

Connecting Sustainable Energy and Economic Development

> October 29-30, 2015 Colorado School of Mines Golden, Colorado USA

www.energyafricaconference.com

(SE) Samuel Engineering

Prepared by:



# COLORADO

Gov. John Hickenlooper



October 29, 2015

Greetings:

On behalf of the State of Colorado, it is my pleasure to welcome you to our state for the 2015 Energy Africa Conference.

Access to affordable, reliable, and clean energy is essential to Africa's economic growth. By bringing together some of the best minds in the energy technology area, this conference has extraordinary potential to foster creative opportunities for sustainable development across the African continent.

This year's conference will focus on the challenges of developing the expertise and infrastructure to connect electricity supply to African communities and commerce. We are confident that the thriving spirit of innovation and collaboration that exists in Colorado makes our state the perfect venue for this type of dialogue.

Once again, welcome to Colorado for this important event. We wish you the best for a memorable and meaningful conference, and we hope you enjoy your stay here.

Sincerely,

John W. Hickenlooper Governor

# Welcome to Colorado and the 2015 Energy Africa Conference.

Colorado is one of the leading states in the nation in developing and disseminating clean energy policies and practices. We hope to share this experience with the conference participants.

Holding the conference in Golden at the Colorado School of Mines and adjacent to the National Renewable Energy Laboratory is ideal as these institutions are home to some of the best minds and students in the energy technology area. Colorado is also a focal point for many companies active in the responsible development of natural gas resources.

This year the conference is focused on the theme "**Infrastructure and Knowledge-Connecting Sustainable Energy and Economic Development**". Access to affordable and cleaner energy is essential to accelerating economic development of countries in Africa and enhancing the living standards of their citizens. The synergy between renewable energy technologies and the unexploited extensive natural gas resources promises a cost effective, environmentally friendly and sustainable approach for Africa to meet its energy needs.

The Energy Africa Conference brings together business executives and thought leaders from the public, non-government organizations and research institutions to discuss and encourage work needed to leverage the synergy between natural gas and renewable energy sources in Africa.

We hope this conference inspires you to think bigger and more broadly about energy related opportunities, to expand your horizons, to grow your businesses and to help make the world a better place.

We want to express our appreciation to the Colorado School of Mines and its Presidents Dr, Bill Scoggins and Dr. Paul Johnson for their hospitality and allowing us to hold the conference at Mines. We hope to expand and continue this partnership in the future.

We would also like to thank our sponsors for their generous support without which this conference would not be possible.

Energy Africa Conference Committee

# DAY ONE THURSDAY, OCTOBER 29

# All Day Registration

# 7:30-8:30 AM: Breakfast/Networking Coffee

## 8:00-8:45 AM: Welcome and Introductory Remarks

Luka Powanga, Professor Regis University and Co-founder Energy Africa Conference Fred Julander, Conference Chairman and President, Julander Energy Derrick Hudson, Assistant Professor, Colorado School of Mines Paul Johnson, President, Colorado School of Mines

# 8:45-10:00 AM: Session 1 - Connecting Large Scale Projects to Local Communities and Development

**Session 1** - Explores approaches to creating local markets for large scale natural gas and power projects. Historically, large scale energy and mining projects have been focused on extraction and exports. While external markets in most cases still remain important, these projects must contribute to in-country needs and economic development to be considered truly successful.

 Moderator: Tisha Conoly Schuler, Strategic Advisor, Stanford University
 Panelists: Susan Morrice, CEO Belize Natural Energy Philip Mshelbila, General Manager External Relations and Communications, Shell Nigeria Everod Samuel, President, Samuel Engineering, Inc. Nii Asante, Technical Advisor, Ghanaian Energy Commission Ramona Graves, Professor and Dean of College of Earth Resource Sciences and Engineering (CERSE)

# 10:15-11:30 AM: Session 2 - Urban and Industrial Grids, Midscale Grids, Micro Grids and Distributed Generation; Developing and Connecting the Core Building Blocks

**Session 2** - Will present the progress in developing larger scale utility grids, and smaller self-contained grid systems including mid-scale grids and micro-grids answering the question: What type of grids work in what settings and how do distributed generation sources fit into grid concepts and Africa's economic development?

Moderator:	David Posner, President, EnVent Energy
Panelists:	<ul> <li>Ravi Vora, Advisor-International Programs, Renewable Energy Grid, National Renewable Energy Laboratory-NREL</li> <li>Ambe Njoh, Professor, Environmental Science and Policy, University of South Florida</li> <li>Sharrieff Mustakeem, President/CEO, MCX Environmental Energy Corp.</li> <li>Monique Dyers, President, Ensight Energy Consulting</li> </ul>

# 11:45-1:00 PM: Lunch – Luncheon Speaker: Mayor Wellington Webb

# 1:15-2:30 PM: Session 3 – Universities as the Nexus for Sustainable Energy Development

**Session 3** - Successful energy development depends fundamentally on people with knowledge to conceive and implement projects. This session considers the essentially roles that universities play in building this expertise. Universities also provide a platform to demonstrate how smart grids can efficiently connect and manage energy supplies and needs.

 Moderator: Nigel Middleton, Senior Vice President for Strategic Enterprises, Colorado School of Mines
 Panelists: Bai Blyden, Engineer, Southern Power Wei-Jen Lee, Director, Energy Systems Research Center/Electrical Engineering Department Daniel Zimmerle, Director, Electric Power Systems Laboratory Mechanical Engineering, Colorado State University Daniel Wessner, Regis University and IEEE

# 3:00-4:30 PM: Session 4 – Foreign Investment and Partnerships and How US Companies Could Become More Competitive

**Session 4** - As countries have moved beyond their colonial past, new partnerships with foreign companies are emerging. This session discusses successful approaches used by different companies and countries, including from China and the US. The session also suggests ideas for US companies to become more successful partners in energy industry projects.

Moderator: Jason Nagy, Founder, Mainspring Innovation, LLC

Panelists: Jim Wilson, Senior Coordinator for Trade Promotion, Bureau of African Affairs, US Department of State
 Monoru Takada, Director, UN Sustainable Energy for All Initiative, New York
 Chip Comins, Chairman and Chief Executive Officer, American Renewable Energy Institute (AREI, Inc)
 Rose Ntlou, Deputy Director, International Coordination, North America, Europe, Ministry of Energy, South Africa
 Richard Jotsbergy, Business Consultant

## 4:30-6:00 PM: Poster Presentations Students and Reception

# DAY TWO FRIDAY, OCTOBER 30

## **All Day Registration**

7:30-8:30 PM: Breakfast/Networking Coffee

8:30-8:45 AM: Introductory Remarks

# 8:45-10:00 AM: Session 5 - Project Successes, Failures and Opportunities

**Session 5** - Highlights selected renewable, waste to energy and energy efficiency projects. Discussion for each project will emphasize the elements that led to the projects successes and disappointment.

Moderator: Luka Powanga, Professor Regis University

Panelists: Richard T. Boehne, Vice President-International Business, Merrick & Company Bob Mulverville, Chairman, Board of Directors for Standard Alcohol Frank Corsini, Chairman & Founder, GIVE Global Energy Robyn McGuckin, Senior Climate Change Advisor

## 10:00-10:30 AM: Networking Break

# 10:30-11:45 AM: Session 6 – Political and Regulatory Frameworks and Policies for Successful Energy Development

**Session 6** - Discusses government policies needed to attract and encourage infrastructure build out for connecting renewable and natural gas projects in rural and urban markets.

Moderator:	<b>Mark Safty</b> , Holland and Hart and University of Colorado, Tim Wirth Policy Center
Panelists:	<ul> <li>Adam L. Reed, Director, Energy Sustainability Education Studies Programs, University of Colorado</li> <li>Fenda Akiwumi, Associate Professor, College of Arts and Sciences, University of Florida</li> <li>Ugo Nwokeji, Director, Center for African Studies, University of California at Berkeley</li> <li>Osagie Okumbor, Managing Director and Country Chair, Shell Companies in Nigeria and Shell Petroleum Development Company of Nigeria Limited (SPDC)</li> </ul>

# 12:00-1:30 PM: Lunch and Poster Presentation Recognition Speaker: Lonnie Johnson, President & CEO, Excellatron

# 1:30-3:00 PM: Session 7- Challenges in Financing Energy Projects and Infrastructure

**Session 7** - Will discuss innovative approaches to financing energy projects in Africa. Examples of successful project financings will be presented.

