

# Human energy to bring power by the pedal

December 20 2015, by Nancy Owano

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Manoj Bhargava, founder of Billions in Change, calls up two words as the stars of his show. Energy, water. He reminds us what may be obvious but often ignored. They hold the key to other things that keep the poor, well, poor. Energy and water hold the key to health and to livelihoods.

Bhargava has been making news with one of those main characters, energy. He said in the video that half the world either lacks electricity or

has it only for two to three hours a day. It's not just a matter of being able to tune into a favorite TV program but of lighting and heating a home, studying after dark, storing food, preparing food without burning wood or coal.

Energy, he said, is a great equalizer. And his goal has been to look for "that one thing that will lead to benefits that are across hundreds of things."

His "that one thing" in this instance has been human mechanical energy to create energy. His video introduces his bicycle.

Free Electric, as it is called, has you pedal for an hour—to get electricity for 24 hours.

(He told *Business Standard* in October, "A standard electricity-producing bicycle can power one [bulb](#) as long as you are peddling it; the bulb goes out once you stop peddling. Our device can power 24 light bulbs, a fan, a phone charger and a tablet charger at the same time.")

How it works: A person pedals a hybrid bicycle. The bicycle wheel drives a flywheel, which turns a generator, which charges a battery. Pedaling for one hour yields electricity for 24 hours.

The Free Electric is made with standard bike parts. Bhargava told *Gizmag* that each working [part](#) of the bike was refined to be made as simple as possible. Added to these standard parts are some weights, an alternator and a 12-V battery, said *Gizmag*.

The name Billions in Change intimates the group is asking people for money. They are not asking for money but asking people to support via telling others, including officials. "We have the technologies to change the lives of billions of people. With your help, these technologies will be

adopted and implemented quickly."

What's next? Singapore's newspaper, *TODAY* said that "in India, Mr. Bhargava will begin in March to manufacture and distribute an electricity-generating bicycle for poor [households](#)."

*Business Standard* said Bhargava plans to produce 10,000 units of the electricity-producing bicycles in India by March for people in need, especially in rural areas.

Does this all sound familiar? There have been other attempts to pedal for power. The Billions in [Change](#) recognizes they are not the first to think up energy-producing bikes. They said, however, "before Free Electric there wasn't anything that produced enough electricity to power 24 [light bulbs](#), a fan, a phone and tablet charger at the same time."

They will make two versions of the bike, one version for people in poorer countries; that bike will be priced lower than the second version and will be made just for [electricity generation](#), they said. A more sophisticated version, they said, will have a few more bells and whistles, including a lithium-ion battery and more aesthetic features, "and will be priced based on the market."

**More information:** [billionsinchange.com/solutions/free-electric](http://billionsinchange.com/solutions/free-electric)

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