilor	Tulcea	10	17.07.2009
29	SC Blue Line Impex Srl	Agighiol-valea Nucarilor	Tulcea	35	17.07.2009
30	SC Wind Power Park Srl	Dorobantu	Constanta	45	29.07.2009
31	SC Renovatio Power Srl	Sarichioi	Tulcea	33	14.07.2009
32	Land Power Srl	Cerna	Tulcea	72	03.08.2009
33	SC Eviva Nalbant Srl	Babadag 1	Tulcea	33.6	03.08.2009
34	SC Holrom Renewable Energy S.R.L.	Baia 3	Tulcea	10	14.07.2009
35	SC Total Electric S.R.L.	Topolog	Tulcea	15	14.09.2009
36	Total Natural Srl	Corbu	Constanta	0.6	01.10.2009
37	Eol Energy Moldova Srl	Mahmudia	Tulcea	5	15.10.2009
38	Wind Park Invest Srl	Pecineaga 2	Constanta	6	05.11.2009
39	SC Renovatio Power Srl	Pestera	Constanta	90	19.11.2009
40	Tilcof Srl	Casimcea	Tulcea	10	24.11.2009
41	SC Elektra Invest Srl	Tortomanu 1 (Mircea Voda)	Constanta	6	23.12.2009
42	SC Elektra Invest Srl	Tortomanu 2 (Mircea Voda)	Constanta	8	23.12.2009
43	Ewind Srl	Pantelimonu(Crucea)	Constanta	150	04.12.2009
44	Blue Planet Investments Srl	Baia	Tulcea	35	24.11.2009
45	Cernavoda Power Srl	Cernavoda 1	Constanta	69	27.11.2009
46	Cernavoda Power Srl	Cernavoda 2	Constanta	69	04.12.2009
47	Blue Line Energy Srl	Caierac	Tulcea	6.9	16.12.2009
48	Monsson Alma Srl	Targusor(Mireasa)	Constanta	50	08.12.2009
49	Fast Wind Energy Srl	Fagarasu Nou	Tulcea	8	15.01.2010
50	Light Energy Srl	Nalbant	Tulcea	3	01.02.2010
51	Romconstruct Top S.R.L.(Wind Power Park Srl)	Silistea	Constanta	25	11.12.2009
52	Monsson Alma Srl	Galbiori	Constanta	5	04.02.2010

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Although some 240,469 GCs were traded in 2009 (169,880 traded on the centralized market and 70,589 by means of bilateral contracts), a substantial shortfall in the certificates produced resulted in a target quota reduction from 6.28% to 0.589%. Of all GCs issued, those issued for wind power generation accounted for a little less than 6%.

According to data from Romanian power and GC market regulator OPCOM, the 2008 quota was similarly reduced from 5.26% to 0.316%, when a total of 132,445 GCs were issued. Of these, 10,995 (8.3%) were issued for wind generation and 121,450 (91.7%) for hydro generation.

As a result of this skewed ratio, GC prices have remained pegged at the upper limit of the permitted range (which extends from €27/GC to €55/GC) and shows no sign of decreasing in the near future.

"[The new wind generation capacity] will of course increase the number of green certificates traded on the

