

# The battle for replacing coal with renewable energy in Kosovo

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The World Bank and U.S. government have been planning support for a new coal plant in Kosovo for over a decade. But could the falling cost of renewable energy combined with cutting-edge air pollution research change the equation?

Nearly eight kilometres from the capital city of Pristina, two Yugoslav-era coal-fired power plants continue to generate electricity, heaving masses of particulate matter and trace metals into the air that float directly into the city. After the U.S. Embassy in Pristina started posting the air quality index readings live on its website early this year, citizens took to the streets, demanding cleaner air for all. But for Kosovo, a country living on the

edge of Europe, avoiding coal remains elusive—the lignite heats most homes and powers nearly all buildings, because Europe's newest country is sitting on the world's fifth largest lignite reserve. Kosovo doesn't need to rely so heavily on coal, however. With the falling cost of solar, wind, and now storage, and investment opportunities arising for clean energy options, the people living in Obilic have a clear choice for clean energy— if they're allowed to make it.

Kosovo A, the power plant with the dubious distinction as 'the largest point-source of pollution' in all of Europe, was built in the early 1960s as a mining and electricity generation operation. The mine-mouth plant evicted a number of residents from their homes, and through the years, as more resources have been extracted, it has encroached further upon local villagers' homes, setting off legal debates and a host of controversies surrounding the proposed construction of a new plant. The World Bank and multilateral development banks remain at

the forefront of financing coal versus cleaner renewable energy projects. The banks have been deliberating the construction of a new coal plant for nearly a decade, but will they leave behind a community forced to evacuate due to coal mining or pave a new way forward to finance sustainable energy systems for the poorest, most vulnerable populations?

For nearly 20 years, as villagers in nearby Hade continue to fight for resettlement rights, the World Bank has been breaking its own rules and safeguards to accommodate new coal mining operations, exposing residents who stayed in their homes to continuous harmful dust and constant noise pollution. Efforts to promote energy efficiency and conservation in homes have helped raise awareness, yet still maintain reliance on the dirty low-rank lignite coal for electricity that is stifling economic development.

### The need for green lending

Kosovo, on its own, cannot significantly invest in the energy sector, due to devalued credit and lack of capital. In spite of this, small local solar and wind companies are emerging to generate electricity in one of the sunniest spots across Southern Europe. However, now citizens are faced with the tough task of convincing lenders to invest in the green energy and new jobs that attract innovation and retain the country's talented youth. Without the option of clean electricity from major lenders, Kosovars are stuck paying the high cost of poor health, noxious air pollution, and few job opportunities for advancement and competitiveness.

One more major hitch remains if coal is continued for electricity generation - the dirty nature of the lignite itself.

Scientists at the University of California, Berkeley took samples of the lignite found in Kosovo back to the lab for elemental analysis. The elevated levels of arsenic, chromium and nickel only tell part of the story, showing up in hospital admission records and high rates of air pollution-related respiratory illness. Taking a drive through the coal mine exposes many of the contemporary social issues Kosovo faces, including a lack of jobs, opportunities and mechanisation of dirty industry. The coal plant experiences frequent blackouts and due to a recent power trade dispute with Serbia, stopped generating electricity and slowed down European clocks by six minutes. The mine itself feels strangely open and empty except for the rows of houses perched right next to coalfields, still at odds and in direct conflict with the coal operators.

A five-kilometre-long conveyor belt delivers the lignite coal from the mine to both



Kosovo A and B in an open-air system. There are plenty of hazards for the few mine workers left, including dust exposure to untreated lignite coal containing unsafe levels of arsenic. The youngest populations are most at risk to these hazardous pollution, and to the hoards of youth protesting on the streets of Pristina, better air quality comes at a major tradeoff. If youth have family connections working outside of Kosovo or ability to work elsewhere, they will, and Germany looks pretty attractive for those seeking employment and new opportunities. However, for all the repatriated Kosovars now trained in green, clean-tech economies, why not enable a bank-funded program to repatriate new clean energy jobs in Kosovo? This investment option could make both economic and social wellbeing a priority for future energy infrastructure decisions that also considers future costs of a looming public health crisis.

Part of the conversation surrounding a new 'clean coal' plant omits key information about a supercritical boiler that can generate electricity at a higher efficiency and heat than '60s-era coal plants. Higher temperature boilers can increase the amount of toxic trace metals present in the air emissions escaping the coal plant. New technologies may reduce sulfur dioxide or nitrogen oxides emissions relative to their current levels, but may not completely mitigate the full negative effects of combusting coal. Even the most advanced filters can't change the low quality of the lignite fuel itself, highlighting the challenge for cleaner electricity supply.

### A sustainable path forward

The bright side is that resettlement doesn't need to be the solution anymore for those living next to the exposed, overburdened shadow of the lignite mines. Solar and wind electricity, along with coordinated regional efforts across southeast Europe, could bring cleaner electricity



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to the Kosovo power sector and create new jobs and opportunities that have been missing for more than a decade since the war ended.

A commitment toward European accession could include a jobs creation stimulus package that includes energy efficiency investments alongside supply-side resources to transition Kosovo from lignite toward cleaner electricity that can enable new jobs for the 21st century.

Kosovo is primed to be a major destination situated north of Greece and Macedonia, and close to the pristine Adriatic coastline. With fine wines and coffee industry gaining notoriety across the Balkans, why not ensure the air and water is clean and of high quality?

As great as the macchiatos and burgeoning wine industry, a healthy environment and sustainable energy plan underscores the need to ensure that the future of Kosovo lies in its history, culture and people and not in the millions of tons of lignite best left in the ground. For the financial institutions with clear lending and decision-making power, the responsibility is to invest in the country's most abundant energy resources – that of

solar, wind, small-hydro and geothermal renewable energy, which offer a lower-cost and lower-carbon pathway to sustainability—leaving the coal in the ground and the power with the people. ■

## Biography:

Daniel Kammen has founded or is on the board of over 10 companies, and has served the State of California and US federal government in expert and advisory capacities. He is a professor at the University of California Berkeley, and is the Director of the Renewable and Appropriate Energy Laboratory at the University of California, Daniel has also contributed to various reports of the Intergovernmental Panel on Climate Change.

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