

# The PowerWalk™

## Kinetic Energy Harvester

Wearable technology for charging batteries.

Designed by Bionic Power\* and powered by people, the PowerWalk™ Kinetic Energy Harvester enables soldiers to produce 10-12 watts of power as they walk.

**Reliable Power:** uninterrupted, life-saving power in the field for communications, navigation and optics, the harvester represents a physical and figurative weight off a soldier's back.

**Intelligent Response:** always two steps ahead, the PowerWalk's onboard microprocessors analyze walking gait, speed and terrain to determine the best timing and resistance to generate the maximum amount of power with the least amount of user effort.

**Field-functional Design:** designed to accommodate a soldier's full range of motion, with no impact to mobility or agility, the harvester works for the wearer, every step of the way. On level ground, the device requires minimal effort. And, while power generation is its primary benefit, the PowerWalk also reduces muscle fatigue during downhill walking, easing metabolic effort and the potential for injuries.

**Reduced Risk and Costs:** the walk-recharge capability of the PowerWalk harvester mitigates the risks and costs of using batteries in the field: smaller environmental footprint, reduced need for soldiers to carry backups, and fewer logistical challenges associated with battery replacement and resupply.



### FIELD TRIAL INQUIRIES

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"A soldier typically carries 16-20lbs in batteries on a 72-hour mission. If a soldier can generate 10-12 watts of power while wearing energy harvesting devices, we can potentially reduce the soldier's load, reduce the logistics tail and the unit's reliance on field resupply, and extend the duration and effectiveness of the mission."

Noel Soto, Systems Engineer, U.S. Army, Natick Soldier Research, Development and Engineering Center

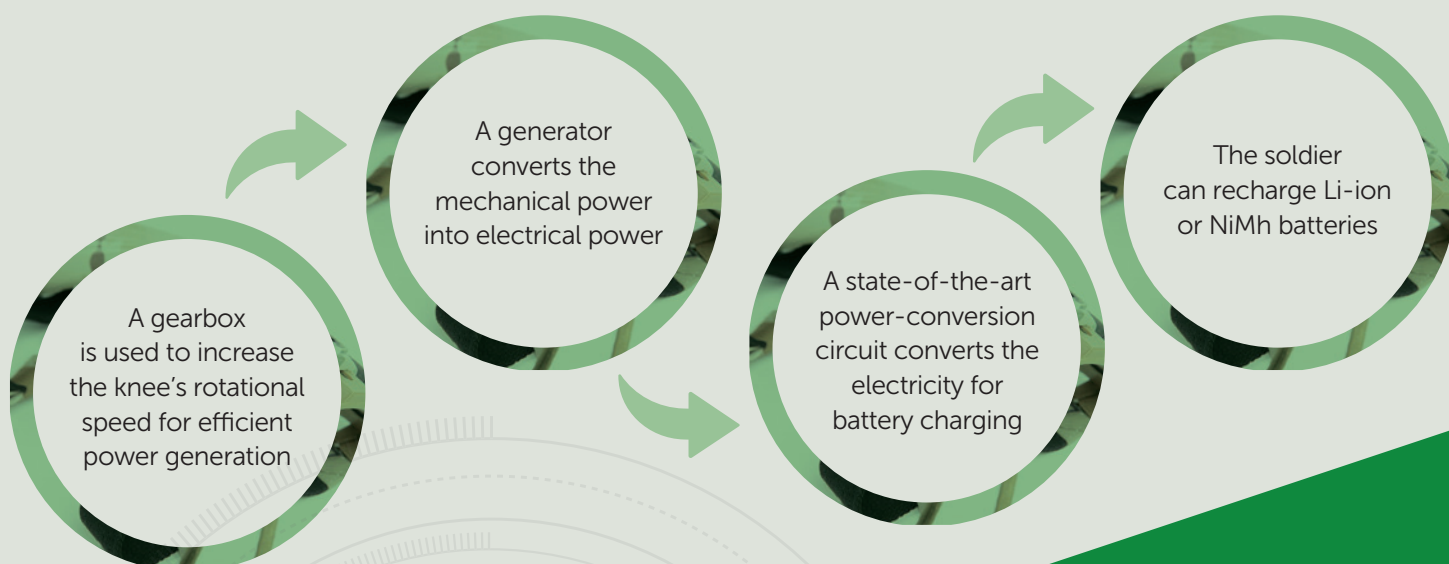


## The PowerWalk *Kinetic Energy Harvester*: wearable technology for charging batteries

On an hour-long walk, a soldier wearing the *PowerWalk* can produce enough power to charge up to four smart phones.

### How does it work?

The harvester is a light-weight exoskeleton designed to generate electricity from the natural action of walking, in much the same way regenerative braking works in hybrid cars. With every stride, the *PowerWalk*'s on-board microprocessors analyze the wearer's gait to determine precisely when to generate maximum power with the least amount of effort.



### About Bionic Power

Bionic Power makes wearable technology for charging batteries.

The *PowerWalk™ Kinetic Energy Harvester* enables users to produce power as they walk. Wearing a harvester on each leg, users produce an average of 10-12 watts of electricity which, over the course of an hour-long walk, can charge up to four smart phones. The walk-recharge capability of the *PowerWalk* reduces user requirements to carry backup batteries, as well as the need for battery resupply in the field. Development and testing of the *PowerWalk* is supported by the U.S. Army and U.S. Marine Corps as well as the Canadian Department of Defense.

Contact Yad Garcha about field trials.

## Bionic Power. Walk. Recharge.

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