

Deep in the isolated forests of eastern Serbia a digger gouges a channel through the trees for a pipeline to siphon river water, as the coal-reliant country's efforts to clean up its energy habit triggers a hydro "gold rush".

The remote and sparsely-populated Bulgarian border region of Stara Planina, which means Old Mountain in Serbian, is famed for rugged peaks and pristine rivers cascading through dense woodlands.

But it is at the heart of a backlash against a rash of controversial small-scale hydro projects, which Serbia has encouraged in order to try to meet ambitious renewables targets as part of efforts to join the European Union.

"You are not welcome" reads a signboard in the hamlet of Rakita. The message is aimed at hydropower labourers, who are protected by guards as they work to lay the pipes that will divert up to 90 percent of the local river's water to an energy-generating turbine.

The rural community views the Raktika river, which runs through the village itself, as a lifeline and fears the plant will devastate fish stocks, cause wells to dry up and deprive livestock of water.

Police intervene regularly to avert clashes.

Rakita locals have spent two years fighting against the power plant, holding protests in Belgrade or closer to home in the town of Pirot.

They are not alone.

The battle over energy policy is sweeping through much of the Balkans, where campaigners say the proliferation of small-scale hydropower projects threaten the future of some of Europe's most unspoilt waterways and the vast swathes of flora and fauna they support. Environmental group RiverWatch has said there is a "gold rush atmosphere" in the region over the hydropower projects, with some 3,000 planned, many in otherwise protected areas. The rugged region of Stara Planina, which means Old Mountain in Serbian, is at the heart of a backlash against a rash of contro

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"It would be like destroying cathedrals to build shopping malls to make more money," said RiverWatch founder Ulrich Eichelmann recently in Belgrade.

## Coal habit

Serbia relies on coal for some 70 percent of its electricity, with hydropower accounting for

around a quarter. Wind and solar power currently provide only a tiny fraction of its energy. But the country, which is negotiating EU accession, is keen to reduce reliance on fossil fuels and has signed up to an ambitious renewables target of 27 percent by next year.

The European Commission said the country was “not yet on course” to meet the target in a 2018 report.

The focus has turned to water.

So far, about 100 small hydropower plants have been constructed in Serbia, according to the environment ministry.

The EPS state power company is offering heavy subsidies—committing to buy electricity generated by small hydropower plants at a price 50 percent higher than the market rate. That has attracted wealthy individuals, many with no prior experience.

Contacted by AFP, EPS referred to the energy ministry which did not reply.

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According to Milos Bakovic Adzic, of the Right to Water association, these plants have become an “easy way” to earn money.

The Belgrade lawyer who finances the Rakita plant could not be reached by AFP.

‘No magic wand’

The environmental impact of small-scale hydropower is not a secret, said Dragan Josic, head of the national association of private investors in the sector.

But “it’s nothing compared with the effect produced by coal-fired power plants,” he told AFP.

“There is no magic wand, if we want electricity we have to produce it from the potential we have.”

According to a recent study by the Health and Environment Alliance non-governmental organisation, coal pollution is responsible for premature death of 570 people annually in Serbia, the heaviest toll in the Balkans.

But Ratko Ristic, dean of the Forest sciences faculty at Belgrade University, sees coal as a pragmatic option.

“We simply cannot close the power stations and go back to the stone age,” he said.

According to projections dating from the 1980s, he notes some 856 small hydropower plants were earmarked for Serbia, but argues they would produce only “two to three percent of

our annual electricity needs”.

But they would put “into tubes 2,400 kilometres (1,488 miles) of rivers in the most vulnerable regions”, he said.

RiverWatch and campaigners EuroNatur say there is another way—arguing that nations could meet or even exceed the power from small hydro projects with other renewables, particularly solar and wind.

‘Without drinking water’

In January, Rakita residents found an ally in the environment ministry, which ordered a halt to construction work.

Minister Goran Trivan said at the time that the energy “contribution” of such plants “is small compared to the damage” caused.

But the ban had no effect, because it has to be implemented by other government departments.

Abandoned and dilapidated houses now dot the village, which has seen its population wither from 2,000 people to just 200.

Even if their protest fails, some are determined not to give up.

“We will stay without drinking water and Rakita’s people can move out,” said Dobrica Stoicev, a 59-year-old unemployed worker, sipping his beer in front of the local grocery store.

Source: [phys.org](http://phys.org)