

April 14th, 2009

technical presentation:

Biomass As A Source Of Renewable Energy



Please join the St. Louis Section of ASME for a technical presentation by **Dr. Ramesh K. Agarwal**.

Biomass resources are potentially one of the world's largest and most sustainable energy sources, which broadly consist of agricultural, forestry and livestock residues, agricultural crops (cereals and

sugar crops e.g.) and oil-bearing plants (rapeseed and algae e.g.), and organic municipal and industrial waste. The estimated worldwide bioenergy potential is 2900 Exa-Joule (8×10^{14} KW-hr), of which 270 Exa-Joule can be considered available on a sustainable basis at competitive prices. At present approximately 4.2% of the world energy needs are met by biomass, of which 4% is obtained from "plant biomass" used directly for cooking and heating primarily in the third-world countries and 0.2% is used as biofuel created mainly from agricultural crops. It is forecasted that the share of biomass in the total energy demand by 2030 will be between 12 to 20%. Biochemical, thermochemical and other processes can be applied to create transportation fuels (ethanol and biodiesel), biogas, methanol and hydrogen, and solid fuels. Significant technology development challenges need to be addressed for biomass to become a major source of energy by 2030.



This presentation will address the current state of technology in bioenergy production depending upon the biomass type and its usage (for electricity generation or as transportation fuel) and the challenges ahead.

The impact of biomass energy on environment (for example on greenhouse gas emissions), and food and agriculture is also discussed. The generation of biofuels from food crops has become a hotly debated topic worldwide because of its potential impact on commodity prices and food supply. The talk will summarize the current worldwide efforts towards using biomass as an energy source, the associated technological challenges, environmental implications, economic and political implications (since the current investment in biofuels remains highly dependent on government subsidy in largest ethanol and biodiesel producing countries and there are trade restrictions in the form of import tariffs), issues related to energy security, and outlook for 2030.

Professor Ramesh K. Agarwal is the William Palm Professor of Engineering at Washington University. He received the ASME Fluids Engineering Award in 2001 and ASME Charles Russ Richards Memorial Award in 2006. He has been engaged in research in several areas of renewable energy systems which include biomass, windmills, photobioreactors and fuel cells.

When: Tuesday April 14th, 2009, arrive 5:45 p.m., dinner 5:45 to 6:15 p.m., 6:15 to 7:15 p.m. lecture.

Where: Saint Louis University DuBourg Hall, 221 N. Grand Blvd., St. Louis, MO 63103, also called Refectory Hall, room #157, on west side of North Grand Boulevard.

Cost: Free.

Menu: Free pizza for the first 70 registrants.

Reservations: ASME members and students call Dr. K. Ravindra 314-977-8438 or email ravindrak@slu.edu. by Friday April 10th.

Parking: On your own, you pay curbside or pay garage.

Directions: to intersection of North Grand Blvd and Laclede Street. HWY40 is closed west of Kingshighway.

Map: see map on next page

ELECTION RESULTS

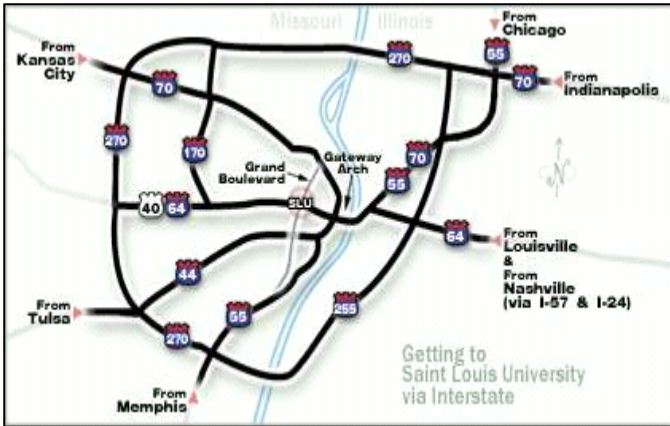
BALLOTING ENDS FOR 2008/2009 NOMINATING COMMITTEE, ASME ST. LOUIS SECTION:

The Nominating Committee has been formed to submit nominations for next year's officers. The following members have been elected to this year's nominating committee.

- ___ Betty Bowersox.
- ___ Mary Hammond
- ___ John Keplinger
- ___ David Henkelmann.
- ___ Dr. Sridhar Condoor

Results were announced at our March 17th event by Chairperson Mary Hammond, contact phone 314-335-6944 or email mary.hammond@edm-inc.com.

MAP TO APRIL 14 EVENT AT ST LOUIS UNIV.



Please join us at the next ASME-STL Board Meeting 6:00 p.m. Tuesday, April 7th at Buffalo Brewing Company, 3100 Olive Street, St Louis MO 63103, one block east of Compton Ave.

ASME-STL Section Program Schedule

May event to be determined.

Message from new webmaster

It is my pleasure to serve the American Society of Mechanical Engineers, St Louis Chapter as a Webmaster. I am a St Louis resident for about eight years. I am a Mechanical Engineer with about fifteen years of experience in Mechanical Engineering, Engineering Management, Mechanical Design of HVAC Systems, Manufacturing Processes, and Production Planning. Joseph M Gaied, P.E., LEED AP

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Bachelor's Degree Should Remain the Educational Requirement for Engineering License, ASME, Jan 22 2009.

ASME believes a four-year bachelor's degree from an accredited college or university should remain the mandatory educational requirement for licensure as a professional engineer in the United States. Responding to a recent change the National Council of Examiners for Engineering and Surveying (NCEES) made to its Model Law to increase the mandatory educational requirements for professional licensure, ASME has released an official position statement making the case for the traditional four-year bachelor's degree plus career-long continuing education.

"ASME believes that an ABET-accredited bachelor's degree has been demonstrated to accommodate technical breadth and flexibility and the intellectual skills necessary for engineering graduates to attain licensure as a professional engineer," says the position statement.

The NCEES plan, known as "Master's or Equivalent," proposes 30 additional credits or a master's degree, on top of the bachelor's, for licensure. ASME states that the higher educational requirements are unnecessary.

"There is no evidence to suggest that adding a master's degree or 30 credit hours, representing a full academic year of upper-level undergraduate coursework or graduate-level coursework, will have a positive impact on the public's health and safety," according to the position statement.

The higher educational requirements also could produce an adverse affect on America's ability to place an adequate supply of engineers in the industrial workforce, enabling the nation to compete technologically and economically, according to ASME. "Increasing the professional licensing requirements has the potential to reduce the supply of licensed engineers who are able to practice, therefore reducing the nation's technological competitiveness," says the statement.

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