

UPGRADE

Power Shift:
A handlebar-based controller lets you switch between three power settings to place more emphasis on muscle or motor.

Charge Cycle

While electric bikes have been growing in popularity, they are typically hampered by paltry ranges resulting from limited battery life. Because the Giant Twist Freedom DX (\$2000) runs on a cyborglike mix of muscle and machine power, it can travel twice as far as most powered cycles—up to 75 miles per charge. When you pedal, an integrated torque sensor summons the perfect amount of power from the bike's front-hub motor to keep you at a steady pace; pedal harder and the motor settles down, take a rest and it kicks into overdrive. The bike comes out in May, and the manufacturer tells PM that it sees the technology eventually taking off in developing countries, where it could act as a low-cost option for carless commuters.

giant-bicycles.com

Motion Measure:

The torque sensor tells the 250-watt DC motor how much power it needs to supplement your pedaling.

Dual Charge:
A pair of 26-volt lithium-ion batteries help power you up to 75 miles.