Kosovo's first wind farm takes shape

Swiss renewable energy-focused engineering company, NEK Umwelttechnik, expects to start construction of Kosovo's first wind park this autumn, the company's chief executive Christoph Kapp told Platts March 4.

The St.Gallen-based group was awarded March 1 a preliminary operation license by the Energy Regulatory Office (ERO) for the Zatric wind farm in the municipality of Rahovec in the southwestern part of Kosovo, Kapp said. An environmental permit for the project was gained in January. "We think that the first project will be ready to be built by autumn of this year. We have now to fulfil some additional conditions under the license as set out by the regulator and then the project will be fully permitted," he said.

The Zatric wind farm, which is being developed on behalf of its Swiss subsidiary Upwind International I, will have capacity of between 30 MW and 45 MW depending on the type of turbines the company chooses to install, Kapp said. It is scheduled to come online in 2014.

Preliminary energy yield calculations for the wind farm, which is to be built 1,000 metres above sea level, predict annual output of between 87.8 GWh and 127.6 GWh based on an average annual wind speed of about 7 m/s at a hub height of 100 metres. The environmental impact assessment was carried out under the assumption that fifteen 3-MW wind turbines will be installed with a maximal rotor diameter of 122 m and a maximal hub height of 100 m.

The cost of the project based on the installation of a 30-MW wind farm consisting of 15 Gamesa G 97 2-MW turbines with hub height of 90 meters has been estimated by NEK Umwelttechnik at around €53.15 million.

It will be the first of three 30-45 MW wind farms that the company is developing in Kosovo, with final capacity of the other two projects also depending on the type of turbines the company chooses to install, Kapp said. The two projects, within a 15-km radius of each other, are at a less advanced stage.

NEK Umwelttechnik said February 18 that it had submitted an application to ERO to build a second wind park in the municipalities of Suhareka and Shterpce near Prizren. The Budakove wind farm would comprise sixteen turbines of the 2-3-MW class and be constructed at between 1,200 and 1,600 metres above sea level. Measurements at the site show a mean wind speed of approximately 6.5-6.8 m/sec can be expected at hub height. This spring the company would install one or two 60 m-high met masts to validate its assumptions.

Preliminary energy yield calculations for the Budakove wind park predict annual output of between 89 GWh and 133 GWh depending on the turbine model used, based on an estimated average annual wind speed of between 6.8 and 7.1 m/s at hub heights of respectively 80 metres and 100 metres. The total cost of the project based on the installation of a 30-MW wind farm consisting of 15 Gamesa G 97 2-MW turbines with hub height of 90 meters has been estimated by NEK Umwelttechnik at around €59.5 million.

"We reckon that the project will be completely permitted either in the final quarter of 2013 or the first quarter of next year," the company said. Kapp said the project could be commissioned during 2015.

A third project in Cicavices, some 12 km northwest of the airport of Pristina, was initiated several months ago, Kapp said, though it is not expected to be operational until 2016 or 2017. "These are the current scheduled timetables but are far from being fixed in stone," he said, adding that investors will be found for all three projects before planning is concluded or upon receipt of all required construction licences.

Should all three projects be developed, NEK Umwelttechnik would have taken up almost the entire 110 MW wind quota available until 2016-17 under a government administrative ruling, which has fixed a provisional feed-in tariff of €85/MWh for wind.

"Due to concerns for grid stability, they have limited total wind capacity that can be installed by 2020 to 150 MW, and we, with our three projects, pretty much fill up this quota," Kapp said.

According to project documentation prepared this February by the Swiss developer for the Budakove wind project, the government has implemented the required policies to promote and realize wind projects in the country, such as a defined permitting procedure, feed-in tariffs and the procedure for power purchase agreements.

"A Power Purchase Agreement can be obtained for a five-year period with an option for extensions for an additional five years. This period is intended to be extended in the near future to ten plus ten years, as stated by the Ministry of Energy and Mining," it said.

NEK Umwelttechnik first began evaluating the potential for wind energy in Kosovo in 2009 and completed a feasibility study at the end of 2010. Measurements were taken at ten sites across the country over the previous year, providing enough data to produce a wind resource map for the country, and identify suitable sites for development.

In September 2011 it established NEK Kosovo, a 100%-owned local branch in Prishtina, to manage its planned projects in Kosovo and the Balkan region.