

# Kazakhstan may see wind-energy projects by 2012, says UN expert

By Hal Foster



*Kazakhstan could see the start of a wind-power industry within two years*

*ASTANA - Thursday, September 23, 2010* - Kazakhstan may see the beginnings of a wind-energy industry within two years, the head of a United Nations wind-initiative project said in an interview today.

A UN Development Program team has gathered information about Kazakhstan's wind-power potential for 15 years, Ainur Sospanova pointed out.

That potential is huge -- the highest in the world per capita, experts say. So the next step will be companies actually erecting wind turbines.

Sospanova said she believes that will start in 2012.

"We're working with a number of potential investors, both inside and outside Kazakhstan," she said.

They include the wind-energy leaders General Electric of the United States and Samsung of South Korea and Kazakhstan's Caspi Company, she said.

An indication that wind energy in Kazakhstan is ready to move from the drawing board to implementation is the fact that the United Nations Development Program (UNDP) will be wrapping up its project by mid-July. The team has focused not only on gathering data but also on talking up wind

energy's pollution-reduction benefits and working with officials and potential investors to help lay the ground for a commercial industry.

Last year the state-owned power company Samruk Energo signed an agreement with the UNDP to study the feasibility of wind farms at Dzhungar Gates, the Shelek Corridor and Fort Shevchenko. Dzhungar Gates is in eastern Kazakhstan near the Chinese border, the Shelek Corridor is in southern Kazakhstan near the commercial center of Almaty and Fort Shevchenk in Mangistau Oblast in western Kazakhstan.

The studies indicated that all three locations would be good wind-generation spots, Sospanova said, but the Dzhungar Gates location is so remote that it would require a costly connection to the national energy grid.

In addition to the three locations that Samruk Energo studied, the UNDP has identified seven others that would be good wind-power sites. And it will add five more locations to its list soon, Sospanova said.

The other seven initial locations are:

- The capital of Astana in northeastern Kazakhstan.
- Korday village in Zahmbyl Province in southern Kazakhstan.
- The Karkaralinks area in Karaganda Province in central Kazakhstan
- The Ereymentau area in Akmola Province in northeastern Kazakhstan.
- The Arkalyk area in Kostanay Province in north-central Kazakhstan.
- Zhuzymdyk village in South Kazakhstan Province.
- The Karabatan railway station area in Atyrau Province in western Kazakhstan.

Each of the 10 initial locations has an average wind speed of between 12 to 20 miles per hour, about 5.9 and 10.1 meters per second. That's much more than the 6-mile-per-hour or 3-meter-per-second minimum for wind energy.

The Dzhungar Gates location actually has too much wind at times – as high as a near-gale-force 80 miles an hour or 40 meters per second. That kind of velocity can damage turbines.

China is harnessing the wind on its stretch of the Dzhungar Gates by placing its turbines on the sides of the tunnel-like terrain rather than in the middle, experts say. That reduces the wind speed to a level that is brisk but not damaging.

Sospanova said Parliament helped lay the groundwork for commercial wind energy last year by passing legislation guaranteeing that electricity-distribution companies will buy any energy that wind-power companies produce. The government will subsidize the distributors' costs so they don't lose money on wind power.

A shortcoming of the 2009 legislation is that it failed to establish rates at which wind-power companies would be paid. Without rates, investors won't know whether they can recoup their costs – so Sospanova expects legislation next year that will establish rates.

The government's decision to subsidize wind energy reflects the reality that its cost "will be between 12 and 13 tenge (11 to 12 cents) per kilowatt hour, which is twice as expensive as traditional energy," Eduard Bocharov, the director of Samruk-Energo's Long-term Development Department, said a few months ago.

About 88 percent of Kazakhstan's energy comes from burning coal and most of the rest from hydropower.

Coal is a major polluter, affecting people's health, Saspanova noted. It's important that Kazakhstan begin moving toward cleaner energy sources, she said.

Saspanova said "that in some countries – Germany, for example – citizens pay extra for greener energy. Kazakhstan should do that as well."

The research and development institute KazZelEnergoProekt said Kazakhstan could generate 1.82 trillion kilowatts of energy per hour by harnessing all of its wind potential.

If it gets serious about developing the resource, it could be generating 12 percent of its energy needs with wind within a decade, experts maintain.

Government officials have set a more moderate – and attainable – goal of renewable sources generating 5 percent of Kazakhstan’s energy by 2024. Those sources would include solar and biomass as well as wind.

Another statistic that speaks to wind’s potential is that 2 percent of Kazakhstan has an average wind speed of 14 miles per hour or 7 meters per second, Sospanova said. That small percentage covers a lot of terrain because the country is the ninth-largest in the world.

But Kazakhstan isn’t just breezy in pockets. “Fifty percent of the country’s territory has average annual wind speeds of 4 to 5 miles per hour,” said Gennady Doroshin of the UNDP’s Almaty office.