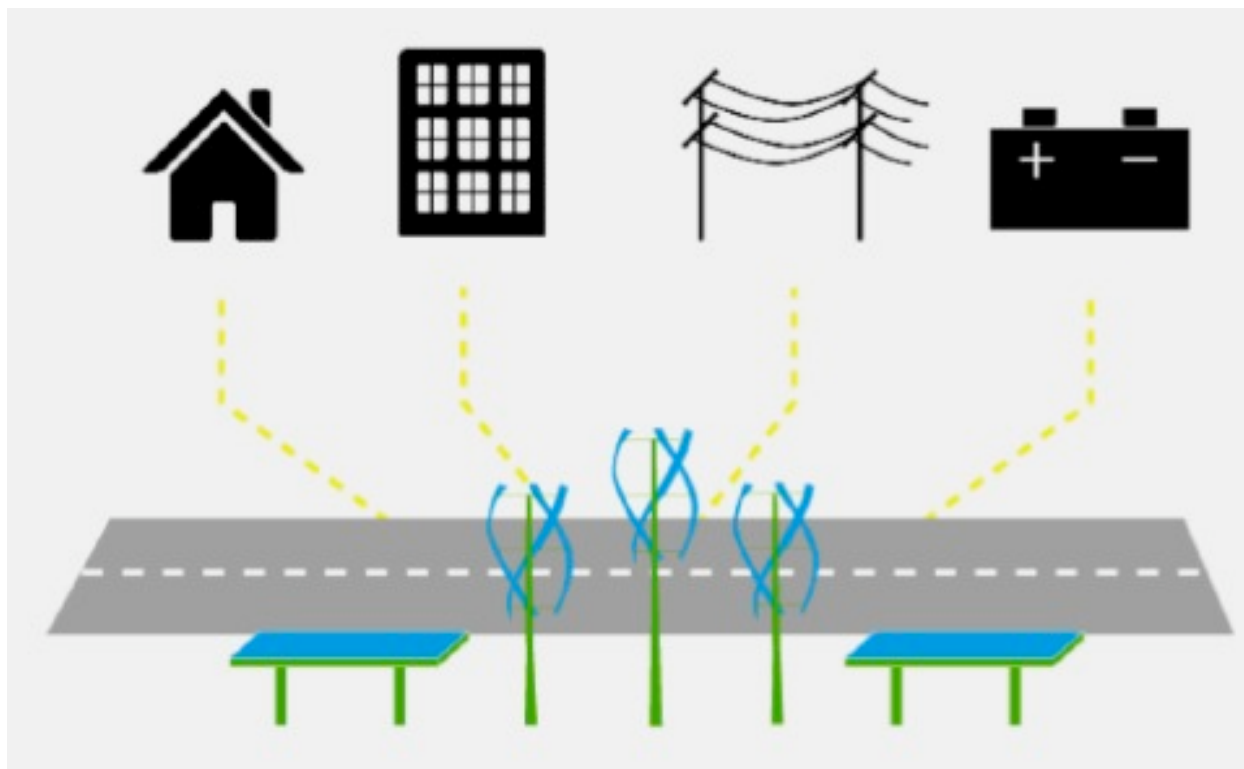


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Harvesting Clean Energy Along the Road

By Leora Broydo Vestel



You can get your kicks on Route 66, as the old song goes, but what if you could get your wind and solar power there as well?

A few states are already dabbling in roadside energy production. Last year, Oregon began a “solar highway” demonstration project with a 104-kilowatt ground-mounted solar array situated at the interchange of Interstates 5 and 205. The array powers about a third of the lights on the interchange. Massachusetts recently announced a plan to install a utility-scale wind turbine – big enough to power 400 households – on land adjacent to the Massachusetts Turnpike’s Blandford Rest Area.

Researchers and designers are also toying with ways to generate power along roads, including the use of piezoelectric materials, energy producing speed bumps and integrating wind turbines into road barriers.

And then there’s the Green Roadway — the brainchild of Gene Fein, a former media executive, and Ed Merritt, a sculptor. Neither has any direct experience working in the energy field, but the

two hold multiple patents for wind, solar and geothermal technologies that operate alongside and in conjunction with what might be called an alternative-energy roadway system.

The project's patent portfolio includes specifications for small wind turbines – 25 feet high or less – powered by both natural wind and the “dirty wind” generated by passing cars and trucks. Another patent covers the deployment of millions of tiny turbines an inch in length or less that could be attached to median guardrails, road signs or noise-barrier walls.

A state-by-state auction of their intellectual property portfolio will take place this Friday, with minimum reserve bids that range from \$125,000 for South Dakota to \$1.5 million for California.

According to Mr. Fein, the technologies allow for the creation of a utility-scale system that can plug into the existing grid infrastructure, potentially over hundreds of miles. The power generated could be used for homes, businesses and electric-vehicle charging stations.

Auction documents suggest that each 10-mile stretch of the Green Roadway system could generate enough energy to power up to 2,000 homes. The installed cost would be about \$2.6 million for the solar components and \$4.2 million for wind, but up to 65 percent could be knocked off if federal, state and local subsidies and tax credits are factored in, the documents suggest.

They also say that the solar and wind power generated, given the available incentives, would be cost-competitive with natural gas-fueled power generation.

Whether or not that's overstated remains to be seen, but the Federal Highway Administration does see promise — in general terms — in roadside renewable energy innovations, and it plans to provide funding for various projects.

“Such technologies hold promise as a means not only of improving the nation's energy independence,” said Cathy St. Denis, a spokeswoman for the agency, “but of its environmental stewardship as well.”