



The Battle for the Hearts and Wheels of the Market

Monday April 3, 2017 Heritage Park, Gasoline Alley Museum, Calgary, AB

Explore the future of automotive technology and implications for investing

### **KEYNOTE SPEAKERS**



Steve Koonin
Former US DOE
Under Secretary and
Current Director of
NYU CUSP



Larry Burns
Former Advisor to
Google Cars and VP
of R&D for GM



Peter Tertzakian Executive Director, ARC Energy Research Institute

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# Keynote Speakers:



### Steve Koonin

Former US DOE Under Secretary and Current Director of NYU CUSP

Steven E. Koonin was appointed as the founding Director of NYU's Center for Urban Science and Progress (CUSP) in April 2012. That consortium of academic, corporate, and government partners will pursue research and education activities to develop and demonstrate informatics technologies for urban problems in the "living laboratory" of New York City. He previously served as the U.S. Department of Energy's second Senate-confirmed Under Secretary for Science from May 19, 2009 through November 18, 2011.

As Under Secretary for Science, Dr. Koonin functioned as the Department's chief scientific officer, coordinating and overseeing research across the DOE. He led the preparation of the Department's 2011 Strategic Plan and was the principal author of its Quadrennial Technology Review. Dr. Koonin particularly championed research programs in High Performance Simulation, Exascale Computing, Inertial Fusion Energy, and Greenhouse Gas Monitoring, Reporting, and Verification. He also provided technical counsel on diverse nuclear security matters.

As the Chief Scientist at BP from 2004 to early 2009, Dr. Koonin developed the long-range technology strategy for alternative and renewable energy sources. He managed the firm's university–based research programs and played a central role in establishing the Energy Biosciences Institute at the University of California Berkeley, the Lawrence Berkeley National Laboratory, and the University of Illinois at Urbana-Champaign.

Dr. Koonin is a member and past chair of the JASON Study Group, advising the U.S. Government on technical matters of national security. He has served on numerous advisory committees for the Department of Energy, the National Science Foundation, and the Department of Defense, including the Defense Science Board and the Chief of Naval Operation's Executive Panel.



### **Larry Burns**

Former Advisor to Google Cars and Former VP of R&D for GM

Larry Burns advises organizations on the future of mobility, logistics, energy, manufacturing, and innovation. His current clients include Alphabet (Waymo), Peloton Technology, Kitson & Partners, Driversiti, IHS Markit and a major U.S. shipping company. From 2010 to 2016, Larry was also a Consultant to Google (Self-Driving Cars), Professor of Engineering Practice at the University of Michigan, Director of the Program for Sustainable Mobility at Columbia University, Senior Advisor to the Chairman of Hess Corporation, Consultant to Allstate and on the Advisory Boards of Greentech Capital Advisors and VantagePoint Capital Partners.

Larry served as General Motors Corporate Vice President of Research & Development and Planning from 1998-2009. He was a member of GM's top decision board and was responsible for advanced technology development, product portfolio planning, capacity planning and strategic planning.

Larry is a major voice for the "reinvention of the automobile" and the diversification of transportation energy. He has championed driverless and connected vehicles, vehicle electrification, fuel cells, advanced batteries, bio-fuels, and innovative concept vehicles.

Larry is a member of the U.S. National Academy of Engineering and the ITS America Hall of Fame, is co-author of Reinventing the Automobile: Personal Urban Mobility for the 21st Century (MIT Press, January, 2010) and is a frequent keynote speaker at conferences and leadership meetings. Larry has a Ph.D. in Civil Engineering, University of California, Berkeley, a M.S. in Engineering / Public Policy, University of Michigan, Ann Arbor, and a B.S. in Mechanical Engineering, from the General Motors Institute (now Kettering University).





#### Peter Tertzakian

Executive Director, ARC Energy Research Institute

He has clocked over 30 years of experience in the business of energy, spanning all systems from oil and gas to renewables. Peter's passion is studying how society evolves its energy use and applying the lessons of the past into today's strategic business issues. His holistic knowledge of physics, innovation, finance and economics allows him to give audiences thought provoking advice on how to think about the pressing issues on the future of energy systems.

Peter has an undergraduate degree in Geophysics from the University of Alberta, a graduate degree in Econometrics from the University of Southampton UK, and a Master of Science in Management of Technology from the Sloan School of Management at MIT. He is also an Adjunct Professor at the University of Calgary and has lectured at many leading universities and conferences around the world.



