



Speaker Information

Carbon Capture, Utilization, and Storage in Kansas

Dr. Rolfe Mandel, Director, Kansas Geological Survey

Presentation: *Introductory remarks*

Dr. Rolfe Mandel is Director of the Kansas Geological Survey, where he also serves as State Geologist, Senior Scientist, and Executive Director of the Odyssey Geoarchaeology Research Program. Also, he is a University Distinguished Professor at KU. Dr. Mandel received a B.A. in Geography from the University of Texas at Austin, an M.A. in Geography from the University of Kansas, and a Ph.D. in Special Studies Quaternary Research through the University of Kansas Geology Department. His work has been published in many books and peer-reviewed journals and spans a wide range of topics including geoarchaeology, paleopedology, late-Quaternary landscape evolution, isotope geochemistry, and paleoenvironmental reconstruction. In 2012 the National Academy of Sciences appointed him Chair of the U.S. National Committee for the International Quaternary Congress, a position he still holds.

Dr. Mandel has received many awards and distinctions, including Fellow of the Geological Society of America, the 2011 University of Kansas Center for Teaching Excellence Award, the KU College of Liberal Arts and Sciences 2009 John C. Wright Graduate Mentor Award, and the 2012 Kansas Endowment Association's Irvin E. Youngberg Research Achievement Award. The Geological Society of America recognized his achievements with two prestigious awards: the George Rapp Award for outstanding contributions to the interdisciplinary field of archaeological geology, and the 2010 Kirk Bryan Award for Excellence. In 2014, the University of Kansas named him University Distinguished Professor.

Brad Crabtree, Vice President, Great Plains Institute

Presentations: *Introductory remarks, National and Regional Collaborative Efforts to Develop CCUS Projects*

Brad Crabtree joined the Great Plains Institute in 2002 and is a vice president responsible for managing its carbon management program. He co-directs the national Carbon Capture Coalition, a partnership of energy, industrial and technology companies, labor unions, and environmental, energy and agricultural organizations that led efforts to secure passage of landmark legislation in Congress to reform the 45Q tax credit for the capture, beneficial use and storage of CO₂ from power plants and industrial facilities. Brad also coordinates a 14-state work group convened by Governor Matt Mead of Wyoming and Governor Steve Bullock of Montana to foster deployment of carbon capture and CO₂ pipeline infrastructure. Brad previously coordinated energy policy advisory groups for the Midwestern Governors Association and facilitated the Midwestern Greenhouse Gas Reduction Accord Advisory Group for six governors and the Manitoba premier. He also co-directed Powering the Plains, GPI's original flagship

project that developed a comprehensive, 50-year regional blueprint for energy efficiency, renewable energy and advanced coal technologies. Brad was appointed by the U.S. Secretary of Energy and serves on the National Coal Council. He lives with his wife and daughter in North Dakota, where he was a statewide candidate for Public Service Commissioner in 2010 and 2012. A graduate of the Georgetown School of Foreign Service, Brad has an MA in history from Johns Hopkins University.

Andrew Wiens, Chief Policy Officer, Office of Kansas Governor Jeff Colyer, M.D.

Presentation: *Governor Colyer's Message*

Andrew Wiens is the Chief Policy Officer for Kansas Governor Jeff Colyer, M.D. He has been working for Dr. Colyer since February 2017 and served a brief stint as Governor Brownback's Policy Director as well. Prior to that, Andrew worked at the Kansas Department for Children and Families as a Senior Advisor and, previously, the Director of Policy & Legislative Affairs since May 2014. He served as the Policy Analyst in the Office of Kansas Governor Sam Brownback from 2011-2014. He was born and raised in Topeka, Kan., and currently lives there with Kelsey, his wife of four years. He completed his undergraduate education at Tabor College in Hillsboro, Kan., in the fields of philosophy, history, religious studies and business management, and earned his MBA from the Washburn University School of Business in Topeka.

