



# A NATIONAL ROADMAP ON ADVANCING CLEAN ENERGY TECHNOLOGIES

ENTREPRENEURSHIP AND INNOVATION  
THROUGH HIGH PERFORMANCE COMPUTING

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**Senator John Hoeven**

**presents**

## **North Dakota Energy Symposium: Using Technology to Enhance Clean Energy Production**

**North Dakota State University  
March 5, 2012**

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- 8:00 AM**      **Registration**
- 8:45 AM**      **Welcome:** Dr. J. Bruce Rafert, Provost, North Dakota State University
- 9:00 AM**      **North Dakota's Computing Center: Opportunities for National Leadership**
- Dr. Philip Boudjouk, Vice President for Research, Creative Activities and Technology Transfer, North Dakota State University
- Dr. Martin Ossowski, Director, Center for Computationally Assisted Science and Technology, North Dakota State University
- 9:30 AM**      **Perspectives from a National Laboratory: High Performance Computing and American Innovation**
- Dr. Tomás Díaz de la Rubia, Deputy Director for Science and Technology, Lawrence Livermore National Laboratory
- Dr. Frederick Streitz, Director, High Performance Computing Innovation Center, Lawrence Livermore National Laboratory
- 10:00 AM**      **Break**
- 10:15 AM**      **Oil and Gas Production: Computing in the Bakken - Improving Access to and Maximizing Output from Existing Fossil Fuel Resources Through Modeling and Simulation**
- Moderator:* Dr. Kalpana Katti, Distinguished Professor, Civil Engineering, North Dakota State University
- Matt Thompson, General Manager, QEP Legacy Division, QEP Resources, Inc.
- Lynn Helms, Director, North Dakota Department of Mineral Resources

-Dr. Gerald Groenewold, Director, Energy and Environmental Research Center,  
University of North Dakota

-Dr. Steve Bohlen, Deputy Program Director, Lawrence Livermore National Laboratory

**11:45 AM Keynote Address: Increasing Energy Independence Through Technology**

The Honorable John Hoeven, United States Senate

**12:15 PM Lunch**

**1:30 PM Wind Energy: Powering the Plains Through High Performance Computing-  
Making Alternative Energy Mainstream**

*Moderator:* Dr. Alan Kallmeyer, Chair and Professor, Mechanical Engineering, North  
Dakota State University

-Bill Burga, Director, Business Unit, LM Wind Power Blades

-Andy Paliszewski, Director of Wind R & D, Siemens Energy

-Nalu Kaahaaina, Zero Carbon Energy Program, Lawrence Livermore National Laboratory

**2:45 PM Break**

**3:00 PM Transmission: Putting the Smart Into Smart Grid**

*Moderator:* Dr. Kendall Nygard, Professor, Computer Science,  
North Dakota State University

-Mark Nisbet, North Dakota Principal Manager, Xcel Energy

-Matthew Stoltz, Manager of Transmission Services, Basin Electric

-Dale Osborn, Transmission Planning Technical Director & Principal Advisor,  
Midwest Independent Transmission System Operator

-Dr. Richard O'Neill, Chief Economic Advisor, Division of Policy Development,  
Federal Energy Regulatory Commission

-Dr. Julio Friedmann, Chief Energy Technologist, Lawrence Livermore National Laboratory

**4:30 PM Closing Address:**

Dr. Tomás Díaz de la Rubia, Deputy Director for Science and Technology,  
Lawrence Livermore National Laboratory