#### **Dawn Farrell**

President and Chief Executive Officer, TransAlta

Dawn has 30 years of experience in the electric energy industry, having held a number of senior management positions at TransAlta and BC Hydro. Her business experience spans a variety of areas in finance, business development, strategic planning, commercial operations, energy marketing and sustainable development. Her past directorships include the Calgary Stampede, Mount Royal College Board of Governors, Fording Coal Income Fund, New Relationship Trust Fund, Mount Royal College Foundation and Vision Quest Windelectric.

Dawn holds a Bachelor of Commerce degree with a major in Finance and a Master's degree in Economics from the University of Calgary, (Calgary, AB). She has also attended the Advanced Management Program at Harvard University (Cambridge, MA).

From 2008-2009, Dawn served as Co-Chair of the Government of Canada's Wind Technology Roadmap Industry Steering Committee. In 2012, she was appointed to the Alberta Energy Deputy Minister's Electricity Advisory Group. She also served on the Canadian Federal Government's Advisory Council for Promoting Women on Boards headed by the Honourable Rona Ambrose.

Dawn is an active supporter of the community. Today, she serves as a Community Champion for Momentum, a Calgary organization that partners with people living on low incomes and inspires the development of local economies, and in 2013, she joined Calgary Police Chief Rick Hanson to serve as Co-Chair of Calgary's 2013 United Way Campaign. She spends all of her personal time with her husband Brendon and her family.



#### Rebecca Lindland

Senior Director of Commercial Auto Insights for Kelley Blue Book

Prior to Kelley Blue Book in 2015, she spent over two years as a senior research fellow for the King Abdullah Petroleum Studies and Research Center (KAPSARC), based in Riyadh, Saudi Arabia. Lindland created and developed the center's transportation studies initiative, leading a project market sizing and estimating adoption rates of alternative fuel vehicles in the U.S. market, advising regulators, academics and manufacturers on the topic.

Lindland also spent more than 10 years at IHS Automotive as director of research and formerly, as a director of industry research and senior analyst. Lindland is highly respected in the automotive industry and frequently interviewed by national media outlets, such as *The Wall Street Journal*, *Bloomberg*, and CBS News, among others. She also recently served on two National Academies of Sciences committees, "Overcoming Barriers to Electric Vehicle Deployment" and "Cost, Effectiveness and Deployment of Fuel Economy Technologies for Light-Duty Vehicles."



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### **Simon Moores**

Managing Director, Benchmark Mineral Intelligence

Simon has specialist knowledge in critical and strategic minerals and markets including graphite, lithium, cobalt, batteries, electric vehicles and China – a sector he has covered since 2006. He has specialised in the lithium ion battery supply chain, especially the upstream sector from mine to battery cell manufacturing.

Benchmark Mineral Intelligence has advised some of the world's biggest actors in the lithium ion battery space from cell manufacturers, to electric vehicle producers to mining companies.

In 2015, Simon and Benchmark advised Goldman Sachs on lithium and batteries in its Low Carbon Economy Report, and have worked with the likes of UBS, Deutsche Bank, CLSA, and Credit Suisse, on lithium ion battery supply chain roadshows.



## Dr. Venkataraman Thangadurai

Calgary Advanced Energy Storage & Conversion Research Technology at the University of Calgary

Dr. Thangadurai's work in Calgary has resulted in the discovery of a wide range of novel ceramic, proton-conducting and oxide ion conducting electrodes and electrolytes for all-solid-state Lithium batteries. In 2016, he received the prestigious Keith Laidler Award from the Canadian Society of Chemistry for his outstanding contributions to physical chemistry. His current research activities include developing novel solid electrolytes and electrodes for advanced batteries.

His research group has support from the US Department of Energy (with University of Maryland) and also is working with Ford US, in addition he has Natural Sciences and Engineering Research Council (NSERC) grants.

Dr. Thangadurai received his PhD from the Indian Institute of Science, Bangalore, India in 1999 and did his PDF at the University of Kiel, Germany. He received a prestigious PDF fellowship from the Alexander von Humboldt Foundation, Bonn, Germany. In 2004, he received his Habilitation degree from the University of Kiel before starting his independent career in Calgary in 2005.



### Steve Przesmitzki

Global Team Leader for Strategic Transport Analysis in Saudi Aramaco Research and Development

Steve is based out of the Aramco Research Center in Detroit, and leads the analysis teams located in Detroit, Paris, and Dhahran. The teams perform technical analysis focusing on current and future transportation technology, transportation regulatory policy, energy-use trends, and economic impacts. Steve has worked at Aramco since April 2014.

Steve was previously a Technology Development Manager for fuels and lubricants within the United States Department of Energy's Vehicle Technologies Program. Steve's prior responsibility was to support the development of energy policy and management of research programs in transportation. Steve's other work experience includes transportation fuels research for DOE's National Renewable Energy Laboratory and vehicle powertrain design and development at Ford Motor Company.

