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# Ancient Italian Town Has Wind at Its Back

By **ELISABETH ROSENTHAL**

TOCCO DA CASAURIA, Italy — The towering white [wind turbines](#) that rise ramrod straight from gnarled ancient olive groves here speak to something extraordinary happening across [Italy](#).

Faced with sky-high electricity rates, small communities across a country known more for garbage than environmental citizenship are finding economic salvation in making renewable energy. More than 800 Italian communities now make more energy than they use because of the recent addition of renewable energy plants, according to a survey this year by the Italian environmental group [Legambiente](#).

Renewable energy has been such a boon for Tocco that it makes money from electricity production and has no local taxes or fees for services like garbage removal.

A quintessential Italian town of 2,700 people in Italy's poor mountainous center, with its well-maintained church and ruined castle, Tocco is in most ways stuck in yesteryear. Old men talking politics fill gritty bars, and old women wander through the market. The olive harvest is the most important event on the calendar.

Yet, from an energy perspective, Tocco is very much tomorrow. In addition to the town's wind turbines, solar panels generate electricity at its ancient cemetery and sports complex, as well as at a growing number of private residences.

“Normally when you think about energy you think about big plants, but here what's interesting is that local municipalities have been very active,” said Edoardo Zanchini, in charge of Legambiente's energy division. “That this can happen in a place like Italy is really impressive.”

Italy is an unlikely backdrop for a renewable revolution. It has been repeatedly [criticized by the European Union](#) for failing to follow the bloc's environmental directives. It is not on track to meet either its [European Union](#)-mandated emissions-reduction target or its commitment to get 17 percent of its total power from renewable sources by 2020, experts say.

Currently, only 7 percent of Italy's power comes from renewable sources.

But the growth of small renewable projects in towns like Tocco — not only in Italy, but also in other countries — highlights the way that shifting energy economics are often more important than national planning in promoting alternative energy.

Tocco was motivated to become an early adapter because Italy already had among the highest electricity rates in Europe, and nearly three times the average in the United States, and it could not cope with the wild fluctuations in fossil fuel prices and supply that prevailed during the past decade.

At the same time, the costs of renewable energy have been falling rapidly. And as in much of Europe, the lure of alternative power here was sweetened by feed-in tariffs — government guarantees to buy renewable electricity at an attractive set price from any company, city or household that produces it.

In the United States, where electricity is cheap and government policy has favored setting minimum standards for the percentage of energy produced from renewable sources rather than direct economic incentives like Europe's feed-in tariffs, stimulating alternative energy has been only mildly successful. But in countries where energy from fossil fuels is naturally expensive — or rendered so because of a carbon tax — and there is money to be made, [renewable energy quickly starts to flow](#), even in unlikely places like Tocco.

With its four wind turbines (two completed in 2007 and two last year), Tocco is now essentially energy independent from a financial standpoint, generating 30 percent more electricity than it uses. Production of green electricity earned the town 170,000 euros, or more than \$200,000, last year. The town is renovating the school for earthquake protection and has tripled the budget for street cleaners.

Kieran McNamara, Italy desk officer for the International Energy Agency, said that although small renewable energy projects were not enough to sustain an entire industrial economy like Italy's, they were important.

“These small projects have their own intrinsic value and make a very, very positive contribution in countries where electricity prices are high,” Mr. McNamara said.

High electricity prices in Italy are a result of various forces, [according to the International Energy Agency](#): Italy has almost no fossil fuels of its own, and until last year, it banned nuclear power

plants; new plants will take a decade to build even if strong public opposition can be overcome. Although Italy has officially opened the former state electricity monopoly, Enel, to private competition, the country does not yet have a functioning market, the energy agency has found.

Large renewable projects are still rare in Italy compared with other European countries because Italian planning and permitting procedures are so complicated.

The type of renewable energy coming from small towns like Tocco depends on local resources. In the northern Alpine counties there is a heavy reliance on hydropower and the burning of agricultural waste. Italy's scorching south tilts a bit more toward solar, although wind, too, is important there because it is by far the most cost-effective renewable technology, the energy agency said.

Tocco itself was primed for success. In a mountain valley that serves as a thoroughfare for passing winds, Tocco was chosen as the site for an early European Union demonstration project in wind power in 1989. It had two inefficient wind turbines installed that lasted about a decade and were not replaced, meeting at best 25 percent of the town's electricity requirements. Residents called them "sacks of noise."

But in recent years, with improved technology, silent turbines and a meager public purse, town officials took another look at wind.

"We knew what we were doing and where to put them," said Riziero Zaccagnini, the town's popular blue-jeans-clad mayor, who came back from studies in Rome to start agitating for new turbines and was elected in 2007.

As is common in both Europe and the United States, the new turbines are owned and operated under a contract with a private energy company. The company installed the turbines and sells electricity to the national grid. Tocco profits because the company leases the land on which the turbines stand and gives the town a cut of the profits it makes from selling electricity generated with local wind.

Though more electricity is produced than consumed in Tocco, its residents do not use the electricity it produces directly because relying entirely on local wind energy could leave the town vulnerable to blackouts during periods of calm.

Impressed with their new turbines, Tocco's residents have lately turned to renewable resources to resolve other civic problems, like a financial scandal at the town's ancient cemetery, a riot of

pastel stucco tombs, festooned with flowers and photographs of departed elders. In the past decade, one management company went bankrupt and another absconded with residents' upkeep fees.

An installation of solar panels now lights walkways, powers the office and generates an income of 1,500 euros a year, or \$2,000, to pay for maintenance. The project has also created new types of work for local electricians.

A growing number of wealthier homeowners are paying these experts to install solar panels. The stucco home of Domenico Marini, a dental technician, has roof panels in addition to a koi pond and garden gnomes. His monthly electricity bills have dropped to \$0 from as much as \$700.

Tocco has won awards from international environmental groups for its efforts in renewable energy. But, said Mayor Zaccagnini, that is not really a strong motivation:

“We’ve gotten lots of kudos from outside, but people here care more that we now have money to fill potholes.”