

## Hydro Green touts fish study

by Wally Northway

Published: January 8th, 2010

HOUSTON, Texas — Results of the first and only direct fish survival study performed on a hydrokinetic turbine show that the technology is extraordinarily fish friendly, according to Hydro Green Energy, LLC.

The hydrokinetic power turbine utilized for the study was designed and manufactured by Hydro Green, a Houston-based company that is presently developing waterpower projects in multiple states, including Mississippi. The 82-page study results were filed at the Federal Energy Regulatory Commission (FERC).

The fish survival study was performed this summer at the only commercial, FERC-licensed hydrokinetic power plant in the United States at Hastings, Minn. The Hastings project was approved by a 5-0 vote by FERC Dec. 13, 2008, and began operating in mid-2009. At the Hastings project, [Normandeau Associates](#), evaluated the direct effects to fish of the first of two hydrokinetic units.

Normandeau deployed 502 balloon and radio tagged fish of a variety of species and sizes. 402 fish swam through HGE's hydrokinetic turbine. Pre-installation computer modeling performed by Hydro Green, which relied on models created by the U.S. Army Corps of Engineers and the Department of Energy, indicated a 97 percent fish survival rating for the turbine.

Only one fish out of the 402 that were introduced into the hydrokinetic unit showed evidence of direct physical harm (0.002 percent). The study also found that the hydrokinetic turbine cannot inflict any pressure related or grinding injuries on fish. Additionally, no signs of increased predation were witnessed downstream from the hydrokinetic unit, which is at times an issue with conventional hydropower facilities.

Before being filed with FERC, the Hastings fish survival study was submitted for review and comment to the U.S. Fish and Wildlife Service, the U.S. National Park Service, the Minnesota Department of Natural Resources, the United States Army Corps of Engineers and the Minnesota Pollution Control Agency. Hydro Green Energy solely covered all costs associated with the extensive study. Despite having significant funding from Congressional appropriations and the American Recovery and Reinvestment Act for hydrokinetic technology and environmental research, the Department of Energy last year rejected an application from Hydro Green for funding assistance for the Hastings study.