Date **May 12, 2004**

TO: **Vice Presidents for Research**

FROM: **Mortimer H. Neufville**
Executive Vice President, NASULGC

SUBJECT: Call for Nominees for DOE Workshops

In early 2004, the U.S. Department of Energy (DOE) and the National Association of State Universities and Land Grant Colleges (NASULGC) signed an agreement designed to increase participation of universities in DOE Energy Efficiency and Renewable Energy (EERE) research and education activities.

As part of these activities, DOE will host two concurrent workshops on Biomass and Solar Energy at the National Renewable Energy Laboratory in Golden, CO, August 3-4, 2004. The purpose of the workshop is to stimulate greater collaboration between DOE/EERE scientists and engineers with scientists and engineers from NASULGC-affiliated institutions. Scientists from NREL and researchers from other DOE Laboratories will be in attendance to describe ongoing research programs and future collaboration opportunities. The workshops will include both general overview sessions and small group discussions as described in the attached pages.

Each institution is invited to nominate up to four interested faculty members or postdoctoral students for each of the above workshops. Nominees might be derived from faculty in agriculture, biology, chemistry, physics or engineering. Nominations must indicate the desired workshop and include a two-page CV with current position, all contact information, research interests and recent publications. In addition, nominees must also submit a statement of interest and anticipated benefits of attendance (200 words max).

A limited amount of funding will be available to partially defer the cost of participation for young investigators and representatives from minority serving institutions. Those requesting support must also include a one page statement and justification of need.

All nominations and supporting materials must be received by June 1, 2004. Send nomination materials to H. Michael Harrington at wdal@lamar.colostate.edu.

Participants will be selected to assure a mix of both developing and established scientists representing the diversity if institutions that comprise NASULGC. Selected participants and travel award recipients will be notified via email by June 15.

Registration information, workshop agendas, as well as accommodation and ground transportation information, will be sent to all selected participants at the time of selection.

U.S Department of Energy / NASULGC
Energy Efficiency and Renewable Energy
Workshops on
Biomass Energy and Solar Energy
National Renewable Energy Laboratory
Golden, CO
August 3-4, 2004

Overview:

The Office of Energy Efficiency and Renewable Energy in the Department of Energy seeks to increase research and education collaboration among the Department of Energy (DOE) Labs and university scientists. In order to facilitate collaboration in the biomass energy and the solar energy programs, two concurrent workshops will be held at NREL. Researchers from a number of DOE facilities will discuss ongoing research programs and future opportunities. The workshop format will include both general overview sessions and smaller breakout groups. The sessions include an overview of Energy Efficiency and Renewable Energy programs, detailed information on the target programs and will provide ample time for scientist to interact in small group and individual discussions.

These workshops should be of interest to scientists in agriculture, biology, chemistry, and engineering who are conducting research in biomass and its many uses or in solar energy.

Biomass Workshop Topics

- Biomass 2004 – State of the Art Overview
- Breakout Topics
  - Microbiology, Molecular Biology, and Biochemistry
    - Strain development for ethanol and bioproducts
    - Fermentation of mixed sugar streams
    - Crop genetics
    - Metabolic pathway engineering
    - Protein separation and characterization
    - Enzymatic plant cell wall degradation
    - Cellulase biochemistry
    - Computational methods
  - Chemistry
    - Organic, analytical, and catalysis
      - Biomass surface characterization
      - Rapid analysis techniques for biomass, e.g., NIR
      - Carbohydrate and lignin chemistry
      - Synthesis of chemical products from sugars, syngas, or pyrolysis oils
  - Chemical Engineering
    - Kinetics and catalysis, thermodynamics, heat and mass transfer, separations
      - Process engineering/development: biochemical and thermochemical
      - Biomass pre-treatment
    - Biochemical engineering
      - Fermentation
      - Bioprocessing
  - Environmental, Economics, and Engineering
    - Biorefinery concept

    - Integration of biorefineries in local economies
    - Life cycle assessment
    - Environmental impacts
    - Soil quality management
    - Materials handling, logistics, and agri/forest engineering

Solar Energy Workshop Topics

- State of the Art Overview
- Physics
  - Condensed matter
  - Optics
  - Devices
  - Theory and modeling
- Chemistry
  - Organic/inorganic
  - Surface and interface chemistry/analysis
- Chemical Engineering
  - Process engineering/control
  - Manufacturing
- Materials Science
- Mechanical Engineering
  - Robotics
  - Equipment design (sample handling/transfer, vacuum environment)
  - Automation
  - Solar hardware (tracking, concentration)
- Electrical Engineering
  - Devices and semiconductors
  - Measurements and characterization
  - Instrumentation