Green Technology Innovation by College Engineering Students

Curious Cat Science and Engineering Blog

With prizes totaling more than $100,000 in value, this year's Climate Leadership Challenge is believed to be the most lucrative college or university competition of its kind in the country. The contest was open to all UW-Madison students.

A device that would help provide electricity efficiently and at low cost in rural areas of developing countries took the top prize – $50,000 – this week in a student competition at the University of Wisconsin-Madison for innovative ideas to counteract climate change.

The "microformer" is the brainchild of Jonathan Lee, Dan Ludois, and Patricio Mendoza, all graduate students in electrical engineering [1]. Besides the cash prize, they will receive a promotional trip worth $5,000 and an option for a free one-year lease in the University Research Park's new Metro Innovation Center on Madison's east side.

"We really want to see implementation of the best ideas offered," said Tracey Holloway, director of the Nelson Institute Center for Sustainability and the Global Environment at UW-Madison, which staged the contest for the second year in a row. "The purpose of this competition is to make an impact on climate change."

The runner-up for the "most action-ready idea" was a proposal to promote the use of oil from Jatropha curcas plants to fuel special cooking stoves [2] in places like Haiti. UW-Madison seniors Eyleen Chou (mechanical engineering [3]), Jason Lohr (electrical engineering), Tyler Lark (biomedical engineering/mathematics) won $10,000 for their scheme to reduce deforestation by lowering demand for wood charcoal as a cooking fuel.

CORE Concept, a technology that would cut emissions from internal combustion engines by using a greater variety of fuels, won mechanical engineering doctoral students Sage Kokjohn, Derek Splitter, and Reed Hanson $15,000 as the "most innovative technical solution."

SnowShoe [4], a smart phone application that would enable shoppers to check the carbon footprint of any item in a grocery store by scanning its bar code, won $15,000 as the "most innovative non-technical solution." Graduate students Claus Moberg (atmospheric and oceanic science), Jami Morton (environment and resources), and Matt Leudtke (civil and environmental engineering) submitted the idea.

Other finalists were REDCASH, a plan to recycle desalination wastewater for carbon sequestration and hydrogen fuel production, by doctoral student Eric Downes

(biophysics) and senior Ian Olson (physics/engineering physics); and Switch, an energy management system that integrates feedback and incentives into social gaming to reduce personal energy use, by doctoral students David Zaks (environment and resources) and Elizabeth Bagley (environment and resources/educational psychology).

Related: University of Michigan Wins Solar Car Challenge Again [5] – Collegiate Inventors Competition [6] – $10 Million X Prize for 100 MPG Car [7]

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