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Zero-waste Sustainability Forum wows

By Brock Auerbach-Lynn
TECHNEWS WRITER

Illinois Institute of Technology's (IIT) Office of Campus Energy & Sustainability hosted November's Sustainability Forum last Friday on "Achieving Zero-Waste". Building off the success of October's Forum on Building Energy Efficiency, the OCES was able to bring together an engaging and informative group of speakers to discuss the successes, failures and opportunities in zero-waste from multiple angles.

First to speak was Blake Davis, Adjunct Professor at IIT and board member at the innovative zero-waste facility known as The Plant. The Plant has recently installed a \$2 million anaerobic digester that nearly completes the closed loop recycling of material within the building. Everything including spent beer hops, waste heat, CO₂, fish feces and plant debris is able to be recycled internally. The Plant will even be able to generate its own energy and should create more than it needs, making it a net exporter to the grid!

Prof. Davis then introduced John Dunsing, Environmental Sustainability Manager for Jewel-Osco. Mr. Dunsing has overseen the development of an innovative program to make Jewel-Osco stores zero-waste. This has been a work in progress with a triple focus: improving the traditional recycling program, developing a food scrap diversion program, and working with suppliers to reduce waste/use reusable material. John started with a small food scrap diversion pilot project in Bloomington-Normal, IL where 3 stores were able to divert their food scraps (after donating everything that was safe) to a local farm.

There were some false starts with

expanding this to other stores due to cost issues using a traditional recycling model. Jewel-Osco has since been able to ramp this up to around 130 of 179 stores nationwide by working with waste haulers and setting up routes for collection that take advantage of high pick-up density to achieve cost-effectiveness. Of stores that have achieved Zero-Waste (at least 90% diversion of waste) - of which Jewel-Osco has three levels - many have been able to go from generating 2,000 pounds of waste per day to about 40 pounds! This is an incredible change and one that has permeated down to every member of the Jewel-Osco team. Next time you're in one of their stores, ask any employee about zero-waste! John is confident they'll be able to tell you all about it.



Photos by Christina Noonan

Dr. Raj Rajaram, Senior Consultant with GZA GeoEnvironmental Inc. and a waste management expert with over 35 years' experience in the field was the last speaker. Dr. Raja-

ram, an IIT Alumnus, has substantial experience working on zero-waste projects in India where waste management is far more local and advanced than in the U.S. Thanks in at least a small part to national legislation making it illegal to dispose of organic waste in landfills, India has developed an effective, sophisticated and low tech means of handling their organic waste. Many places have bike riders with baskets who go around and collect organic and traditional waste from houses; sometimes several times a day, and take the organics to a local compost facility. Liquid waste is also a gold mine according to Dr. Rajaram. Wastewater has very highly desired levels of nutrients (such as nitrogen and phosphorus) that we currently devote huge amounts of money to remove. Cleaning water for non-potable uses such as for farm fertilizer is already done successfully in many locations and could be done in the U.S. with some rule changes. Other successful local efforts towards achieving zero-waste, which Dr. Rajaram would like to see in the U.S., include technology that allows for home composting of organic waste under the sink where the biogas is recovered for energy generation and the compost used for soil fertilization.

The common message across the Forum was that there is a paradigm shift in progress around waste, with a new dominant view emerging that sees it as a revenue source, not a cost. The rate at which we see adoption of innovative zero-waste technologies and policies is only limited by our desire, says Dr. Rajaram. They are already out there and working well for other parts of the world, why not Chicago and the U.S.!

Presidential Lecture Series brings world-renowned economist to campus

By Utsav Gandhi
CAMPUS EDITOR

Very rarely do undergraduate students get the chance to listen to and network directly with some of the most accomplished minds in academia, government or the private sector; those who have chalked out the very careers us as students are working hard towards.

IIT does an understatedly incredible job in bringing these big minds to campus on a regular basis; whether it is for the Benjamin Franklin Project, the Darsh Wasan Lecture, the Kilpatrick Lecture or the Karl Menger series; among other annual departmental traditions. The inaugural Dr. Irwin Stelzer, senior fellow and director of Hudson Institute's Economic Policy Studies Group, kicked off Presidential Lecture Series on Friday, October 19, 2012. A political columnist for various international economic periodicals, Dr. Stelzer has held various teaching positions at the world's foremost universities like NYU, Cornell, Oxford, MIT and Harvard (where he served as

the Director of the Energy and Environmental Policy Center). In his talk, Dr. Stelzer laid out the basis for an energy/environmental policy that aimed at bridging the gap between equitable development of energy sources and sustainable growth of the economy.

Dr. Stelzer started by laying out his foremost opinion - in a politically conflicting world, "risk management requires reversible approaches and the feedback loop". Every political decision comes with its own set of assumptions, stakeholders, uncertainties, and a misplaced sense of confidence in knowing everything ("policy paralysis") and remedies, which in some case might worsen the situation than the problem itself. While some call fossil fuels a disaster, the bird lobby says wind kills aerial life, power companies are gobbling up water in the name of hydroelectricity and fracking is irresponsible. There is both the "drill baby drill" crowd and the tree-hugging hippy that doesn't really contribute. The climate change debate sees both the believer - who might be wrong; and the non-believer - who has less faith in the scientific model. In such a scenario, how does the government take sound decisions? How does it correct de-

fects in one part of the system without negatively affecting other parts?

Well, for one thing - the distinction between fact and opinion has to be made clear. "Governments are made of laws, not of men," is what Dr. Stelzer had to say. But all regulators are biased; and maybe that's why, in today's increasingly pluralized world, all their voices matter. Since investments in energy are costly to reverse, they need to be made keeping the long run in mind. He spoke about the importance of dealing with taxes wisely: governments need to more stringently tax the pollutant; and he also advocated to internationally allow developing countries to work around this regulation as much as possible.

He addressed the complicated question of how he recommends the government can hand out subsidies to competing energy sectors. Like the case of Britain's public transit system, he recommends that venture capitalists take the product and actively bid for it.

Those motivated strongly enough must be willing to pay at least some price for it. This will significantly level the playing field and give a clear indication where the alternative energy movement is headed. The US Navy

was recently under fire for using \$27/gallon fuel made from algae oil and chicken fat; "in the interests of national security". Obviously, there are tradeoffs to everything; and Dr. Stelzer overwhelmingly recommended placing a common sense approach built around principles over an ideology-dominated methodology; especially in times of economic crisis.

When decisions such as the Keystone pipeline rest upon the President, the smart thing isn't to close it down completely, despite the environmental hue and cry. "If we don't swoop in for such opportunities, someone else will," upon He concluded that economic growth and environmental impact minimization is a delicate balance, though not impossible to achieve.

The next Presidential Lecture, also on the current theme of environmental sustainability, will be held on Tuesday, January 15 2013; and the last one at the end of the spring semester; making it a total of three lectures per academic year. Students are highly encouraged to come for the opportunity to hear about what the country's most celebrated voices have to say about the foremost challenges facing our generation.