Renergé (rhymes with energy) is a start-up in late stage R&D of a near-market entry, hydrokinetic energy device for river applications. ‘The Water Horse’ is being developed to optimize the balance between energy extraction and environmental compatibility, as opposed to the traditional approach of maximizing point-source energy extraction. At least as important, the Water Horse design philosophy enables access to sites previously described as ‘technically unrecoverable.’

The Water Horse relies on an oscillatory instability to establish repeating motion. Early stage R&D focused on identifying strategies to exert control over mechanical instability, which has now been established. The technology has subsequently reached a stage where ‘cleaning’ of the electrical power, reconsideration of electrical power generation strategies, and mating to traditional grids and mini-grids is becoming prominent.

Electrical Engineering Internship

Via our NSF Phase II SBIR support we plan to offer an electrical engineering internship in the form of an REU (http://www.nsf.gov/eng/iip/sbir/Supplement/). The position focuses on power and conditioning systems integration into the emerging hydrokinetic technology. Efforts will include developments for both in-lab prototypes and in-river deployments. The focus is on build-and-integrate, however, some amount of pre-build design and post-build testing will be necessary. As part of a small team, work will be performed in close collaboration with mechanical systems engineers and an externally contracted electrical engineer. Time invested in the project as an intern would contribute to time-with-the-company dates for post-graduation employment considerations. Preference will be given to candidates with hardware experience. The position can be full time during the Summer, or part time beginning in the Spring with start and end dates resulting in equivalent total commitment (end date not later than August 31).