



Billing Code 6450-01-P

DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

Collegiate Wind Competition

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Request for proposals.

SUMMARY: The U.S. Department of Energy (DOE) requests proposals to participate in the 2016 Collegiate Wind Competition (Competition), which is administered by the National Renewable Energy Laboratory (NREL). DOE anticipates the award of ten (10) firm fixed price subcontracts under this solicitation. The anticipated period of performance is through July 31, 2016, with a funding availability of \$20,000 for each award. The Competition is open to teams of undergraduate students from two- and four-year institutions of higher education.

DATES: The request for proposals was issued on October 30, 2014 and is available at wind.energy.gov/windcompetition. Technical questions must be received in writing to NREL by November 13, 2014. Proposals must be received by December 15, 2014. The Competition event will be held in May, 2016. Dates are subject to change.

ADDRESSES: Interested persons can find full details about the Competition online at wind.energy.gov/windcompetition. Questions about the Competition can be sent to:

- *E-mail:* maurice.nelson@nrel.gov
- *Mail:* Mr. Maurice Nelson, National Renewable Energy Laboratory, 15013 Denver West Parkway MS RSF030, Golden, Colorado 80401.

FOR FURTHER INFORMATION CONTACT:

Questions may be directed to Mr. Maurice Nelson at (303) 384-7029 or by email at:

maurice.nelson@nrel.gov.

SUPPLEMENTARY INFORMATION: The Department of Energy Science Education and Enhancement Act (42 U.S.C. 7381b) authorizes the Secretary to support competitive events for students under the supervision of teachers, designed to encourage student interest and knowledge in science and mathematics. DOE introduced the Competition in 2014 for the purpose of engaging the future workforce in wind energy. NREL administers the Competition for DOE.

The objective of the Competition is to prepare students from multiple disciplines to enter the wind energy workforce. Currently, the wind industry has shortages in key jobs such as scientists, educators, design and research engineers, technical workers, and project managers. Wind-specific advanced degrees are not required for many of these jobs, but having wind experience is of high importance. The Competition is also aligned with the central goals of DOE, which are to catalyze the timely, material, and efficient transformation of the nation's energy system, secure the United States' leadership in clean energy technologies, and maintain a vibrant domestic effort in science and engineering as a cornerstone of economic prosperity.

The 2016 Competition theme is to design, construct, and develop a plan to market a wind-driven power system, which includes an off-grid load supplied by the wind-driven power generator. The load shall be designed to perform useful work in an off-grid environment, be easily transported to the competition, tested safely and cleanly in the Competition environment, and provide a visual indication of the instantaneous power generated by the wind-driven power system. This theme focuses on effective electrical and electronic design of the wind turbine for efficient and safe control of the device, a load system that can match the power being generated, and an overall safe and reliable mechanical and aerodynamic turbine design. The Competition does not prescribe a market or a wind regime.

The Competition consists of three multi-faceted elements. The technical element requires teams to design and build a unique wind-driven power system, develop and present the technical designs to a panel of judges, and test the wind system against pre-determined parameters in an on-site wind tunnel. The second element of the Competition is the creation and presentation of a market research-supported business plan that will be used to develop the team's technical product into a marketable wind power system. This plan will be presented formally to a panel of judges and informally pitched to a public audience. The final element of the Competition aims to familiarize students with the siting, permitting, and planning process associated with deployment of wind power systems by requiring students to identify a project site for their power system, develop a plan to install their system informed by siting constraints and expected challenges at that location, and present their well-researched deployment strategy. The plan for deployment shall be presented in a slide show or poster.

Each Competition element will be evaluated against a set of pre-weighted objective and subjective criteria in both closed-door and public settings. Technical design and business plan presentations to judge panels will be closed-door and non-public. Teams' market pitch and deployment strategy presentations will be public and attended by judges and other Competition teams. Criteria and weighting will be defined in the 2016 Rules and Requirements document, which will be published in the spring of 2015. Refer to the 2014 Rules and Requirements for examples of likely content.

All dates are subject to change. For more details please visit wind.energy.gov/windcompetition.

Dated: October 30, 2014.

Jose Zayas,
Director,
Wind and Water Power Technologies,
Office of Energy Efficiency and Renewable Energy.

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