UNH Media Relations

Emissions Calculator Developed At UNH In Fifth Revision

Contact: Jody Record
603-862-1462
UNH Media Relations

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DURHAM, N.H. – A greenhouse gas inventory tool developed at the University of New Hampshire that is being used by about 700 colleges and universities around the country to keep tabs on emissions has undergone its fifth revision and will be released this month for testing.

The Campus Greenhouse Gas Emissions Inventory Calculator was created by a graduate student eight years ago in partnership with the UNH Office of Sustainability and the global warming activist group Clean Air-Cool Planet. The tool is specific to the uniqueness of college campuses.

"Colleges and universities overall have a fairly significant chunk of the nation's greenhouse gas emissions," says Brett Pasinella, program coordinator for climate and biodiversity education initiatives at the Office of Sustainability.

But, he says, even if that wasn't the case, there's a good reason the higher education sector should keep an inventory of their greenhouse gas emissions.

"It's imperative to educate the next generation of professionals and citizens so they can respond to the challenges of climate change that will play out over the next generation and a university campus is an excellent 'living laboratory' for developing innovate solutions to the climate problem," Pasinella says.

The inventory tool is a key component of the University of New Hampshire's climate education initiative and the work of the UNH Energy Task Force to lead the campus in developing a climate action plan as part of its commitments under the American College and University Presidents Climate Commitment. In February 2007, UNH was the first land-grant university in New England to sign this commitment.

Using the inventory calculator, UNH released its first greenhouse gas emissions inventory in 2001. The inventory went back and looked at records starting in 1990 for such things as electricity, heat and transportation—huge producers of emissions. It has been updated twice since then and Pasinella is working with other faulty, staff and students to complete another update this year.

After UNH's inventory was published, ways to adapt the tool so it could be used by other colleges were explored. By 2003, about 10 campuses in the Northeast were using the system that Pasinella describes as a "massive, very complicated Excel spread sheet."

The Campus Greenhouse Gas Emissions Inventory Calculator takes users through three steps. First, there's the data collection and input; emissions from major energy production sources such as electricity, gas, diesel fuel and natural gas are recorded. Transportation, waste and agriculture are also factors.

In the second step, the greenhouse gas emissions are computed (formulas, conversion factors, emission factors and such are built-in) and in the third, the data is summarized.

And that is where planning for carbon reductions can come from.

"Having an inventory let's you see where the inefficiencies are," Pasinella says. "Once you know where they are, you know how to focus your efforts and can estimate reductions from potential projects."

For more information on the Campus Greenhouse Gas Emissions Inventory Calculator go to http://www.sustainableunh.unh.edu/climate_ed/greenhouse_gas_inventory.html.

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