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VENTURING IN FUEL CELLS: The Power in 'Small'

SPEAKER

Maurice E.P. Gunderson
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Maurice Gunderson is a co-founder of Nth Power LLC, a successful venture capital firm with a focus on investments emerging from the global restructuring of the energy industry. Prior to founding Nth Power, Mr. Gunderson spent over 20 years developing profitable products and launched five successful companies. He is a specialist in thermodynamics and energy technologies and has been instrumental in the development of cryogenic equipment, energy systems, turbomachinery, and computer-based control systems for process plants and pipeline systems. Mr. Gunderson is a patent holder and a Registered Professional Engineer.

Mr. Gunderson holds an MBA from the Stanford University Graduate School of Business (1985), a Master of Science degree in Mechanical Engineering (Thermodynamics) and a Bachelor of Arts degree in Mechanical Engineering, both from Oregon State University (1974, 1975). He was named a 1984-85 NASA Technology Fellow.

Mr. Gunderson is a member of the boards of NEOPhotonics Corporation, NanoGram Corporation, Metallic Power, Inc., STM Power, Inc., Pentadyne Power, Inc., H2Gen Innovations, Inc., Clean Air Partners, Inc. and CellTech Power, Inc.

Nth Power invests in companies with high growth potential addressing large market opportunities with a proprietary technology or service that meets a significant unmet customer need. Market opportunities are selected where Nth Power can leverage the industry expertise of their team and their industry partners.

Ideal businesses have progressed beyond the proof-of-concept, R&D and "seed" funding stages and are on the threshold of introducing commercial products. Nth Power's initial investment typically ranges from \$1-5 million and often the company makes further investments over time. The firm receives and reviews business plans from more than 500 energy-related businesses each year normally resulting in investment in 5-10 of these companies.

PANELISTS

Serge Adamian
President and CEO
H₂ ECOnomy
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Serge Adamian is a serial entrepreneur. In recent years he has created many technology based start-ups in clean energy and information technologies areas. H₂ ECOnomy currently has 25 direct employees and about the same number contract employees engaged in R&D and manufacturing of hydrogen proton exchange membrane fuel cells, test stations, and other related products. His work experience includes managing Ecotrade, Inc., a clean energy consulting company based in Glendale, CA for six years and prior to that eight years with Los Angeles Department of Water and Power and four years with Parsons in Pasadena, CA. He has BS and MS degrees in engineering and a Masters degree in Business Administration.

Peter Arias
Director
Reed Global Advisors LLC
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Mr. Arias is currently a Director at Reed Global Advisors (RGA) specializing in performing business due diligence related to the firm's financial advisory services. Prior to his current role, he has written research on publicly listed energy and energy technology companies as well as analyzed private energy technology companies for investment and financial advisory opportunities. Mr. Arias came to RGA, LLC from Baring Asset Management where he was a member of the Latin America equity research team. Before joining BAM, Mr. Arias worked at Markowitz and McNaughton, where he specialized in performing primary research, corporate development, and market due diligence studies on publicly and privately held high-tech companies, including acquisition and joint venture searches. He holds B.S. degrees in Electrical Engineering and Finance from the Jerome Fisher Management and Technology program at the University of Pennsylvania. Mr. Arias is fluent in Spanish and conversant in Brazilian Portuguese.

Dr. Derek Dunn-Rankin
Personal Power Systems
National Fuel Cell Research Center, UC Irvine
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Professor Dunn-Rankin is currently leading a multi-university effort to establish a research center for the development of human compatible, personal power systems. Personal power is a clear technological bottleneck for advancement in machine-assisted human endeavor. Communication systems, augmented reality, and personal robots are all demanding more power than can be conveniently provided in compact, lightweight packages. The goal of the Personal Power Systems Center is develop the next generation devices for providing this power. He is exploring thermochemical

approaches (engines), electrochemical solutions (fuel cells), and biochemical methods (mitochondria) which have limitations and advantages in different power profile environments. Through hybrid designs breakthrough performance may be achieved. Hence, the Center is researching each of these power approaches individually and also in combination.

Dr. Derek Dunn-Rankin, Professor in Mechanical and Aerospace Engineering, received his B.S. degree in Mechanical Engineering from the University of California, Santa Barbara (1980), and his M.S. and Ph.D. degrees (1985) from the University of California, Berkeley. He was a post-doctoral researcher at Sandia National Laboratories Combustion Research Facility in Livermore until 1987, when he joined the faculty of Mechanical Engineering at the University of California, Irvine. Dr. Dunn-Rankin has more than 150 technical publications documenting research in droplet vaporization studies and applications of laser diagnostic techniques to practical engineering systems, primarily those associated with combustion. Dr. Dunn-Rankin received a National Science Foundation Presidential Young Investigator Award in 1989, the Society of Automotive Engineering Ralph R. Teetor Engineering Educator Award in 1991, and a Fulbright Scholar Fellowship in 1997.