Grid connection permits issued for wind power generation

	Company/Investor	Project Name	Location (County)	Installed Capacity (MW)	Issue Date
53	Electra Wind Power Srl	Tortomanu	Constanta	8	15.02.2010
54	Romwind Com. Beidaud	Sarighiol De Deal	Tulcea	8	17.12.2009
55	Eolian Proiect Srl	Pantelimon	Constanta	4.8	18.02.2010
56	Wind Power Srl	Limanu	Constanta	10	18.02.2010
57	General Concrete Srl	Nicolae BalceSCu	Constanta	28	02.03.2010
58	SC Ecoprod Energy Srl	Topolog	Tulcea	9.22	16.03.2010
59	Ecoenergia	Stejaru	Tulcea	34	
60	SC Sabloal Energie Eoliana Srl	Pestera	Constanta	204	
61	Eolica Dobrogea Srl	Mihai Viteazu	Constanta	80	
62	SC Palace Construct Srl Campina	Com. Foltesti	Galati	9.8	23.01.2009
63	SC Palace Construct Srl Campina	Com. Foltesti	Galati	10	28.09.2009
64	Europp Energocons	Frumusita	Galati	33	23.01.2009
65	SC Corni Eolian Srl	Corni	Galati	70	17.02.2009
66	SC Custom Line Energy Srl	Com. Varlezicom. Corni	Galati	10	12.02.2009
67	SC Custom Line Energy Srl	Com. Varlezi	Galati	6	12.03.2009
68	SC Bridgeconstruct Srl Iasi	Com. Cudalbi	Galati	10	12.03.2009
69	SC Panel International Srl Ploiesti	Com. Topliceni	Buzau	9.4	23.04.2009
70	SC Panel International Srl Ploiesti	Com. Calugareni	Prahova	9.4	23.04.2009
71	SC Gamisa Energy Srl	Vanatori	Galati	10	01.09.2009
72	SC Odis Srl, Sat Urleta, Com. Banesti, Jud. Prahova	Vanatori	Galati	10	01.09.2009
73	SC Alwind Electric Srl	Vanatori	Galati	10	01.09.2009
74	SC Money Invest Srl, Campina, Jud. Prahova	Vanatori	Galati	10	01.09.2009
75	SC Bixenta Impex Srl	Vanatori	Galati	10	01.09.2009
76	SC Ammonit Energy Srl	Vanatori	Galati	10	01.09.2009
77	SC Palace Construct Srl	Vanatori	Galati	10	01.09.2009
78	SC Bigsem Construct Srl	UrleaSCa	Braila	10	14.09.2009
79	SC Lospa Srl	UrleaSCa	Braila	10	14.09.2009
80	SC Domco Energy Srl	UrleaSCa	Braila	10	14.09.2009
81	SC Reifag Electric Srl	UrleaSCa	Braila	10	14.09.2009
82	SC Dan Holding Mgm Srl	Cuza Voda	Braila	6	28/09/2009
83	SC Dan Holding Mgm Srl	Pechea	Galati	6	28/09/2009
84	SC Smart Clean Power Srl	SChela	Galati	8	28/09/2009
85	SC Smart Clean Power Srl	Ianca	Braila	8	28/09/2009
86	SC A-z Market Construction Srl	Bordei Verde	Braila	8	28/09/2009
87	SC Soft Group Srl	Insuratei	Braila	10	28/09/2009
88	SC Trioenergy Srl	Podgoria	Buzau	45	08/10/2009
89	SC Grenerg Srl Satu Mare	SCanteiesti	Galati	1	26/10/2009
90	SC Romstal Imex Srl, Bucuresti	Sat Costi	Galati	0.23	20/11/2009
91	SC Eol Energy Moldova Srl Satu Mare	Varlezi	Galati	6	21/12/2009
92	SC Eol Energy Moldova Srl Satu Mare	Smulti	Galati	2	21/12/2009
93	Pirotehnic O.S.B. Srl	Muntenii De Jos	Vaslui	0.23	29.07.2008
94	Gervis Sa	Bucecea	Botosani	0.03	02.04.2007
95	SC Telesatelit Srl	Sat Dienet Deal	Bacau	0.23	27.03.2009
96	SC Energycum W Srl	Ruginesti	Vrancea	1.2	17.03.2009
97	SC Catalan Electric Srl	Vanatori	Iasi	9	12.11.2009
98	SC Windair Srl	Lipovat	Vaslui	6	28.10.2009
99	SC Btwm Candesti Srl	Candesti	Botosani	0.9	16.12.2009
100	SC Provider Green Srl	Mezaros	Caras-severin	30	10.11.2009
101	SC Provider Green Srl	Macesti	Caras-severin	50	10.11.2009
102	SC Lc Business Srl	Oravita	Caras-severin	9	20.01.2010
103	SC Toplet Energy Srl	Toplet	Caras - Severin	1.8	20.01.2009

Source: Transelectrica

market, but the quota is still very high," Senior Specialist Engineer of OPCOM's Day Ahead Market and Green Certificates Market Department Dida Vladescu told Platts. "In my opinion the price will remain at €55 this year and even in 2011 because the quota is also increasing and the quota is in energy consumed, not green certificates."