Greg Thompson, CEO, White Energy

Presentation: *Carbon Capture & Ethanol – The Perfect Fit*

Mr. Thompson graduated from Penn State University and attended numerous Executive courses at Harvard, Columbia University, and Purdue. He worked for American Cyanamid in various sales and marketing roles for first 10 years of his career. Mr. Thompson worked for BASF leading their Specialty Marketing efforts for 5 years. Mr. Thompson wanted a more entrepreneurial role and worked for Eitgra Life Sciences which focused on generic pesticides and grew the business from a \$5M business to a \$47M business in 4 years which was sold to Nufarm for \$69M. At Nufarm, Mr. Thompson headed a \$450M agricultural unit for 3 years. Following Nufarm, Mr. Thompson partnered with Paine Schwartz, a \$3B private equity group focused on food and agribusiness. Mr. Thompson helped acquire 6 companies with over \$400M of capital to form Verdesian Life Sciences where he served as President and Chief Operating Officer for 5 years. Mr. Thompson became President and CEO of White Energy in September 2017 and is currently focused on accelerating growth and leading strategic initiatives and process improvements.

Eugene Holubnyak, Research Associate Petroleum Engineer, Kansas Geological Survey

Presentations: *Introduction to Carbon Capture, Storage, and Utilization, Overview of ICKan: Integrated Carbon Capture and Storage for Kansas*

Eugene Holubnyak is a Research Associate Petroleum Engineer at the Kansas Geological Survey and a PhD student at Heriot-Watt University. Mr. Holubnyak has over 10 years of experience in Applied Geoscience and energy related research. Eugene has focused his research on reservoir engineering problems related to CO₂ Enhanced Oil Recovery (EOR), secondary recovery, CO₂ and waste disposal, unconventional resources development, and induced seismicity. Eugene has managed several research and field scale projects funded by Department of Energy, has prepared numerous proposals, and participated in several tenders.

Eugene is interested in reservoir dynamics that could be affected by geochemistry, thermal conditions, geomechanics, and other factors. Mr. Holubnyak has also participated in several hydrogeological and geothermal studies as a reservoir and geochemical modeler

Susan Stover, Outreach Manager, Kansas Geological Survey

Presentation: *CarbonSAFE Projects In Kansas Panel*

Susan Stover is a licensed professional geologist and Outreach Manager with the Kansas Geological Survey. She has over 20 years of experience in water policy, resource planning and environmental remediation. Prior to working for the Kansas Geological Survey, she was with the Kansas Water Office and the Kansas Department of Health and Environment. Stover is a Fellow of the Geological Society of America, and current Chair of GSA's Geology and Society Division, and past chair of the Geology and Public Policy Committee.

Charles C. ("Chris") Steincamp, Managing Partner, Depew Gillen Rathbun & McInteer, LC

Presentation: *CarbonSAFE Projects In Kansas Panel*

Chris Steincamp's primary areas of practice are oil and gas and environmental law. Chris graduated magna cum laude in 1993 from Washburn University School of Law. He has a B.S. degree in Geology from Kansas State University and is a licensed Kansas Professional Geologist. He is a member of the American Bar Association, Section of Environment and Resources, Kansas Bar Association, and past President of the Oil and Gas Mineral Law Section, the Wichita Bar Association, the Kansas Association of Defense Counsel, the Defense Research Institute. He is also a member of the Kansas State University Geological Advisory Council, the American Association of Petroleum Geologists, and the Kansas Independent Oil and Gas Association. Chris has been listed in the Best Lawyers of America from 2006 to the present and was named Lawyer of the Year for Environmental Law in 2014, 2016, 2017, and 2018. He is a frequent author and lecturer on Oil and Gas and Environmental Law topics.

Joseph A. Schremmer, Attorney/Partner, Depew Gillen Rathbun & McInteer, LC.