Moderator: Brian Johnson, President, Sheldon Key Energy

Panelists: Peter U. Nwangwu, Senior Vice President for Africa, Global Edison Corporation Jacques Jonathan NYEMB, Co-Founder, African Business Lawyers' Club Consultant, President, NYEMB Law Firm and Teaching Fellow, Harvard Kennedy School of Government Gabriel Shumba, Chief Executive Officer, Group Shumba LLC Dr. Ken Jennings, Managing Director, K2J Environmental, LLC

3:00-3:15 PM: Closing Remarks

# SPEAKERS



#### Fenda Akiwumi

Associate Professor, University of South Florida

Dr Akiwumi's research touches upon varied aspects of environmental resources, particularly water, and minerals. She is interested in the political ecology of the production, management and distribution of these resources. Her work in this area engages issues in broad areas: resource extraction

and policy, resource problems (equitable distribution, environmental deterioration, conflict), and resource issues (sustainability and development, livelihoods, gender, cultural diversity). Her focus area is West African development issues where she studies the intricate relationships between sustainable resource use and development, livelihoods, culture and conflict in this region. She also researches the interconnection between urban water provision, perceptions, wetlands, and climate change in the Tampa Bay region. She uses development theories such as world-system, political ecology and sustainable livelihoods framework and a mix of quantitative and qualitative field data collection methods for a holistic analyses that examines the interaction of political, economic, and socio-cultural institutions with natural systems and consequences for environmental and cultural sustainability.



#### Nii Darko Asante

Technical Advisor, Ghana Energy Commission

Dr. Asante is a Chemical Engineer with over 20 years' experience in energy management and optimisation. He is currently the Technical Director of Ghana's Energy Commission and is responsible for the development and enforcement of regulations in the electricity, natural gas and

renewable energy sectors. He has also been responsible for the promotion of Renewable Energy, and the development and execution of initiatives to promote the efficient use of energy. Following the launch of Ghana's Country Action Plan on Sustainable Energy for All (SE4ALL), Dr Asante also led the Energy Commission's activities in coordinating the refinement and implementation of the Action Plan.

Dr Asante previously lectured at the University of Ghana, in Accra, where he was part of the team that set up the Engineering Faculty, and acted as the first head of the Department of Food Process Engineering. Prior to this he was the Technology Manager of the Energy Optimisation business of Aspen Technology Inc., where he developed tools and implemented solutions for Energy Management and Optimisation at refineries, chemical and petrochemical plants all over the world.



# Bai Blyden

Senior Engineer, Southern Nuclear Services

Bai K Blyden currently serves as a Senior Engineer with Southern Nuclear services under the Calculations Design Basis Validation Program for Configuration Management on the 2 x 940 MW Plant Hatch Nuclear plant. Over his career he has contributed his expertise to over forty major and minor

power plant projects and their associated interconnections in various capacities of electrical systems design, operations planning, project development and construction management.

Among his more notable assignments, Mr. Blyden served as Project Manager on the team, which planned the Calpine 70,000 MW development program. Within this scope he also served as onsite Construction Manager for the California Emergency Peaker Program which planned and managed the construction and commissioning of eleven (11x 45 MW) General Electric LM6000 gas turbine units under California executive order D-26-01 issued to protect the grid around Silicon Valley at the peak of the 2001 California energy crisis. Mr. Blyden has also worked on large Nuclear, hydro and mid to small distributed energy systems as well as having held senior technical consulting and staff positions with various utilities and AE firms such as TVA; Pacific Gas & Electric; The New York Power Authority, Texas Utilities, ABB among others.

An early advocate of an Integrated African Grid, Mr. Blyden has presented a conceptual framework and technical analysis for a centralized African Power pool with links to North Africa at the first IEEE Region 8 conference held in Nairobi, Kenya, December 1983. Since then authored numerous papers on African Energy Development with a particular emphasis on the strategic role of Micro Grids and Knowledge development.

Mr. Blyden earned an MS.EE from Moscow Energetics Institute in Power Systems, Generation and Industrial Distribution Systems and is a member of the IEEE International Practices Subcommittee. Fluent in multiple languages Mr. Blyden brings a multicultural mindset and an exceptional relationship building acumen. He is a Senior Member of the IEEE and serves as Chair of the IEEE PES International Practices subcommittee for Africa. He is also an advisor to Centric Ltd a commercial startup focused on the development of sustainable Green Housing and general building systems and to the strategic consulting group BBRM.



# **Richard Boehne**

Vice President-International Business, Merrick and Company

Richard Boehne is the Vice President of International Business for Merrick & Company in Washington, DC and a Board Director for Merrick's International Services Company. Mr. Boehne has over 20 years of leadership experience in international program management and business develop-

ment. Merrick's core capabilities include energy, national security, life sciences, infrastructure, and geospatial markets. Specific areas of focus include; bio-mass energy conversion, petroleum processing, nuclear materials processing, bio- science research facility design, facilities infrastructure development, national security facilities, and geospatial solutions.

Mr. Boehne's international experience includes long-term assignments in East Africa, Antarctica, Central Asia, and the Gulf Region of the Middle East. His focus includes both commercial and government business activities related to energy, defense, science support management, geospatial and infrastructure development. Mr. Boehne serves on the American Council of Engineering Companies (ACEC) International Committee and Council of Advisors for AmCham MENA.

During his extensive career, Mr. Boehne served as Raytheon's Country Director for the Middle East Arabic Gulf Region from 2007-2011 while living in Abu Dhabi, UAE. Prior to this assignment, he served as the Director of Operations for Raytheon's US Antarctic Program contract (1999-2002). From 2002-2007, he worked throughout Eastern Europe and Central Asia and was Head of Office for both Kazakhstan and Azerbaijani businesses. His tenure includes management of a large oil/gas project in Western Kazakhstan, Unmanned Aerial Systems consulting in Kenya and water development in East Africa. Mr. Boehne also led a Department of State (DOS) funded BioTechnology Engagement Program for approximately 60 bio-science projects in Eastern Europe and Central Asia.

His early professional career focused on security, environmental health, and safety activities in both government and commercial facilities – including the opening of two Department of Energy nuclear technology laboraties in the US. He received his MS in Environmental Health at Colorado State University, an MS in Industrial Safety Management at the University of Central Missouri and a BA in History at St. Cloud State University in Minnesota. Mr. Boehne as also completed Executive Education coursework at both the Thunderbird School of Global Business and Harvard Law School.

Mr. Boehne is a citizen of the US and currently resides in the Washington, DC National Capital Region.



# Frank Corsini

Chairman and Chief Executive Officer, GIVE Global Energy

Frank Corsini, Chairman & Chief Executive Officer and founder of GIVE Global Energy which specializes in advising and partnering with governments and private industry to create viable renewable energy based upon sustainable agriculture practices and best of breed green energy facility

designs. GIVE stands for Green, Independent, Viable Energy. Mr. Corsini also serves as co-founder and President of Liberty Global Energy which has partnered with China International Trust and Investment Corporation (CITIC) to design and build Africa's first LNG gas port to supply 300 MW's of new and converted electricity and to spur industrial development in Senegal.

Previously, Frank founded NXT Nutritionals, a natural sweetener three times sweeter than sugar to counter diabetes (patent pending); was an Executive of ION Capital Partners (a wholly owned wealth management division of Bear Stearns); Founder, American Express Cobalt Card (sold to First Data Corp); Founder, California Health Technologies inventor of commercial cancer drug (sold to Cooper Development); Inventor with 4 U.S. patents; Economist, U.S. Department of Commerce and White House Staff (President Gerald Ford).

