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Pre-Intermediate Student’s Book

Life

Wind power

**00.00–00.28** Around the town of Spirit Lake, Iowa, the land is very flat, and the wind blows across it a lot of the time. It’s not easy to live with, but one school district here is using this wind in order to get an advantage. In Spirit Lake, they’ve built two wind turbines right next to their schools. These turbines are helping the schools to save energy – and money.

**00.28–00.36 Jim Tirevold** The little turbine, since it’s been paid off, has saved the district $81,530.

**00.36–01.00** The Spirit Lake school district built its first wind turbine in 1993. This was the first turbine used to power a school in this part of the US. Since then, the school has constructed a second turbine. Together, the two turbines could save the district $140,000 a year in energy costs. This amount of money is very impressive, but it’s even more impressive if it’s explained in a different way.

**01.00–01.07 Tim Grieves** Well, it will mean anywhere from two to three teachers, which is very important at a time right now.

**01.07–01.11** From the inside, it’s clear just how big the turbines really are.

**01.11–01.14 Jim Tirevold** This turbine stands 180 feet to the hub height.

**01.14–01.20** The turbine is held in place by steel rods that go 25 feet down into a solid foundation.

**01.20–01.27 Interviewer** What type of a wind could this withstand?

**Jim Tirevold** It’s rated to stand up to 130 mile an hour winds.

**01.27–02.44** The strength of the turbines is especially important in a place where tornadoes can – and do – occur. In extremely strong winds, the huge blades of the wind turbines simply shut down, or stop working. The turbines are also very efficient at using the wind. They’ll produce energy in winds of just eight miles an hour.

The smaller turbine sends its power directly to the school itself. The larger turbine sends its power to the local electricity grid. There it can be used by the power company.

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This little school district is able to sell the extra energy that the turbines produce.

The schools aren’t the only ones who are making money in the energy business. In the countryside south of the Spirit Lake schools, more turbines stand near the big silos on the local farms. In this area, 65 farmers have recently allowed energy companies to build wind turbines right next to their fields. Now, farmers can make money from the wind, just as they do from selling their crops. Farmer Charles Goodman thinks he’ll make an extra $6,000 a year from the three turbines on his farm.

**02.32–02.41 Interviewer** So when you see the wind kicking pretty good like it is, that’s money in your pocket, right?

**Charles Goodman** I smile all the time when the wind’s blowing like this.

**02.41–02.57** This piece of the Iowa countryside is just 27 miles long, but it now has 257 wind turbines. These turbines provide enough energy to power a city like Des Moines. That’s 71,000 homes!

**02.57–03.08** The turbines are also providing more than just power. In Spirit Lake, wind power is used for teaching as well.

**03.08–03.17** Physics teacher Jan Bolluyt can’t imagine why schools wouldn’t use wind power.

**03.17–03.23 Jan Bolluyt** When I talk about force, and energy and electricity, they see that we’re producing it right here.

**03.23–03.33** The teachers here encourage students to keep detailed records. They write down the amounts of fossil fuels, such as coal, that are no longer needed for energy for the school.

**03.33–03.45 Jan Bolluyt** We’re talking tons of carbon dioxide. We’re talking tons of sulphur dioxide. We’re talking hundreds of trees. So, you know, it’s not just a small thing.

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**03.45–end** In this part of Iowa, people are using wind power to earn money and to learn about saving the environment. The people of Spirit Lake are using the power of the wind to ensure a better future for everyone!