



Engineers for a
Sustainable
World - NU

ESW CIRCULAR

January 4, 2010
Fall 2009 wrap-up

Letter from the presidents

Dear ESW supporters and community:

This year we wanted to bring back the ESW Circular to write about some highlights and accomplishments of the group this quarter. It seems that every quarter goes by with a great hurrah at the start and rush at the end, so with the start of winter quarter we want to acknowledge all of the terrific work our teams have accomplished during the fall as well as the future projects that they have planned for the New Year.

As an exec board, one of our top tasks in 2009 was to reorganize the ESW meetings - making them more project centered. This goal was accomplished in two ways. First, our fall kickoff meeting took the form of an open house, in which new members could meet each project leader and learn about each project in a casual but informative setting. We hope that this early one-on-one interaction with new members will help ESW's project teams retain recruits throughout the quarter. Second, project managers showcased their progress and problems in weekly general meetings during the school year. We believe that this new style of meetings provides more opportunities for new members to get involved, while also creating a platform on which project managers can demonstrate progress throughout the quarter. Additionally, we hope that the workshop format will encourage more camaraderie and collaboration within ESW's membership.

Next quarter, our top goal is to provide continuity for projects from year to year. Since project managers change at winter quarter's end, in order for us to be a sustainably led organization, their wealth of knowledge needs to be transferred to the incoming leadership. We will be discussing ways to provide this continuity such as having committed advisers and sponsors for each individual project, and we would love to hear more suggestions on this matter.

Cheers,
Alan Fast and Suelyn Yu

Fall Quarter highlights:

- **Largest kickoff meeting in ESW history with 120 new members attending**
- **Nicaragua Wind turbine team wins Murphy grant and ISEN grant**
- **Philippine Ram pump team wins ISEN grant**
- **GRIN team wins ISEN grant, Be The Change Grant, and Murphy Grant**
- **130+ people attend Energy Day conference**
- **Record number of active members involved in 4 international projects and 4 local projects**
- **New Google site used for collaboration within and among teams**
- **New partnerships with ISEN and One book Northwestern**

Sponsors

Abbot Fund
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Dow Chemical
Civil and Environmental Engineering
Office of Industry Relations
National Science Foundation
Chemical & Biological Engineering Department
Northwestern University Alumnae
General Motors



Local Project Focus: GRIN

The Green It Now (GRIN) group has been busy this fall quarter, focusing on our Ford Building Solar Panel project and several other local leads for on-campus audits.

The solar panel project was conceived last spring and planned this summer. We initially met with representatives from both McCormick and Facilities Management before officially pitching the project to both for approval. We worked with Tom Debates from Habi-Tek Renewable Energy Systems to obtain estimates for installation and maintenance, and thanks to his experience in the business, Tom served as our technical expert. Facilities Management offered support and approval to move forward, and after a spirited \$25k backup fundraising event, McCormick also offered support and approval. As we await the results of our primary DCEO state grant, our fundraising efforts continue. We were recently awarded a \$1000 Be The Change grant from NU's Center for Student Involvement, and we are working on our grant proposal for the ICECF Competitive Cycles Grant.

Our energy auditing process has also seen plenty of activity. We have met with Citizens for a Greener Evanston in

the hopes of coordinating on a project to assist local businesses in applying for rebates for energy upgrades from ComEd. We've been working with the Evanston Youth Job Center to help them with a restoration project they are working on for their building. We've also just recently met with representatives from the Sheil Catholic Center on campus. They would like us to perform an analysis of the upgrades they recently made, and they would also like help making additional improvements to their building. We will likely select this location for our on-campus energy audit for the winter quarter.

Current Sponsors:

- ISEN
- Murphy Grant
- Chemical and Biological Engineering Dept
- Materials Science and Engineering Dept
- Habi-Tek Renewable Energy
- CSI Be The Change Grant

Guarantors:

- Prof Kung
- McCormick
- ESW

International Project Focus: Philippines Ram Pump

The Hydraulic Ram Pump team is led by junior Junzi Shi and has gained momentum over the last quarter, gaining an adviser, two graduate students, and a ram pump expert from Green Empowerment. We have received grant awards from two sources: the ISEN booster award and the CEE department. This money has made it possible to design and build a prototype. Over the last quarter, we have obtained lab space and

finished building the first model. We are now waiting for the actual life-sized pump to arrive from our NGO partner AIDFI in the Philippines. Once we receive the incomplete body, we will do research on it and finish building the air chamber as well as several key valves. In addition, the team is inventing an innovative way to open the waste valve with a lever system.

In Winter Quarter, students

will study different aspects of theoretical as well as practical aspects of the technology for installation in Tres Hermanos, Philippines, in June 2010. Look for our demonstration seminar in the following weeks! The project may even be incorporated into a homework assignment for CEE 364. There are still openings for dedicated and enthusiastic students to join the team. Contact Junzi at j-shi@northwestern.edu if you're interested.

Quarter Highlight: Energy Day 2009

During Fall Quarter we were excited to hold ESW-NU's fifth annual Energy Day Conference. Energy Day is an annual symposium held at Northwestern, which features speakers who present on topics related to sustainability and the environment. The conference this year featured many leaders in the field of sustainable technology including Gary Smyth, Director of Propulsions Research at GM, Eric Peeters, the Business VP of Solar at Dow Corning, Craig Sieben, President of Sieben Energy Associates, and Jack Lewnard, VP of GTI. In addition to terrific speakers, Energy Day hosted over 130 students and professionals from the Chicago area.

ESW greatly appreciates the dedication and hard work of Yinka Ashiru and Alexandra Letuchy, whose planning made Energy Day 2009 a great success.



Photos taken by Phillip Dziedzic