Education: Georgetown University, BA Economics; Clark University, BS Psychology



## **Chip Comins**

Chairman and Chief Executive Officer, American Renewable Energy Institute

Chip Comins is the Chairman and CEO of the American Renewable Energy Institute, (AREI, Inc), Founder of the AREDAY Summit, Expo and Film Festival, Managing Director of American Spirit Productions, President and CEO of WEnergy, Inc.

and Co-founder of the Green Girl Minute. He has produced and directed both long and short form documentary films for educational and broadcast television markets, including The National Renewable Energy Laboratory, DOE Wind Powering America, PBS, Link TV and BET.

A long-time advocate of developing and implementing renewable energy resources to abate green house gases and climate change, Comins advocates a business approach to solving both the economic and environmental crisis. In 2009 he produced 13 official side events at the UNFCCC COP 15 in Copenhagen and is now producing the 11th Anniversary AREDAY Summit featuring President Jimmy Carter "Accelerating Solutions for the Great Transition" August 10-13, 2014.



# Monique Dyers President, Ensight Energy Consulting

Monique Dyers is the President of Ensight Energy Consulting, LLC with over 10 years of experience in the energy and power generation industry. Ensight Energy Consulting is a technical advisory firm which provides consulting services and project management to developers, investors, owners and equipment manufacturers of renewable energy projects.

Ms. Dyers experience includes leading transmission and interconnection evaluations, technical evaluations, bankability studies, construction monitoring and leading independent engineering and due diligence reviews in support of the financing of utility-scale electric power, solar and wind projects. In addition, Ms. Dyers previously managed global teams in the design, development and performance validation of Generator Set Engines and Wind Turbines used in Power Generation. She has also conducted technical product evaluations and testing of rotating machinery and power electronics for compliance with global certification standards of UL, CSA and CE. Ms. Dyers holds a Bachelor of Science in Electrical Engineering and Masters of Science in Electrical Engineering. Ms. Dyers has previously held senior consulting positions with other firms such as AWS Truepower LLC and Luminate LLC. In addition, she has held leadership and engineering positions with Vestas Technology R&D Americas and Caterpillar Inc.

As a successful and accomplished energy professional and business leader, Ms. Dyers also utilizes her expertise to serve as part of the executive team of the Urban Leadership Foundation of Colorado where she helps to influence and develop future leaders. In addition to her work with the Urban Leadership Foundation of Colorado, Ms. Dyers serves as a mentor and instructor to underprivileged students in the areas of mathematics and science. Her passion for community is also demonstrated in her contribution and dedication to several groups and organizations. Ms. Dyers serves as a board member of Colorado's Utility Consumers' Board and Friends of the Blair-Caldwell African American Research Library. She was recently appointed as a member to the City and County of Denver Sustainability Advisory Council where she serves as co-chair of the Air Quality, Climate and Energy committee. Ms. Dyers has been recognized for her professional contributions by the Denver Business Journal as a recipient of the 2014 Forty Under 40 Award and the 2015 Top Women in Energy Award.

During Ms. Dyers' tenure at Louisiana State University and A&M College, Ms. Dyers was initiated into the Mathematics Honor Society, Pi Mu Epsilon. She is also recognized as establishing a local Woman in Engineering Networking group at her previous employer, Caterpillar Inc.

Ms. Dyers is a native of New Orleans, Louisiana and appreciates spending time with her family and friends, giving back to the community, travel, golfing and designing pottery.



Hans Hyde Independent Contractor

Hans Hyde graduated from Clarkson University with a Bachelor's in Environmental Science & Policy in 1996 with a strong background in engineering and biochemical sciences. Turning attentions towards electric utilities, grids & distribution systems throughout California, he forged new working

relationships between the utilities, land managers, municipalities, fire protection agencies and individual customers in regional environments, which were carried over to system-wide implementation schemes.

Following pursuits in nursing, and establishing a successful startup business in Portland, Hans returned to the physical energy sector and leading edge solar thermal systems to design, build, and project manage over a dozen municipal scale systems throughout Colorado. He was also involved with residential & off-grid solar PV and wind turbine projects, as well as influential in new product line R&D, testing and deployment, pushing barriers of conventional wisdom as to what was technologically feasible during the early years of solar within the United States.

The past 5 years, Hans has focused attentions towards energy systems and natural resources on a global scale. His position with a small, family owned business with a global and multi-national customer base, and his inherent interests in water and energy concerns, afforded him unique opportunities to expand his expertise in past, present and proposed energy systems around the world, through direct and indirect interface with countless and varied energy infrastructure projects.

Since June 2014, Hans has striven to share his holistically derived knowledge and expertise of diverse energy delivery systems, including advanced integration of intelligence amplification and mutually beneficial agreements, as a foundation to advancing sustainable and equitable energy development in Southern Africa.

By the time of the EAC 2015, he hopes to have secured long term entry into Namibia, from which to deploy a Social Enterprise, scalable globally, to bridge barriers between those in need of energy and those whom can facilitate its delivery. His focus is on energy infrastructure systems as a keystone to emergent economies successful development.



# Kenneth V. B. Jennings Managing Director, K2J Environmental

Dr. Ken Jennings is an environmental scientist with over 25 years' experience in government (the US EPA Headquarters); industry (Amoco, Shell and Microsoft Corporations) and consulting. His areas of expertise include sustainability, energy, and climate change in Africa and the Caribbean. He

is an Adjunct Professor of Environmental Management for the University of Maryland University Center and consults major industries and governments.

As Managing Director of K2J, recent speaking engagements include:

- The African Presidential Roundtable on Energy Strategy for the 21st Century in Mauritius June 2011
- The Africa Energy Indaba in Johannesburg February 2012
- The African Presidential Roundtable on Energy Security in Johannesburg -May 2012
- The Joint UK, US, Niger Investment Forum in London (a participant) June 2012
- Micro Grid World Forum in Irvine March 2013
- Compliance and Risks Webinar Doing Business in a Regulated Africa August 2013
- Micro Grid World Forum in Irvine March 2014

Dr. Jennings earned a BS in geology and geophysics from Yale, a Masters in geology from the University of California Santa Barbara, and a Doctorate in environmental science and engineering from UCLA. He is married and has one daughter. In his leisure time Dr. Jennings enjoys playing basketball, traveling and writing.



# Brian Johnson

President and Owner, Sheldon Kye Energy

Brian re-located back to the US after being offshore for 14 years in Australia and the UK. He has set up a limited liability company called Sheldon Kye Energy whose focus is energy infrastructure development and advisory.

Brian was previously (2002-2012) an Executive Director heading up the Energy & Utilities team in Melbourne at PricewaterhouseCoopers with a focus on strategic, commercial development and risk management activities in competitive energy & broader resource markets. Previously, he has come from the UK where he was a Director & Senior VP at Caminus (1999-2002) leading the strategic consulting team that focused on merchant energy projects throughout Europe and risk management advisory (Caminus was a leading European strategic energy advisory firm specialising in Energy Utilities). Brian was involved across the value chain and advised a range of large European utilities, North American new entrants into utilities, upstream and midstream gas companies and several investment banks. Prior to Caminus Brian was a Director at Oakvale Capital (1996-1999) in Sydney where he specialised in general energy financial risk management issues and strategic risk management issues for a range of resource focused entities across Australia. Brian held mandates with a range of Australian companies (power generators, retailers, the high voltage network operator, upstream oil and gas companies and several mining companies & other large energy consumers) providing general and strategic trading and risk management advice, deal execution services as well as constructing a range of market and asset valuation tools to assess value and risk.

Brian has also held positions as the Director of Energy Research for the New York Mercantile Exchange (1990-1996), Business Development for Colorado Coal & Coke and started his energy career as a petroleum geologist working with Amoco, Canadian Hunter and Questar. He holds undergraduate degrees in petroleum geology and business administration from Western State Colorado University and completed a MS degree in mineral economics & finance from the Colorado School of Mines.