Steve holds a PhD from the Massachusetts Institute of Technology, a MS from the University of Michigan, and a BS from Kettering University; all in Mechanical Engineering. He is also registered as a Professional Engineer in Michigan.





# **Doug Suttles**

President and Chief Executive Officer of Encana Corporation

Doug Suttles joined Encana as President & CEO in June 2013. With over 30 years of experience in the oil and gas industry in various engineering and leadership roles, he is responsible for the overall success of Encana and for creating, planning, implementing and integrating the strategic direction of the organization.

Before joining Encana, Doug held a number of senior leadership posts at BP, including Chief Operating Officer, BP Exploration & Production, and President, BP Alaska.

Doug has served on the University of Texas Engineering Advisory Board since 2007 and was honored with the school's Mechanical Engineering Distinguished Alumni Award in 2008. Doug graduated from the University of Texas at Austin in 1983 with a bachelor's degree in mechanical engineering.



#### Mark Blackwell

Entrepreneur In Residence at the GE Industrial Internet Accelerator

Mark Blackwell currently is the Entrepreneur In Residence at the General Electric (GE) Industrial Internet Accelerator in Calgary. Most recently Mark was the Chief Operating Officer of GNS3 Technologies, an enterprise networking start-up, which was acquired in October for over \$30MM by Solarwinds. While at GNS3 the company grew to over 8000,000 monthly active users, 11MM downloads and was utilized by such organizations as the US Department of Defence, AT&T, Walmart, Google, Facebook and more. Mark also has experience as a venture investor while helping to run the Cenovus Energy Corporate Venture fund and investment banking with CIBC.

Mark also worked in the technology investment banking division at CIBC World Markets in Calgary. During his time at university, Mark received the Order of the University of Calgary and the Alumni Association's Future Alumni Award. He was also named a Top 20 Compelling Calgarian by the Calgary Herald and a Canada Top 20 Under 20.



#### **David Mount**

Partner at Kleiner Perkins Caulfield & Byers

David Mount joined Kleiner Perkins Caufield & Byers in 2008 and is a partner in KPCB's Green Growth Fund (GGF), which supports young companies leading new markets in sustainable ways. David is focused on software and services investments applicable to the energy and industrials markets. He is on the boards of UpWind Solutions and Choose Energy, a board observer at OSIsoft, and led the firm's investment in ServiceMax. He has also worked closely with the teams at Silver Spring Networks (SSNI), Opower (OPWR), and Hara (acquired by Verisae).

For over a decade, David has been investing in billion dollar technology and energy portfolios that span the petrochemical, oil and gas and consumer sectors. Before joining KPCB, David developed his principal investing expertise at Sankaty Advisors, a \$20B structured finance unit of Bain Capital. There David helped manage Sankaty's petro-focused portfolio, which included exploration, production, refining, field services and specialty chemicals. He also evaluated opportunities in renewable energy and alternative fuels and chemicals, predating the first wave of investing in these technologies. David's involvement in the firm's consumer portfolio included investments in multinationals within the food, health and sustainable business sectors.

David holds a B.A. degree from Yale University and an M.S. degree in environment and resources from Stanford University. He completed his M.B.A. at the Stanford Graduate School of Business, where he was an Arjay Miller Scholar. He remains involved in course development at the Stanford Graduate School of Business and School of Earth Sciences.



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#### Kevin Skillern

Managing Partner, Energy Innovation Capital

Kevin Skillern is a partner with Energy Innovation Capital, a fund focused on venture and growth-stage technology companies in the oil & gas sector. Kevin's more than 20-year career has focused on investing and strategy development in the global energy industry. He led GE's program investing in technology companies in the Energy industry from 2005 through 2013 and led a joint \$300 million fund with ConocoPhillips and NRG Energy. Kevin's prior activities in oil & gas included key roles in 15 private equity and debt investments for GE Capital, and 9 years as a strategy consultant with Booz Allen Hamilton. Kevin has an MBA from Stanford University and a B.S. in Electrical Engineering from the University of Texas at Austin. Mr. Skillern lives in the San Francisco area.



#### **Jackie Forrest**

Director of Research, ARC Energy Research Institute

Jackie actively monitors emerging strategic trends related to energy. She is an author and sought after public speaker with 20 years of experience in the energy industry. She has written numerous blogs and columns on energy issues. She is also a recognized expert in analyzing oil and gas systems in a carbon constrained world.

Prior to joining ARC, she was the leader of North American crude oil research for IHS CERA. Jackie has published more than 16 public papers on energy issues, including five papers on life cycle GHG emission from crude oil. Jackie attended the University of Calgary where she received an undergraduate degree in Chemical Engineering. She also has an MBA from Queens University.