



Hydro Green hydrokinetic turbine friendly to fish, study says

Results of the first fish survival study performed on a hydrokinetic power turbine in the US shows that the technology produced a negligible mortality rate, according to Hydro Green Energy, which commissioned the study done by consulting firm Normandeau Associates.

The study was carried out at Hydro Green's 100-kilowatt nameplate-rated unit at US Corps of Engineers Lock and Dam No. 2 on the Mississippi River in Hastings, Minnesota, the only federally licensed hydrokinetic turbine installed in the US.

The turbine is designed and manufactured by Hydro Green. It is sited behind a conventional run-of-river hydroelectric dam.

Normandeau's patented methodology uses a controlled experiment approach and produces comprehensive, statistically reliable and verifiable results on injury and survival of fish passed through a turbine, spillway or over falls.

To accomplish this task, Normandeau deployed 502 balloon and radio tagged fish of a variety of species and sizes: 402 fish swam through the turbine and 100 were allowed to swim freely in the river near the turbine, which rotates at 21 revolutions a minute.

Environmental scientists studied fish survival and injury rates of both groups after recapture of nearly all the tagged fish.

Only one fish out of the 402 that were introduced into the hydrokinetic unit showed evidence of direct physical harm. Hydro Green says this was almost certainly due to the fact that the fish was outfitted with a balloon tag, causing it rise to the surface to interact with the hydrokinetic device in a manner that otherwise would never occur.