## Lonnie Johnson President and Chief Executive Officer, Excellation

Dr. Lonnie Johnson, a bonafide "rocket scientist", has just one mission--- to ensure the world has enough energy for a prosperous future. Although he has devoted his life to solving some of the world's most complex technological problems, he is best known for his widely popular invention, the Super

Soaker water gun. Dr. Johnson is a prolific inventor and holds more than 100 patents, the vast majority of which are energy related.

In 2000, realizing that that a small startup company could not compete in a technology where larger well established companies were already beginning to focus, Johnson looked beyond Lithium ion which was the emerging advanced battery technology at that time. With this "leap-frog" strategy, Excellatron has become a leading developer of the next two generations of battery technology, Ceramic Solid State Batteries and Lithium-Air batteries. Today, electric vehicles can run 100 miles on a single charge, however, with Excellatron's technology; an electric vehicle could potentially achieve 1,000 miles on a single charge. Excellatron currently receives support for its research from the U.S. Department of Defense (DoD).

An energy expert at the National Science Foundation has identified Dr. Johnson's battery and other energy related inventions as being "possibly the greatest on earth". In 2011, Dr. Johnson was inducted into the Engineering Hall of Fame by the state of Alabama, the first African American ever to obtain such an honor in the state's history. He was awarded the "Breakthrough Award" from Popular Mechanics magazine for an invention that converts heat directly into electricity. He has been featured in countless magazines and newspaper articles and has appeared on numerous television programs.

Dr. Johnson holds a bachelor's degree in Mechanical Engineering, a master's in Nuclear Engineering and an honorary doctorate in Science from Tuskegee University. He served as a Space Nuclear Power Safety Officer in the U.S. Air Force, where he analyzed NASA space systems that utilized nuclear power sources. During active duty assignments in the Air Force and tours as an employee at the Jet Propulsion Laboratory, he helped develop some of the nation's most advanced technological achievements including the Galileo mission to Jupiter, the Mars Observer Project and the Cassini Mission to Saturn and the Stealth Bomber (B-2). He has received numerous honors including two Air Force Commendation Medals, an Air Force Achievement Medal and a number of NASA awards.



# Paul Johnson President, Colorado School of Mines

Dr. Paul Johnson is the 17th President of Colorado School of Mines. Mines is world-renowned for producing highly sought-after scientists and engineers, innovations, and objective analyses, especially in fields relevant to earth, energy, and the environment. Mines enroll more than

5,900 students and conducts \$65 million of research annually for industry and governmental agencies.

Dr. Johnson's career reflects his strong passion for innovation, education, and student success. He began his career at Shell Development in Houston, TX, developing novel approaches for managing and treating contaminated soil and groundwater sites. He then joined the faculty at Arizona State University to continue this work and share his experiences with students.

While at ASU, he gradually took on senior leadership positions, including Associate Vice President for Research and Dean of the Ira A. Fulton Schools of Engineering. As Dean, he focused on creating a signature student experience, expanded the suite of experiential learning opportunities, and increased peer-to-peer interactions, all of which led to improved retention, persistence, and graduation rates. Throughout this time he continued teaching at least one class per semester, mentored graduate students, led research projects, served as consultant to industry and governments, and was editor for the National Ground Water Association's journal Ground Water Monitoring and Remediation. He was attracted to the presidency at the Colorado School of Mines because of its focused mission, long history of industry research partnerships, reputation for producing outstanding graduates, and strong alumni affinity.

A chemical engineer by training, Dr. Johnson earned a BS from the University of California- Davis and masters and doctoral degrees from Princeton University. He has been recognized for excellence in teaching and innovation through numerous awards, including the Fair Distinguished Engineering Educator Award from the Water Environment Federation, the Brown and Caldwell Lifetime Achievement Award in Remediation, and the National Ground Water Association's Keith E. Anderson Award. His most valued recognitions are those received for excellence in education.

Dr. Johnson and his wife Elyse reside in Golden and have two adult children living in Arizona and California.



# Richard Jortberg Consultant

Based in Boulder, Colorado, Mr. Richard Jortberg is managing director of multiple corporations focused on international investments. Most recent efforts include telecommunication projects in several countries in Africa. These projects consist of both commercial and secure governmental

telecommunication systems with high speed wireless and internet connectivity. These hybrid telecommunication programs involve complex and specialized financing mechanisms which can be discussed as needed. In addition to these telecommunication projects, Mr. Jortberg has been involved in several economic development and energy projects (with valuations significantly in excess of \$1 billion) in Cameroon and Uganda.

Mr. Jortberg's professional and educational background is in commercial real estate development, valuation and finance. He has an undergraduate degree in business from Marquette University and a graduate degree in in real estate investment analysis from University of Wisconsin at Madison.



# Fred Julander

President, Julander Energy

Fred has over 39 years of experience in energy and natural resources as an independent operator. He has been a leader in the oil and gas community pushing for responsible exploration and development and for recognition that natural gas has a bright future as a natural compliment to renewable

energy and efficiency. Fred is a member of the National Petroleum Council, past President of the Colorado Oil & Gas Association, founding Chairman of COGA's Rocky Mountain Natural Gas Strategy Conference and Chairman of the Natural Gas Committee of COGA. Fred is also the recipient of the 2007 Distinguished Public Service Award presented by the Rocky Mountain Association of Geologists.

In 2009 Mr. Julander was selected to the Independent Petroleum Association of Mountain States Rocky Mountain Oil & Gas Hall of Fame. Mr. Julander earned a BA degree from the University of New Mexico and a JD degree from the University of Iowa Law School. He is a graduate of the University of Denver's Executive MBA program.



# Wei-Jen Lee

Director and Professor, Energy Systems Research Center/ Electrical Engineering Department

Professor Lee received the B.S. and M.S. degrees from National Taiwan University, Taipei, Taiwan, R.O.C., and the Ph.D. degree from the University of Texas, Arlington, in 1978, 1980, and 1985, respectively, all in Electrical Engineering.

In 1986, he joined the University of Texas at Arlington, where he is currently a professor of the Electrical Engineering Department and the director of the Energy Systems Research Center.

He has been involved in the revision of IEEE Std. 141, 339, 551, 739, 1584, and dot 3000 series development. He is the Chair of the IEEE/IAS, Industrial & Commercial Power Systems Department (ICPSD). He is an editor of IEEE Transactions on Industry Applications and IAS Magazine, editorial board member of Journal of Modern Power Systems and Clean Energy (MPCE) and CSEE Journal of Power and Energy Systems, and guest editor of IEEE Transactions on Smart Grid. He has been inducted as a member of Academy of Distinguished Scholar at the University of Texas at Arlington since 2012. He is the project manager of IEEE/NFPA Collaboration on Arc Flash Phenomena Research Project.

Prof. Lee has been involved in research on utility deregulation, renewable energy, smart grid, microgrid, energy internet and virtual power plants (VPP), arc flash hazards and electrical safety, load and wind capacity forecasting, power quality, distribution automation and demand side management, power systems analysis, online real-time equipment diagnostic and prognostic system, and microcomputer based instrument for power systems monitoring, measurement, control, and protection. He has served as the primary investigator (PI) or Co-PI of over ninety funded research projects with the total amount exceed US\$12 million dollars. He has published more than one hundred and ten journal papers and two hundred twenty conference proceedings. He has provided on-site training courses for power engineers in Panama, China, Taiwan, Korea, Saudi Arabia, Thailand, and Singapore. He has refereed numerous technical papers for IEEE, IET, and other professional organizations.

Prof. Lee is a Fellow of IEEE and registered Professional Engineer in the State of Texas.



Robyn McGuckin Senior Climate Consultant

Mrs. Robyn McGuckin is a senior manager experienced strategy development, planning, and project delivery in the areas of energy, climate change and international development. She has worked in Asia, Africa, the Middle East, Europe and the US at the municipal, utility, federal and

international institute level. Her international work has been acknowledged by the press and in several current affairs books, and combined with her infrastructure work has resulted in several awards, such as the Denver Business Journal's "Who's Who in Energy". Robyn sits on various boards, has numerous publications, and has spoken at events around the world.



