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CLIMATE CHANGE RESEARCH &

Considerations in NPPD's Carbon-Emission Reductions

An educational forum sponsored by the Nebraska Public Power District and UNL's Nebraska Center for Energy Sciences Research, in partnership with the Electric Power Research Institute

July 13, 2016
Regency Suite / Nebraska Union / UNL Campus
Lincoln, Neb.

Thanks for attending! Presentations and follow-up materials can be accessed at .
Meeting Presentations@NCESRUNL.com.

Climate Change Research &
Considerations in NPPD's Carbon-Emission Reductions

9:00 - 9:15 a.m.

WELCOME
Alan Dostal, Director of Research, Nebraska Public Power District

Mr. Dostal was assigned responsibility for NPPD's Domestic Energy Research and Application Initiative as well as interactions with UNL's Nebraska Center for Energy Sciences Research in September 2005. He is a 1974 graduate of the University of Nebraska – Lincoln with a Bachelor of Science Degree in construction Management. He joined NPPD in March 1979 as a generation engineering scheduler and earned his Masters Degree in Business Administration from the University of Nebraska – Kearney in 1989.

9:15 - 10:30 a.m.

ENERGY VISION: LOOKING FORWARD
Anda Ray, Senior Vice President with EPRI
Energy, Environment and External Relations

Ms. Ray leads EPRI's environmental research sector that addresses environmental sciences, energy analysis, sustainability and occupational health and safety. Additionally, she is the EPRI Renewable Energy executive sponsor, coordinating a cross area industry advisory group on bulk and local renewable energy generation, and integration onto the grid. Prior to EPRI Ray was at TVA for over 30 years, serving in a variety of executive-level positions, including leading environment, engineering, technical services, strategy, power supply planning, research and development. The breadth of her utility experience includes almost all aspects of the electric industry, including nuclear power, fossil fueled generation, renewable energy, development of new products and services and emergency response and recovery for biomass. She has earned several certifications in Project Management, Emergency Response and Hazardous Waste. Her degrees are in Solid State and Nuclear Physics.

10:45 - Noon

CONSIDERATIONS IN NPPD'S CARBON-EMISSION REDUCTIONS
John McClure, Vice President and General Counsel, Nebraska Public Power District

Mr. McClure majored in history and political science at the University of Nebraska-Lincoln and graduated from the UNL Law School in 1980. The Hastings native joined NPPD in 1980 and gained experience working with a variety of legal issues. In 1993, he moved into management and held executive positions relating to strategic planning and government relations. In addition to NPPD's legal affairs, NPPD's governmental, environmental, water policy and corporate communications functions are part of his present responsibilities. He is a frequent speaker on energy issues. John is active in several state and national energy associations and in his community having just completed service as President of the Columbus Library Foundation and Chairman of the Columbus Community Hospital Board of Directors.

Noon - 1 p.m.

LUNCH

1:00 - 1:45 p.m.

TECHNICAL SOLUTIONS TO REDUCE CARBON EMISSIONS
Anda Ray, EPRI

1:45 - 2:45 p.m.

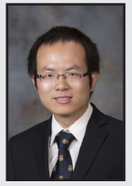
RESEARCH IN NEBRASKA: THREE PROJECTS
Dr. Michael Nastasi, Director, Nebraska Center for Energy Sciences Research

Dr. Nastasi is also the Elmer Koch Professor of Mechanical & Materials Engineering. He received his B.S. (1981), M.S. (1983) and Ph.D. (1986) degrees from the Materials Science and Engineering Department at Cornell University. Prior to coming to UNL in January 2012, Mike was a laboratory fellow, staff scientist, and director of the Energy Frontier Research Center on Materials at Irradiation and Mechanical Extreme at Los Alamos National Laboratory (1985–2011). Among many goals he has for the NCESR, Mike wants to develop innovative research programs that a) enhance renewable energy resources and energy conservation in Nebraska and worldwide and b) support economic development in Nebraska through development of new technologies and commercialization in new businesses.

NCES Research Project Representatives

Alex Enders, Associate Professor, Functional Service Nanostructures
Mr. Enders is studying surface-supported nanostructures, from single atoms to complex 3D structures. His team is researching how materials behave in the nanoscale world and how they can be manipulated for various purposes, such as making computers faster than lightning and batteries which can last forever.

Dennis Alexander, Assistant Professor, Kingery Engineering
As director of the Center for Electro-Optics, Mr. Alexander has developed one of the premier ultra-fast laser facilities in the U.S. His research group is interested in femtsoecond laser induced breakdown spectroscopy using co-linear dual pulse dual focus techniques to enhance the signal for remote detection of explosives, chemicals, and nuclear threats.



Bai Cui, Assistant Professor, Materials for Extreme Environments Lab
His research is focused on advancing materials which endure extreme temperature, irradiation or corrosive environments so as to enhance the performance of next-generation nuclear energy, petroleum, and aeronautic systems which need to endure high neutron doses, high operating temperatures, and extremely corrosive coolants.

2:45 - 3 p.m.

CLOSING COMMENTS
Alan Dostal, NPPD