

Spanish Streetlight Powered by The Sun and The Wind

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The UPC/Eolgreen streetlights incorporate both solar panels and a wind turbine (Photo: Eolgreen)

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If you're trying to save power, you generally don't leave your lights on all night. With [a few exceptions](#), however, that's what cities do with their streetlights. That's why some groups have developed streetlights with [built-in solar panels](#). A Spanish team is now taking things a step farther, with a stand-alone streetlight that runs off of both solar and wind power.

The light is being developed through a collaboration between the Universitat Politècnica de Catalunya and Spanish startup Eolgreen.

The current prototype stands 10 meters (32.8 ft) tall, and – along with an LED lighting array – features photovoltaic panels, a wind turbine, a battery pack, and an electronic control system that manages the flow of energy between those components.

Its composite-bladed turbine starts generating electricity at a minimum wind speed of 1.7 meters (5.6 ft) per second, moving at 10 to 200 revolutions per minute and producing a maximum output

of 400 watts. A planned second-generation turbine will only need to turn at 10 to 60 rpm, producing 100 watts as it does so.

The commercial version of the streetlight should feature two 100-watt polycrystalline solar panels, an array of Philips LEDs that put out either 3,500 or 4,000 lumens (depending on the streetlight model), and a lithium iron phosphate battery pack that can store enough power to run the lights for up to 3.5 nights per charge – an optional higher-capacity battery could reportedly manage 6.5 nights.

While the streetlights can run off-grid, groups of up to 99 of them are also able to send status updates via UHF to a central station, once every 30 minutes. This will allow administrators to know of any technical problems, so that they can be repaired.

Eolgreen has reportedly signed agreements with several Spanish municipalities, and plans to produce 700 of the lights this year. Spain's University of Seville is also working on a [solar/wind-powered streetlight](#), while New York-based Urban Green Energy [already manufacturers one](#).

Sources: [Universitat Politècnica de Catalunya](#), [Eolgreen](#)