# Nigel T. Middleton

Senior Vice President for Strategic Enterprises, Colorado School of Mines

Dr. Nigel Middleton is Senior Vice President for Strategic Enterprises at the Colorado School of Mines. Prior to his current appointment, he held successive positions as Provost, Executive Vice-President for Academic Affairs

and Dean of Faculty, Vice-President for Academic Affairs and Dean of Faculty, and Associate Vice-President for Academic Affairs, since 2007, 2004, 2001 and 1996 respectively. He came to Colorado School of Mines in 1990 as Assistant Director of the Engineering Division, and has since been engaged in academic administration and instruction and research in electrical engineering, with emphases in telecommunications engineering and special applications of signal processing techniques. He has been fully involved in the development of Colorado School of Mines' new undergraduate curriculum and has led or participated in many nationally funded initiatives in engineering education. He has also been a principal in developing a major collaborative partnership between Colorado School of Mines and The Petroleum Institute in Abu Dhabi, through the sponsorship of the Abu Dhabi National Oil Company and major multinational corporate participants. Prior to joining Mines, he was on the faculty in Electrical and Computer Engineering at West Virginia University, and this followed the period 1977-85 when he was employed in the research and development of integrated systems technologies for mechanization, power distribution, and environmental control in deep South African gold mines. This work was performed for the Chamber of Mines of South Africa Research Organization, where he held divisional Chief Engineer positions in electrical engineering, and then in power and control engineering for applied multidisciplinary engineering systems. Dr. Middleton has received many academic awards, and has a publication record spanning accomplishments in industrial and academic research, and in engineering education. Dr. Middleton is Professor of Engineering at the Colorado School of Mines and holds the Ph.D. and B.Sc.(eng.) cum laude degrees from the University of the Witwatersrand in Johannesburg, and he holds a Professional Engineer's license in South Africa. He is a member of the Governing Board of The Petroleum Institute and is a director of Mines Applied Technology Transfer, Inc. He is a Senior Member of the IEEE, a member of the American Society for Engineering Education, and a member of the South African Institute of Mining and Metallurgy.



#### Susan Morrice

Chairperson, Belize Natural Energy

Grounded by her love of nature and community, Denver-based Susan Morrice lives to create positive change in the world. As an experienced geologist, explorer, entrepreneur and dealmaker, Susan is renowned for her down to earth approach to all aspects of business. She has

a passion for the protection of the environment and a vision of uncovering the true potential of everyone with whom she meets. It is through her holistic business model and approach to life that the entire world over, including the biggest names in oil and aviation seek Susan out.

Susan Morrice was born and raised in Belfast Ireland, with a MoD degree in Geology from Trinity College. Susan is Founder and Chairperson of Belize Natural Energy, International Natural Energy, Chx LLC and original investor/partner in XJet Private Aviation.

BNE has become a global oil industry beacon that has completely transformed a nation in Central America –Belize. It was through Susan's gift of exploration, and an understanding of the power of untapped human potential that she was able to find oil where it was believed by all of the Big Oil industry that there was none. Not only did Susan and her BNE team find oil in Belize, they found it on the first well which is unheard of. BNE just celebrated ten years of production and over ten-million barrels of oil, and is the #1 revenue generator in the country.

Susan has applied this same Holistic Business Model to her investment in XJet in Denver, a 7-star service private jet company that is continually ranked among the best and most elite in Private Aviation services. XJet was also granted the coveted license in the New Dubai Airport beating all the long established industry players and Xjet is rapidly expanding rapidly into the Europe including London, and into the Middle East, including the United Arab Emirates.

Susan was just recently recognized by the Denver Business Journal as one of the "Top Women in Energy" and was a finalist for the prestigious "Outstanding Woman in Business" award. She is continually ranked among the "Top Women-Owned Companies" by CoBiz Magazine. Beyond this, Susan has been recognized for her contributions under the Clinton Administration, and the story of how she and her originating investors went about finding oil in Belize was featured in the international bestseller "The Secret" by Rhonda Byrne. Fortune Magazine has also recognized her as one of the most "Powerful Female Entrepreneurs" in Business. Susan was most recently awarded the "AAPG Presidential Award for Exemplary Service" in recognition of her exceptional service to the geoscience profession and AAPG. These are just a few of the numerous acknowledgments and awards that Susan Morrice has received in recognition of her contributions world-wide.



# Philip Mshelbila

General Manager Upstream Gas, Shell Petroleum Development Company, Nigeria

Philip graduated from the Ahmadu Bello University, Zaria in 1990 with a degree in Human Medicine (MB,BS), and went on to work for the Nigerian National Petroleum Corporation (NNPC). In 1994 he left NNPC to work for National Oil

& Chemical Marketing PIc (a Shell JV) as a Medical Officer. He further studied Occupational & Environmental Medicine at the University of Aberdeen, Scotland and underwent training and attachments in various Shell refineries and petrochemical plants in the UK, France and The Netherlands, rising to the position of Chief Medical Officer and Corporate Health Safety and Environment Adviser. He also obtained a Masters of Business Administration (MBA) degree from the IESE Business School of the University of Navarra, Spain in 2000. Subsequently he joined Shell Nigeria Oil Products working for Shell Health Services as the Regional Health Adviser for Africa. In this position he oversaw the management of all health and related matters for Shell downstream (retail, marine, aviation, LPG, manufacturing, consumer & industrial) and chemicals businesses in 35 African countries.

In 2004 he left the medical practice to work as Regional (Business) Adviser for Africa in the International Directorate of Royal Dutch Shell in The Hague, The Netherlands. In this position he provided cross-business and country advice to the Regional Managing Directors of Shell on African matters. He also served briefly as the Private Assistant to the Chief Executive of Royal Dutch Shell.

He subsequently moved to the Gas & Power business where he worked in LNG Business Development as the Planning & Integration Manager, and subsequently as a Commercial Manager. Subsequently he worked as the Project Development Manager on various Gas & Power projects. In 2009 he joined an industry team to evaluate the Nigerian Petroleum Industry Bill (PIB), as the gas subject matter expert. In 2010 Philip was appointed as the Managing Director of Shell Nigeria Gas Ltd, a natural gas distribution company that builds and operates pipeline networks in Lagos, Aba and Port Harcourt areas of Nigeria, supplying natural gas to over 60 industrial and commercial customers.

Philip became the General Manager for Sustainable Development and Community Relations in the Shell Petroleum Development Company of Nigeria from January 2012, overseeing social performance, sustainable development, social investment, community relations and relations with the state governments in the Niger Delta. Most recently he was appointed as the Regional Communications Manager for West Africa



# **Robert Mulverhill**

Executive Chairman-Board of Directors, Standard Alcohol Company of America

Robert Mulverhill, Executive Chairman Board of Directors of Standard Alcohol Co. of America, Inc. a global leader in alternate, clean energy Gas-to-Liquids (GTL) technologies. He was named Chairman in 2012 bringing more than 30 years

of technology, energy industry leadership and executive management experience to his role with the Company. He oversees corporate direction and strategy implementation while advising and supporting the company's CEO and senior leadership on business and policy matters. He serves as President and CEO of Delta Geophysical, LLC and is the Managing Director of Castle Partners, LLC.

In early 2009, Mr. Mulverhill was named President and CEO of International Seismic Co., Inc. Prior to that, he had served as founding President and CEO of Ascend Geo, Inc. was President and CEO of Encynova International, Inc., was President and CEO of TVX, International Inc. and was Managing Director of SATL, Ltd. in Bangkok, Thailand and Beijing, China. He has held a variety of management positions in Business Development, Operations, Marketing/Sales, Program Management, Contracts and Subcontract Management with Honeywell Corporation and the Cobham Group plc, London, England. He is recognized for his diverse knowledge, experience and expertise in international affairs primarily in China and the EU. He is called upon to speak, advise and consult with various corporate and governmental agencies on enterprise structure, market/business strategies, energy development and technology advancement.

Mr. Mulverhill received his Bachelor of Science in Business/Economics from Millikin University with graduate studies at Arizona State University and the American University, Washington DC.