Presentation: *Known Unknowns: Legal, Regulatory, and Public Policy Issues with CCS and CCUS and Possible Solutions*

Joseph A. Schremmer (Wichita) is a partner at Depew Gillen Rathbun & McInteer, LC. Joe received his B.S. degree in Journalism and B.A. degree in Political Science in 2009, and his M.B.A. in 2013 from the University of Kansas. He received his J.D. from the University of Kansas School of Law in 2013. Upon graduation from law school, Joe was inducted into the Order of the Coif and received the Samuel Mellinger Award as the most distinguished student in the combined areas of scholarship, leadership, and service. During law school, Joe served as the Editor in Chief of the Kansas Law Review. Joe currently serves on the executive committee of the Oil, Gas, and Minerals Section of the Kansas Bar Association as a member at large. Joe is also an Adjunct Professor at the University of Kansas School of Law and Washburn University School of Law where teaches courses in oil and gas law.

Dr. Andrew Duguid, Senior Engineer at Battelle Memorial Institute

Presentation: *Integrated Midcontinent Stacked Carbon Storage Hub: Overview*

Andrew Duguid has 15 years of research and practical experience in studying well integrity, risk assessment, carbon capture and storage (CCS) and CO₂-enhanced oil recovery (EOR) topics. Dr. Duguid is the principal investigator for the Phase 1 and Phase 2 Integrated Midcontinent Stacked Carbon Storage Hub (IMSCS HUB) CarbonSAFE project. In addition, He has led projects related to wellbore integrity in field and laboratory settings in the United States, Canada, Brazil, and South Korea. Dr. Duguid has multiple publications on well integrity, risk assessment, and cement degradation for CCS and CO₂-EOR projects. Dr. Duguid leads two technical panels on well infrastructure for the Industrial Standards Organization's Technical Committee 265 Carbon Dioxide Capture, Transportation, and Geological Storage. He earned a Ph.D. and Master's Degree in Civil and Environmental Engineering and a certificate in Science, Technology, and Environmental Policy from Princeton University and Master's degrees and a Bachelor's degree in Civil and Environmental Engineering and Nuclear Engineering from the Ohio State University.

Dr. Martin Dubois, Owner, Improved Hydrocarbon Recovery, LLC

Presentation:

Economics for Capture, Compression and Transportation in the Mid-Continent

Martin Dubois has 40 years of wide-ranging petroleum industry experience, as an exploration geologist with a major, independent oil and gas prospector, exploration manager for a Kansas oil company, research geologist at the Kansas Geological Survey, and for the past 10 years, owner of Improved Hydrocarbon Recovery, LLC. Over the last 15 years Dubois has managed or co-managed multi-discipline, large-scale reservoir characterization-modeling-simulation projects, including four U.S. DOE-funded projects related to CO₂ enhanced oil recovery in Kansas. Dubois is currently Joint-PI and project manager for the KGS-managed, DOE-funded, Integrated Carbon Capture and Storage for Kansas project. Dubois has a BS in Geophysics from Kansas State University and MS and PhD in Geology from the University of Kansas.

Al Collins, Senior Director Regulatory Affairs, Occidental Petroleum

Presentation: *Vision for CO₂-EOR Market Expansion Post-45Q*

Al Collins is the Senior Director of Regulatory Affairs at Houston-based Occidental Petroleum Corporation (Oxy) – an international oil and gas exploration and production and chemical company. Oxy is one of the largest oil and gas companies in the United States based on equity market capitalization and the world's largest user of carbon dioxide (CO₂) to enhance oil recovery (EOR). Over the past 33 years, Mr. Collins has held a variety of positions in the environmental policy, engineering and management fields. His experience spans air, water, hazardous waste, toxics, and superfund issues, both on behalf of regulators and those being regulated. He has participated in environmental negotiations with federal, state, and local agencies, and has extensive experience with regulatory and legislative development. At Occidental, Mr. Collins is involved in a variety of issues, including hydraulic fracturing, endangered species, remediation, toxics and EOR using CO₂. Mr. Collins was very involved in Occidental's development of the first and only U.S. Government approved plan for quantifying the amount of CO₂ geologically stored during EOR. Prior to joining Oxy in 2000, Mr. Collins served two years as Vice President of Regulatory Affairs at National Environmental Strategies, representing clients on environmental and small business issues. From 1985 to 1997, he worked at the United States Environmental Protection Agency, where he developed regulations

and policies related to waste, toxics, and water. Mr. Collins holds degrees in Economics and Chemical Engineering from North Carolina State University.