Work in progress

Despite the rosy forecasts and hundreds of megawatts of new clean energy on the horizon, there have been some hiccups in the development of the Romanian wind power sector which have given some investors reason to pause before jumping into the market.

"It is difficult to find financing for two reasons, I think," Duica told Platts. "One is the so far unstable legal framework, and the second is the economic crisis."

Much of the legal limbo surrounding the ERES legislation stems from conditions attached to a law passed in November 2008 which was designed to address the shortcomings of previous legislation. One of the articles included in this package requires the approval of the European Commission prior to full implementation of the law, which has yet to be granted. In the meantime, the legislation has been further debated and amended by the Romanian government.

"The main problem is the lack of security of the green certificates promotional mechanism," said Duica. "You cannot find anywhere in the law a statement that surplus green certificates will be bought by a last resort buyer, which would bring comfort to the banks. It just establishes a floor and cap for green certificates that is a minimum and a maximum price through 2020, but there is no certainty that all issued green certificates will be bought. There is the possibility of excess green certificates, which supposes a bigger offer than the demand of green certificates, the opposite of what we have now. In case the quota is reached, there is this possibility that a developer will have some green certificates which are impossible to sell or no one will buy."

As a result of these unresolved issues, many developers and potential lenders (including major banks) remain in a holding pattern and will likely sit on the fence until a final decision is reached.

"The major projects being developed in phases are waiting for money right now, and probably 80% of the projects will be delayed," Sebastian Enache, director of Monsson Alma's subsidiary Wind Power Energy, told Platts. "Investors need more security on the legislation such as when, for how long [the incentives will last], whether or not it will be passed as it is in the Senate now. There is a lot of uncertainty."

When eventually passed (most in the industry believe this will happen before the end of the year), these revisions would provide a significant boost to targeted producers by increasing the number of GC's issued depending on the type of energy. Wind energy producers, for example, would receive two GCs per MWh until 2015, after which the incentive will revert back to the original 1:1 ratio. Photovoltaic generators would receive five GCs per MWh produced and biomass would receive from one to three GCs depending on the technology employed.

Other concerns expected to be rectified in the new legislation include clarification of producers eligible for GCs and for how long the GCs will be issued, contingency plans for an oversupply of GCs on the market, allocation of funds derived from balancing penalties paid by producers, and the matter of who is responsible for connection to the national grid.

Even after the issues of financing, permits and construction have been resolved, developers may still face the dilemma of access to the national electricity grid. Romanian TSO Transelectrica is currently in the midst of a massive overhaul of the network (investing approximately €200 million on infrastructure improvement in 2010 alone), and further expansion into the more remote regions of the country where optimum wind conditions exist is putting additional strain on the company. As of March 2010, Transelectrica had issued 103 grid connection permits for wind power projects totaling more than 2,600MW across the country.

Romania wind energy forecast until 2013

Company	Location	MW to be installed
Miscellaneous companies	Different localities-already running	14.1
Hollrom	Bucovina	5
	Dobrogea	40
	Dobrogea	8
	Bucovina	8
	Dobrogea	8
	Maldavia	5
Blue Planet	Maramures	10
Global Wind Power	Dobrogea	40
Renovatio/ EDPR	Dobrogea	90
	Dobrogea	138
	Dobrogea	30
	Transylvania	24
	Dobrogea	33
	Bucovina	28
Monsson	Maldavia	5
	Dobrogea	5
CEZ	Crisana	300
	dobrogea	300
Bogaris	Dobrogea	72
	Dobrogea	52
	Bucovina	40
IMA PARTNERS+ others	Dobrogea	432
Land Power	Dobrogea	168
IMA Partners+Verbund	Maldavia	642.5
Martifer	Dobrogea	42
	Dobrogea	40
ENEL	Dobrogea	210
EP Global Energy	Dobrogea	80
Karomex	Dobrogea	40
TOTAL		2,909.6

Source: RWEA