## Sharrieff Mustakeem



President/CEO, MCX Environmental Energy Corp.

Sharrieff Mustakeem is President and Chief Executive Officer of MCX Environmental Energy Corp., based in Atlanta, Georgia. Mr. Mustakeem, the company's founder, has developed MCX as a forward-thinking, environmentally conscious entity with emphasis on a clean, sustainable

energy paradigm. Mr. Mustakeem founded MCX after extensive successful careers in sales and financial services. Mr. Mustakeem is or has served on the boards of the International Power Institute [Morehouse College], Organic High Yield, The African-American Alliance [Newnan, GA] and Southface Energy Institute. Mr. Mustakeem is also a founding member and Co-Chairman of the Sustainable Community Technologies Consortium [SCTC]. In 2013 Sharrieff was appointed to the Fulton County Sustainability Commission. Mr. Mustakeem, a Pittsburgh native, holds a bachelor's degree in Business Management, with minor emphasis in Philosophy, from Fordham University, in New York.



## **Jason Nagy**

Founder, Mainspring Innovation, LLC / Director, Public Sector Engagement, Africa Finance and Advisory Partners, LLC

Jason Nagy founded Mainspring Innovation, LLC (Member, Posner Center for International Development) in Colorado as an international business and economic development enterprise providing consulting services and innovative

programs to advance infrastructure development, technology transfer, skills development, job creation, economic/social justice, environmental stewardship and sustainability. Jason is also Director, Public Sector Engagement for Africa Finance and Advisory Partners, LLC, a company established to revolutionize how American businesses engage the African Continent. AFAP's approach blends the best from the public and private sectors, which is important given the available monies and strategic partners having both developmental and profit-seeking motives.

Jason led USTDA's Africa office (2008-2014) and served on Ex-Im Bank's sub-Saharan Africa business development, policy and program team. He identified and crafted over \$70mn of USTDA program funding primarily in clean energy, transport and ICT projects. In 2013, he launched the US-Africa Clean Energy Development and Finance Center and supported the launch of President Obama's Power Africa Initiative. He has an MA International Affairs from American University with concentration in international economic policy and international business, and a BA in Journalism and Political Science from Indiana University. Jason is a passionate promoter for innovation, education and collaboration!



# Ambe Njoh

Professor, Environmental Science and Policy, University of South Florida

Prof. Njoh is a Professor of Environmental Science & Policy at the University of South Florida (USF), where he has been since 1994. Before then, he was Transit Planning Manager at the Florida Department of Transportation, Tallahassee,

Florida. He has written more than 11 books, and more than 100 peer-reviewed articles, book chapters, and technical reports. He is an authority on urban public service delivery in Africa, and served as a consultant to the United Nations Centre for Human Settlements. He has a book on French Urbanism in Foreign Lands. His most recent book focuses on Urban Planning and Public Health in Africa. His prominent is on "The Impact of Infrastructure Development in East Africa and the Indian Ocean Region," which appeared in the Journal of Urban Planning and Development. He is currently working on Electric Energy Supply/Consumption and Development in Africa, and The Political Economy of Energy Policy in Africa. He is also developing a model for assessing the sustainability of renewable energy technologies in developing regions.

Prof. Njoh, graduated with a Ph.D. in Planning Studies from the University of London's Bartlett Development Planning Unit. Prior to earning the Ph.D., Njoh had completed a Masters of City & Regional Planning (MCRP) from the School of Architecture at the University of Oklahoma, and a Diploma in Civil Engineering Technology from the Advanced School of Public Works in Cameroon.



## **Jacques Jonathan Nyemb**

Lawyer and Policy Advisor

Jacques Jonathan Nyemb is a lawyer and policy advisor. He was formerly an Attorney-at-law at a leading international US law firm, Cleary Gottlieb Steen & Hamilton LLP, advising on project finance with a focus on infrastructure, energy, oil and gas and mining sectors. He has also advised a

coalition of 17 sub-Saharan African governments on policy-making relating to the reform of corporate laws across West and Central Africa. His clients have included multinationals, governments and institutions in Europe, Africa and the Middle East. Mr. Nyemb is the co-founder of the premier association of pan-African business lawyers (African Business Lawyers' Club), which convenes an annual summit in Paris bringing together top business leaders, investors and legal practitioners working on the African continent. Mr. Nyemb holds an LLM from the London School of Economics and also graduated from the Paris II Pantheon-Assas University in Banking and Financial Law. He currently serves on the boards of various non-profit

organizations in Europe and Africa. He is an avid author of several published articles and a media commentator on public policy analysis in Africa.



# Osagie Okumbor

Managing Director and Country Chair, Shell Companies in Nigeria and Shell Petroleum Development Company of Nigeria Limited (SPDC)

Osagie Okunbor assumed the position of Managing Director of The Shell Petroleum Development Company of Nigeria Ltd (SPDC) and Country Chair, Shell Companies in Nigeria on

March 1, 2015. He is the third Nigerian to hold both positions.

A graduate of business administration from the University of Benin, Osagie joined Shell over 28 years ago. His working experience in Shell spans Nigeria, the UK, Brunei and the Netherlands. His previous role was Vice President Human Resources for Shell's Upstream Business in Sub-Saharan Africa (2008-2013). Prior to that, he was Vice President for Infrastructure and Logistics for Shell Nigeria (2007-2008). Upon his return from Brunei in 2002, he was appointed the EP Africa Regional HR Policy Manager and subsequently General Manager HR for SPDC in January 2005 and then in 2006, Human Resources Director and member of the Board for The Shell Petroleum Development Company.

Before assuming the current role, Osagie was Senior Advisor in Shell's Upstream International Operated business, based in The Hague, Netherlands. In that role, he supported the implementation of the Shell Group revised strategy for the Nigeria business aimed at positioning the Shell companies in Nigeria for a stronger and more sustainable future. He was also active in maintaining a strong liaison between Shell corporate headquarters and the business in Nigeria in the execution phase of the strategy.

Osagie is a strong believer in Nigeria and Shell, and in a strong and mutually beneficial relationship between the two. He enjoys music and football in his spare time.

He is married to Soala and they are blessed with children.



David Posner President, EnVent Energy LLC

David M. Posner founded EnVent Energy LLC in 2000. EnVent's primary business is negotiating gathering, processing, transportation and marketing arrangements for natural gas producers, and related strategic initiatives. Posner previously led the marketing function and midstream

operations for Santa Fe Snyder, Snyder and Ladd, is a past Chairman of COGA, and has over 30 years of experience in energy marketing, project development, and management. EnVent is also involved the development of waste heat power projects on gas pipelines and at processing plants, and the interface between new energy technologies including renewable sources and natural gas. Posner is a graduate of Brown University and received his Masters degree in Mineral Economics from the Colorado School of Mines.



# Luka Powanga

Professor, Regis University

Dr. Luka Powanga is a professor in the School of Management at Regis University and the Executive Director of the Global Commerce Forum. He is also the Managing Editor of the Journal of Global Commerce Research and the Journal of Current Research in Global Business. He is currently the

US correspondent for CargoNews Asia a trade magazine based in Hong Kong.

He holds a BSC degree in Metallurgy and Mineral Processing, Masters and PhD degrees in Mineral Economics from Colorado School of Mines with a minor in Finance from the Graduate School at Denver University. He also holds a Masters degree in Computer Information Technology and Graduate Level Certificate in Object Oriented Programming from Regis University. His industry and academic experience spans over thirty years at middle and senior management levels. He consults in mining and international business management. He worked in the mining and telecommunications industry at middle and senior management level within and outside the United States. He taught at Colorado School of Mines before transitioning to Regis University. He has written a textbook in economics published by McGraw-Hill.



