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### KREC PI McGinley to Lead 2013 Solar Decathlon Team

*From U.S. Department of Energy and the University of Louisville.* A team of students from the University of Louisville, the University of Kentucky and Ball State University will participate in the U.S. Department of Energy's (DOE's) 2013 Solar Decathlon. Dr. W. Mark McGinley, KREC principal investigator and endowed chair for civil infrastructure at UofL's J.B. Speed School of Engineering, is the team's faculty leader.



*Members of the UofL-led  
Solar Decathlon Team.*

The U.S. DOE Solar Decathlon challenges collegiate teams to design, build and operate solar-powered houses that are cost-effective, energy-efficient and attractive. The teams have two years to construct a 600 to 1,000 square foot house using materials that are affordable and commercially available.

McGinley says that the Solar Decathlon is a great learning opportunity for students from all disciplines - not just engineering students. Besides engineering, the team includes students from business, communication and fine arts as well as architecture.

"We're really excited about the opportunity. Our multidisciplinary team is building the skills to solve the challenges our country faces in the future," said McGinley. "We are grateful for the support of the DOE, UofL Speed School of Engineering, the Conn Center for Renewable Energy Research, Ball State, UK and GE. This is a real team effort across multiple programs, institutions and states."

Dr. Mahendra Sunkara, interim director of UofL's Conn Center for Renewable Energy Research, said that through the 2013 Solar Decathlon Competition, the Conn Center hopes to develop and introduce low-cost housing solutions with very low energy bills for low-income and rural living within the state of Kentucky.

The first Solar Decathlon was held in 2002 and has since occurred biennially in 2005, 2007, 2009 and 2011.

Learn more about the the U.S. DOE Solar Decathlon on the event's website.

Read more about the team in the January 27 issue of UofL Today.

Submit an  
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### Solar Decathlon Branding Contest

The Conn Center is accepting entries for a logo and brand to use for the UofL Solar Decathlon team. Entries must include a logo, a branding concept using a two- or three-color scheme and typeface, a website scheme and a 500-word design rationale (optional).

The Solar Decathlon Branding Contest winner will receive \$100.

See the Conn Center's website for more information and to enter.

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### U.S. Energy Secretary Chu Details Obama's 2013 Energy Budget

On February 13, U.S. Secretary of Energy Steven Chu detailed President Barack Obama's \$27.2 billion fiscal year 2013 budget request for the U.S. Department of Energy, which includes critical investments in innovative and job-creating clean energy technologies.

"The United States is competing in a global race for the clean energy jobs for the future," said Chu. "The choice we face as a nation is simple: do we want the clean energy technologies of tomorrow to be invented in America by American innovators, made by American workers and sold around the world, or do we want to concede those jobs to our competitors? This budget request includes responsible investments in an American economy that is built to last."

Some highlights of the FY 2013 budget include:

- \$350 million for the Advanced Projects Research Agency-Energy (ARPA-E) to continue support for promising early-stage research projects that could deliver game-changing clean energy technologies;
- \$120 million to support the Energy Frontier Research Centers and \$140 million for the five existing Energy Innovation Hubs and to establish a new hub to focus on grid systems and the tie between transmission and distribution systems; and
- \$60 million to perform critical research on energy storage systems and devise new approaches for battery storage.

Read more about the FY 2013 budget request on the U.S. DOE's website.

The U.S. DOE's complete FY 2013 budget request to Congress is available online.

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### Regional P2Rx Center Now Operated by KPPC



KPPC - Kentucky Pollution Prevention Center recently launched a new website for the Pollution Prevention Resource Exchange (P2Rx), a national network of regional environmental technical assistance and information centers. The Environmental Sustainability Resources Center (ESRC), previously supported by the North Carolina Division of Pollution Prevention and Environmental Assistance, is now administered by KPPC (the KREC program administrator), with funding provided by the U.S. Environmental Protection Agency.

ESRC provides technical environmental sustainability information and resources to industrial service providers in EPA Regions III and IV, which include Virginia, West Virginia, Pennsylvania, Washington, D.C., Delaware, Maryland, Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee.

The center provides pollution prevention information to state environmental agencies, businesses, educators, technical assistance providers and the general public. ESRC will help organizations move toward environmental sustainability by reducing costs, minimizing ecological impacts and helping conserve, protect and maintain the environment.

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## Research of Tobacco as Fuel Source Gets DOE Grant

*From AgriLife Today.* The U.S. Department of Energy has granted more than \$1.8 million to a researcher looking at tobacco as a potential fuel source. If the research proves successful within 18 months, almost \$2 million more will be given to transfer the technology into giant reed, a fast-growing grass species.

“The goal of our project is to make sure our country is the leader around the world in terms of energy and research,” said Dr. Joshua Yuan, Texas AgriLife Research plant pathologist and lead investigator on the project. “Energy independence and energy costs are all important considerations for our country.”

The project will use tobacco plants initially because of their ease of use in a laboratory. If the technology works in simple tobacco plants, the goal is to transfer the ability to make fuel in a plant to higher producing plants such as the reed. The targeted fuel for the project comes from terpenoids.

Terpenoids occur in all living things. In plants, they are responsible for many common scents and flavors – eucalyptus, cinnamon and ginger, for example. They have been important for humans because of their antibacterial and pharmaceutical properties. But terpenoids are also hydrocarbons – the prime source of combustible fuels – and that speaks volumes to the energy department, the researchers noted.

“We are trying to develop a way to use a plant to directly make hydrocarbon fuel,” said Yuan, who also is assistant professor of plant pathology and microbiology at Texas A&M University in College Station. “We want to make it so that one can easily extract or squeeze the fuel from the plants instead of going to an oil field to take the oil out.”

Under a program called PETRO – Plants Engineered To Replace Oil – Yuan and his colleagues hope to create a tobacco plant that produces and stores high levels of terpene – the fuel derivative of terpenoid – and they plan to do it fast.

Read more about the project and watch an interview with Dr. Yuan on the AgriLife Today website.

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## NREL Seeks Leaders for National Executive Academy

Applications are currently being accepted for the National Renewable Energy Laboratory's (NREL's) 2012 Executive Energy Leadership Academy (Energy Execs). Energy Execs is a leadership program focused on educating business, community and government leaders about clean energy solutions through energy efficiency and renewable energy technologies.

The two Energy Execs learning opportunities are the Leadership Program and the Leadership Institute. Both programs are designed to provide executive decision-makers with information and tools to guide their organizations and communities

in energy-related planning.

Representatives from 120 industry, government and non-profit organizations have completed the program since 2007. Participants are selected from a national pool of candidates.

Apply online for the 2012 Leadership Program and Leadership Institute. The application deadline is March 30, 2012.

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Submit an Article to REnews!

KREC would like to publish your thoughts on renewable energy and energy efficiency in Kentucky in the "Members' Forum". Please send your opinions, articles or news about RE happenings in the Commonwealth to [KREC@kppc.org](mailto:KREC@kppc.org). A short piece is preferable (300 or fewer words work best).

Make your voice heard – we want to give KREC members a forum to spread the word about renewable energy efforts and issues.

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