Dana Wreath, Vice President, Berexco LLC

Presentation: *A Kansas Independent's Perspective on CO2 Flooding*

Dana Wreath is a Vice President for Berexco, LLC, a fifty-year+ Wichita Kansas-based company, the second largest oil producer in Kansas, the largest producer in Nebraska and with operations in eight states. They are the lead industry partner in the U.S. Department of Energy funded, Kansas Geological Survey managed, South-Central Kansas CO2 Project. Berexco recently operated a successful CO2 EOR pilot in the Wellington field within that project. After first working as a reservoir engineer for Mobil E&P US in Houston (1989-1992, joined Berexco, Inc. (1992) as a reservoir engineer and moved up the ranks to Division Engineer in 1996 and Vice President in 2010.

Scott McDonald, Biofuels Development Director and IL-ICCS Project Director, Archer Daniels Midland

Presentation: *Capturing CO₂ From Ethanol*

Scott McDonald is Director of Biofuels Development for Archer Daniels Midland Company. In this role, his responsibilities include identification and development of projects and novel product applications which will expand the use of biofuels and bio-based products into the marketplace. As part of this role, he leads the biofuels technical services team which provides technical support to ADM's customer base as well as industry expertise to regulatory agencies and nongovernmental organizations. Prior to joining ADM, he was the commercial trading manager for TOTAL, a refining and petrochemical company where his job responsibilities included trading and risk management for various feed and finished product streams for the company's US refining and petrochemical assets. His 20-year career has included trading and risk management, business development, economics and planning, fuels formulation, and unit process design, startup, and operation.

Keith Tracy, Owner, Cornerpost CO₂ LLC

Presentation: *Economic Carbon Capture, and the Missing Letter in CCUS*

Keith Tracy is a subject matter expert in capturing, compressing, and pipelining CO2 emissions from industrial sources to underground injection sites. His company provides carbon capture consulting services, develops CO2-related infrastructure projects, and helps companies qualify for 45Q tax credits. Previously, Keith worked for over 11 years for Chaparral Energy, a CO2-EOR company, where he directed all carbon capture operations, including project development, CO2 supply efforts, and overseeing design and construction of CO2 capture plants and CO2 pipelines. Keith was raised on a family farm, has a BA from Oklahoma State University, and a JD from Oklahoma City University. He has also practiced oil and gas law for over 20 years. Keith and his wife have four children, and they reside in the Oklahoma City area.

Brendan Jordan, Vice President, Great Plains Institute

Presentation: *Making progress on CCUS in Kansas – breakout session 1*

Brendan Jordan has 13 years of experience with renewable and low carbon energy technology and policy. He leads programs related to transportation, fuels, biogenic carbon management, and the bioeconomy. He is an experienced policy advocate, facilitator, energy analyst, and project manager. Jordan has led the Bioeconomy Coalition of Minnesota since 2012, supporting deployment of biobased chemical, advanced biofuel, and biomass thermal energy projects in Minnesota. The Coalition organized an effort to create the Bioeconomy Production Incentive, which passed Minnesota's legislature in 2015, and which is already beginning to attract new commercial-scale projects in the state. He collaborated with other Institute staff to pass an advanced biofuel loan guarantee program in North Dakota and worked with former North Dakota Senator Kent Conrad to develop language on carbon negative bioenergy systems for national energy legislation in the U.S. Senate. Jordan is part of GPI's carbon management team, which coordinates policy, research, and project development to deploy carbon capture and utilization technology. Jordan also coordinates efforts on vehicle electrification and smart grid technology at the Institute. Brendan earned an M.S. in Science, Technology and Environmental Policy from the University of Minnesota, and a B.A. in biology from Carleton College.