# Adam Reed

Director, Energy Sustainability Education Programs

Adam Reed is the Director of Energy Sustainability Education Programs at the University of Colorado Boulder and an Instructor in the Environmental Studies Program. A legal scholar with a background in natural resource law, energy systems and markets, Adam's work addresses

legal, regulatory, communication, and knowledge problems across markets and governance institutions related to sustainable energy deployment and operations. His work has been published in the Albany Law Journal of Science and Technology, Utilities Policy, Colorado Law Review, Yale Environment 360, and the American Bar Association's Energy, Environment, and Resources Law Journal. He has also contributed to and authored special reports for the U.S. Department of Energy, the Colorado Energy Office, the Natural Resource Defense Council, Alstom, and the International Electrotechnical Commission.



# Mark D. Safty

Partner, Project Development and Finance Renewable Energy, Holland and Hart

For more than 30 years, energy companies operating on five continents have turned to Mr. Safty for virtually every type of development and financing transaction. In transactions involving \$2 million to those exceeding \$2 billion, clients

trust his extensive experience developing and financing energy projects. Mr. Safty provides the counsel clients need to clear regulatory, financial, and operational hurdles so they can keep pace with industry changes and demands.

Since the 1980s, Mr. Safty has served as lead counsel in the development, acquisition, financing, and refinancing of dozens of power generation facilities across the spectrum of energy technologies. Since the late 1990s, Mr. Safty has focused his practice on development, construction, financing, and M&A activity in the renewable energy industry. His earlier years of experience as general counsel and COO of a bank holding company, and his time as outside director and chairman of the board of a \$2.5 billion financial institution, help him understand his clients' interests from the business side of any matter.

As a complement to his energy practice and an additional service to his clients, Mr. Safty handles general corporate and transactional matters. He advises multinational clients on the sale and acquisition of mining and oil and gas properties, and has helped them successfully complete corporate reorganizations including spin-off transactions and mergers. His clients span industries including mining, manufacturing, power generation, health care, education, transportation, and water and waste treatment, among others.

Mr. Safty currently serves as the practice group leader for Holland & Hart's Energy & Infrastructure Group. He is listed in The Best Lawyers in America® for project finance law. Mr. Safty is an adjunct professor at the University of Denver's Sturm College of Law and at the University of Colorado Law School, where he teaches Renewable Energy Development and Regulation and Finance. He is a frequent speaker at national and international conferences on renewable energy topics.



# **Everod Samuel, P.E.**

President / Project Sponsor, Samuel Engineering Inc.

Everod Samuel is a Registered Professional Engineer with over 25 years of project management, design, design management, and construction / commissioning experience for large industrial projects in the mining, electric utility, oil & gas, power generation & transmission, chemical, and mineral

refining industries.

As President, Everod is excellent at building high performance teams that are committed to achieving project goals. He anticipates problems before they occur and ensures corrective actions are implemented.

As Vice President of Engineering and Project Operations for a large world-class engineering company he directed Project Managers, Project Engineering, CAD and MIS, Procurement, Estimating, Project Controls and Construction Management departments.

As Engineering Manager, Everod has been responsible for directing all design engineering disciplines and for coordinating the design engineering functions for large projects to ensure the innovative, correct and timely preparation of designs, drawings and specifications.

As the Principal Electrical Engineer for large engineering companies, Everod designed, supervised, developed standards and started up projects involving large motors (up to 24,000 hp), generators, Variable Frequency Drives (VFDs) up to 21,000 hp, 15 kV switchgear, 230 kV / 120 MVA substations, 90,000 Amp DC transformer/rectifiers etc.

As a Project Manager, he has executed fixed price and reimbursable projects all within budget and schedule.



**S. Gabriel Shumba** Chief Executive Officer, Group Shumba, LLC

Gabriel has over 17 years' experience in banking, structured finance, private equity, and business venture development. He is an astute negotiator, deal structuring expert and business operations strategist, and he has advised Fortune 500 corporations, asset management firms and international

financial institutions in North America and Africa. His experience includes work at PWC, Goldman Sachs, Barclay Capital, KPMG, and GMAC (now Ally Bank). He is an inspirational leader who speaks on various corporate, community and economic platforms on the subjects of frontier investing and personal financial independence. He volunteers on many levels and is passionate about developing African communities, poverty alleviation, and about alternative energy explorations. As the Founder & CEO of Group Shumba, LLC, he dedicates most of his time in developing ventures in frontier geographies for listing on developed financial markets.



# Minoru Takada

Representative and Director of New York Office-Sustainable Energy for All, United Nations

Minoru Takada is Representative and Director of the NY office of the Sustainable Energy for All initiative at the Executive office of the Secretary-General, United Nations. Dr Takada spearheads global outreach and partnership mobilization

efforts of this initiative, a global movement involving thousands of partners from governments, businesses and civil society aiming to achieve sustainable energy for all by 2030. He coordinates the Advisory Board of Sustainable Energy for All, a multi-stakeholder group of 40 global leaders and eminent people. In this capacity, he led the Global Thematic Consultation on Energy in the Post-2015 Development Agenda and serves as UN-Energy focal point on this issue. Prior to this position, he was Head of the Sustainable Energy Programme at the United Nations Development Programme (UNDP), and involved in policy and strategy development to address energy poverty challenges linking energy issues to income poverty, gender inequality and climate change. He also served as the UNDP's representative at the Expert Group of Technology Transfer under the UN Framework Convention on Climate Change. He has spearheaded policy analysis with many international organizations such as IEA, IIASA, UNDP, UNEP, UNFCCC, WHO, World Bank, Accenture and McKenzie. Before taking up this position, Minoru was posted at UNDP in Angola, and in Ghana as a community organizer with Japanese volunteer services. Minoru has written widely on the issues of energy and development and taught a graduate course workshop at the Columbia University. He holds a PhD in

renewable energy applications from the University of Mie in Japan, and a Masters in Nuclear Engineering from the University of Hokkaido, Japan.



# **Tisha Schuller**

Strategic Advisor, Stanford University

Tisha Schuller serves as Strategic Advisor for Stanford University's recently formed Natural Gas Initiative. In this role, she works with companies and stakeholders to interface with Stanford's diverse faculty conducting research in the areas of sustainable development, technology innovation, climate

policy, and geopolitics.

She most recently worked as President & Chief Executive Officer of the Colorado Oil & Gas Association in one of the most dramatic and contentious times for energy development in Colorado's history. Through this work, she has become a passionate advocate for deescalating the fracking wars, solving climate change by expanding the dialogue tent, and engaging communities in conversations about energy development. The programs built at COGA during her tenure will likely have the longest lasting impact. Several of these have piqued interest around the country and around the world, including the Industry Ambassador's education series and the community outreach program. Tisha has had the honor of speaking about her work internationally, debating Congressmen, and engaging regularly with civic and environmental leaders.

Prior to COGA, Ms. Schuller served as a Principal and Vice President with Tetra Tech, a national environmental consulting and engineering firm. In addition to running business operations, Ms. Schuller spent 15 years conducting environmental permitting for oil and natural gas projects across the country.

She has a B.S. in Earth Systems with an emphasis in Geology from Stanford University. Tisha is a proud Executive Board Member of the Colorado-Wyoming Chapter of the American Red Cross. She's also married to Brian and has two seriously awesome boys ages 8 and 12.



# Ravi Vora

Advisor-International Programs, Renewable Energy Grid, National Renewable Energy Laboratory-NREL

Ravi R. Vora is an experienced international energy executive with focus on clean energy. He has a successful track record in renewable energy (Solar, Wind, and Biomass), power generation, international electric utility, oil/gas industries

(upstream, mid-stream, LNG, refining, petrochemicals) and commercialization of disruptive clean technologies including energy storage. His career in the international energy spans from first of a kind global commercialization of synthetic lubricants for a major oil company to marketing, trading of clean fuels, natural gas liquids, natural gas as well as electricity covering both the physical and financial transactions.

He has comprehensive knowledge and relationships related to clean energy economy in North America (including Mexico), Southern Africa, South Asia and Middle East. He has led successful business models in clean energy both in private sector (Creation of a multi-billion dollar Suzlon-global leader in wind energy) to public sector (Advising Eskom on RE when South Africa's RE IPP attracted over \$17 Billion investment in less than five years and on creating a clean fuels /natural gas strategies and regulations). Leads and facilitates international energy conferences in workshops in USA, South Africa and India. He possesses in-depth experience and a proven track record in all phases of development, organization, financing and monetization (A to Z) of full life cycle based clean energy business ventures. He has a strong network of relationships with key stakeholders in the global clean energy markets especially in emerging economies. He has BS and MS in Chemical Engineering and Masters in International Management from USA and lives in Arvada Colorado with his partner.



