



## Tap the New Global Hydropower Market

**Hydrovolts has invented new hydropower technology** to generate renewable energy from fast flowing water currents.

There are millions of fast water flows around the world in spillways, channels, constructed waterways, and some rivers and tidal channels.

However they cannot be tapped with traditional hydropower technology which relies on head, not velocity. This means that clean, renewable affordable hydropower is not available to billions of people, particularly in rural areas where electricity is expensive or not available at all.

The Hydrovolts hydrokinetic turbine is a breakthrough that can make power from shallow fast water flows such as canal spillways as well as rivers and tidal channels. It is an underwater paddlewheel with a unique mechanical operation that operates even in slow currents. The technology has been validated by researchers at the University of Washington Applied Physics Laboratory, who have applied for US Navy funding to develop the turbine for their applications.

The new “Flipwing” turbine can generate power in fast flows such as spillways and confined water channels at cost less than 1 cent per kilowatt. It is a “drop-in” floating turbine that requires almost no construction or site preparation. Even a large unit can be installed with a boat trailer and boat ramp. Compared to wind and solar it is much less expensive, produces more power and is easier to install.

The market for Hydrovolts is irrigation and water management organizations around the world. These organizations have big budgets, they are managed by engineers, they own the water channels, there are usually no environmental issues of concern, and they can purchase multiple units. For example the Sunnyside Canal in Washington has over 50 sites for Hydrovolts turbines that can provide power for irrigating the vineyards in the surrounding valley and sell power to the grid at other times. There are thousands of locations for Hydrovolts turbines just in Eastern Washington’s farm areas and millions of similar sites around the world. Wherever there is a water flow greater than 1 square meter of area and greater than 2 m/sec or 4 knots (a fast walk) Hydrovolts can generate renewable energy.

The company projects rapid growth following canal demonstrations in summer 2009. With gross margins of 50% and average sales price of \$10,000 the company expects to sell around 8000 units a year by 2013. The company is seeking \$300k in bridge funding to achieve the first sale and \$1.2M in 2010 to accelerate growth.

Company management is highly experienced with unique background for this new industry. Co-Founder Burton Hamner directed the *Tacoma Narrows Tidal Power Feasibility Study* in 2007, supervising eight local firms and the UW in the largest study of its kind in the USA. Hydrovolts brings that expertise and team forward to create a new global micro-hydropower industry.

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