#### **Mayor Wellington Webb** Denver, Colorado USA

Former Denver Mayor Wellington Webb is the only mayor in America who was elected by his peers to be president of the U.S. Conference of Mayors, the National Conference of Black Mayors and the National Conference of Democratic Mayors. Mayors of today call him "sensei" or coach and in Ethiopia they call him "abera," which means enlightened one.

In his published autobiography, he writes about being a teacher, mental health worker, university professor, federal administrator, state regulator, state legislator, elected city auditor and Denver's first African American mayor elected to three terms from 1991-2003. He is now a businessman and philanthropist.

As a state representative, he was known for fighting for social justice and protecting the environment.

As the city's auditor, he restored fiscal integrity to the office and promoted a new prompt payment ordinance for city government.

As Denver's mayor, he moved the Mile High City out of the economic doldrums of the late 1990s with \$7 billion worth of infrastructure and acquired more park space than any other mayor, including cleaning up and preserving the South Platte River corridor.

In his 12 years as mayor, he also created the Denver Health Authority that saved the city's public hospital. His administration completed 85 percent of the construction of Denver International Airport and opened airport concession bids to Colorado-owned businesses, including women and minorities.

He is an advocate for arts and culture, sports, historic preservation and downtowns.

Since leaving office, he has served as a representative of the United States to the United Nations and founded Webb Group International, a consulting firm.

The honorable Wilma J. Webb, who served 13 years in the Colorado House of Representatives, has been his wife for more than forty years. He is a father, grandfather and great-grandfather.

He serves as a board member for Maximus Corp., Denver Health Foundation, the Colorado Symphony, Colorado Black Chamber of Commerce Foundation and Friends of Blair-Caldwell African American Research Library. He is a member of the Delta Eta Boule and Kappa Alpha Psi fraternities and is a 33rd Degree Mason. He formerly served on the board of directors for MALDEF (Mexican American Legal Defense Fund), The First Responder Network Authority (First Net), and Vice Chair of the Democratic National Committee.



Dan Wessner Professor of Politics, Regis University

Dr. Dan Wessner is Professor of Politics at Regis University. He directs the university's graduate programming in Development Practice. He works extensively among international nonprofits committed to just and lasting change. He has served in community-based development in eight

countries and connects this work to ongoing research of international education, social capital, and post-war empowerment. He collaborates among scores of Denver-headquartered global nonprofits at the Posner Center for International Development. His degrees are in international studies, law, theology, and history. He serves on the boards of the Posner Center, iDE, WAC, and IEEE Smart Village.



# Albert E. White

Managing Director, Diversity Energy Partners, LLC

Albert E. White has more than 25 years of experience in the international arena, and formerly Head of International Finance and Country Lending Officer for two New York major money center banks, JP Morgan and Bankers Trust Company (acquired by Deutsche Bank). Structured more than \$250

million of international projects and equipment financing for major Fortune 1000 companies. Founded his own international Trading Company marketing its services in Africa, Asia, Middle East and Latin America, as well as a contractor in Africa for U.S. AID. Mr. White has been a noted presenter and guest speaker on how to utilize the programs of U.S Eximbank, OPIC, US AID and other international trade finance institutions. Provides Consulting Services in international equity and debt finance area related to energy and technology. Broad experience in the energy space as CEO of two Energy Companies and board member of two public stock companies. Recent projects: Structured the financing of a \$30 million Solar Water Project in West Africa, Evaluated the potential of MRO Project, Advisor on International Cacoa Farming Project, Sourcing and Structuring financing for Solar Equipment for a major farming and mining group in South Africa.

Graduate of University of Denver with BS and MBA from Columbia University



#### James M. Wilson

Senior Coordinator for Trade Promotion and Commercial Affairs, United States Department of State

Jim Wilson serves as the State Department African Bureau's principal point of contact on trade promotion and commercial issues in sub-Saharan Africa. He works with individual U.S. companies to support their business development efforts in

sub-Saharan African markets.

Jim brings broad international experience to this position having worked as a Foreign Service officer at both the State and Commerce Departments. He served as Commercial Counselor at U.S. Embassies in Poland, Spain, Argentina, Turkey and Kenya. Washington assignments included a detail at the Office of the U.S. Trade Representative as Director for South American Affairs and at the Commerce Department as Regional Director for Europe and as the Director of the Office of Energy, Infrastructure and Industrial Machinery.

Mr. Wilson graduated from Swarthmore College with a degree in International Relations and Economics. He was born and raised in suburban Philadelphia.



#### Dan Zimmerle

Director, Electric Power Systems Laboratory-Mechanical Engineering, Colorado State University

Dan Zimmerle leads EECLs power system program, centered on the InteGrid Test and Development Laboratory. He consults with energy-related companies in the area of signals and systems analysis.

Prior to joining CSU, Dan served in many industrial leadership roles, most recently as Chief Operating Officer for Spirae, Inc. He has twenty years of experience at Hewlett Packard and Agilent Technologies, where he led organizations as an R&D, consulting or general manager. He has extensive international experience, as well as product development experience in businesses ranging from consumer products to application software to industrial test equipment. Dan received a BSME and MSME from North Dakota State University.

# CONFERENCE COMMITTEE CHAIRS

# **Conference Chairman:**

Fred Julander, President, Julander Energy

# **Conference Co-Chairman:**

David Posner, President, EnVent Energy

# **Conference Vice Chairmen:**

Luka Powanga, Professor, College of Business and Economics, Regis University and Co-founder, Energy Africa Conference.

Robert Stoner, Deputy Director, Massachusetts Institute of Technology (MIT) Energy Initiative

# **Committee Members**

Richard Hortsberg, Consyultant,

Michael Allender, Project Manager, HP (retired)

Derrick Hudson, Associate Professor, Colorado School of Mines

Carol Tappenden, Social Investment and Philanthropy

Heidi VanGenderen, Director of Public Engagement, United States Department of Energy

Azra Tutuncu, Harry D. Campbell Chair and Director, Unconventional Natural Gas and Oil Institute (UNGI), Colorado School of Mines

John Reed, Goodwill Ambassador, Project Cure

Mark Safty, Partner, Project Development, Holland and Hart

Bai K Blyden, Senior Engineer, Southern Nuclear Services

John Holm, Senior Director of Business Development Charities Aid Foundation America

Ravi Malhotra, Founder and Chairman, ICAST

Jason Nagy, Founder, Mainspring Innovation, LLC

Derrick Hudson, Assistant Professor, Colorado School of Mines

Monica Labiche Brown, Founder and Executive Director, Africa Development Promise

Hans Hyde, Independent Contractor

Craig Morkel, Business Development Manager and former Member of Parliament, South Africa.

Atupele Powanga, Project Manager and Social Media Consultant

Keith Larson, Partner, TPG

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# INTRODUCTION TO THE REGIS UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS



Regis University's new College of Business and Economics (CBE) has set lofty goals: To imbue Jesuit values into business education by teaching students to place ethics at the heart of all business matters and operate according to Jesuits principles.

CBE was formed by combining the existing program from the Regis College Division of Business with the College for Professional Studies, School of Management and Master of Nonprofit Management. CBE opened this fall with Tim Keane as its founding Dean.

CBE plans to meet this need by offering courses to undergraduate and graduate students as well as working professionals. Students can seek bachelor's or master's degrees, as well as academic certificates, in accounting, business administration, economics, finance, health industry leadership, human resources management, marketing, nonprofit management, operations management, organizational leadership, project management, public administration and strategic management.

Jesuit principles are at the core, among them service to humanity, self-reflection, positive engagement and combining practical skills with critical thinking skills.

October 29-30, 2015 Colorado School of Mines Golden, Colorado USA

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