Michael A. Russell
VP Finance, CFO and Corporate Secretary
Metallic Power
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Mr. Russell joined Metallic Power in May 2000. He has over 30 years of financial management experience, half of which was in positions as VP of Finance or CFO at technology companies such as HNC Software, Vitesse Semiconductor and Micom Systems, which included participation in two IPOs. He holds BSEE and MBA degrees from UCLA.

Michael Walkinshaw, C.A.
Entrepreneur-in-Residence and Acting Chief Financial Officer
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Mr. Walkinshaw joined Chrysalix in 2002 after 5 years at Ballard Power Systems where he held positions in strategic planning, product management, marketing and program management. Mike was instrumental in identifying the opportunity for fuel cells in backup power and intermittent use power markets and in creating the Nexa Power Module. Prior to joining Ballard, Mike spent 6 years in the Small Business unit of Price Waterhouse providing Business and Tax advisory services to small and medium size businesses in a broad range of industries. He obtained his C.A. designation with the Institute of Chartered Accountants of British Columbia in 1993. Mike holds a Bachelor of Commerce (Finance) from the University of British Columbia.

ENTREPRENEURS

Jerald Alan Cole
Senior Vice President and Chief Technology Officer
OptiSense LLC
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Mr. Cole is a consultant specializing in the research and development of advanced energy technologies and air pollution control. Much of his work involves technology-based market studies for advanced energy technologies, including hydrogen production, fuel cells, sensor systems and catalysts. He is a public speaker and advocate on behalf of the California Hydrogen Business Council.

Mr. Cole has more than 22 years of experience in R&D and other product development in the energy and environmental fields. He is currently Sr. Vice President and Chief Technology Officer of OptiSense LLC, in Torrance, CA, a start up venture focusing on low-cost safety and process sensors for the emerging fuel cell industry. He is also Chief Technology Officer of Hydrogen Ventures, LLC. Previously, he was Vice President for R&D at Hydrogen Burner Technology. Mr. Cole was a senior manager at Energy and Environmental Research Corporation, now a wholly owned division of General Electric Power Systems Division. In his 18 years with EER he became known internationally for his scientific and engineering contributions in the fields of utility power plant pollution control, hazardous waste treatment, mercury emissions, and advanced hydrogen production technologies. He has published over 70 technical papers and presentations and holds 6 patents with 2 patents pending. Jerald earned a Master's degree in Chemical Engineering from MIT and a Bachelor's degree in Chemistry from San Jose State University.

Carl Kukkonen Ph.D.
CEO and Founder
Direct Methanol Fuel Cell Corporation
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Carl Kukkonen, Ph.D. is CEO and founder of Direct Methanol Fuel Cell Corporation. He was also founding Partner of ViaSpace Technologies, a privately held technology transfer company headquartered in the Pasadena area. ViaSpace was formed with the objective of transforming technologies from the NASA/Caltech Jet Propulsion Laboratory (JPL), and other advanced technology centers into profitable commercial enterprises through its strong connections with the advanced technology community. Prior to founding ViaSpace in 1998, Dr. Kukkonen spent 14 years with the Jet Propulsion Laboratory and was most recently Director of the Center for Space Microelectronics Technology and Manager of Supercomputing. Prior to his JPL experience, Dr. Kukkonen was at the Ford Motor Company, where he was Ford's leading expert on hydrogen as an alternative automotive fuel. He also led a team that developed Ford's first turbocharged intercooled direct injection diesel engine. Dr. Kukkonen received a BS in physics from the University of California at Davis. He earned an MS and Ph.D. in physics from Cornell University and was a postdoctoral fellow at Purdue.

MODERATOR

Lawrence Wnuk Ph.D.
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Dr. Lawrence Wnuk is Programs Director and a founding partner in Hydrogen Ventures LLC in El Segundo. Hydrogen Ventures provides technical advisory and financial services to entrepreneurs, expanding companies and investors that have renewable energy and new power products.

Prior to Hydrogen Ventures, consulting activities included providing vehicle studies and transit analysis services, assisting in startup activities for transit enhancing services companies as well as heavy duty truck prototype development and alternative fuel vehicle infrastructure projects. Work has included partner development between fuel cell and hydrogen storage manufacturers with the Industrial Technology Research Institute of Taiwan, as well as programs for alternative fuel vehicle and infrastructure development.

Dr. Wnuk has worked at General Motors Advanced Technology Vehicles in Torrance, California, where he spearheaded programs and partnerships for development of advanced power electronics concepts. At GM, he forged strategic alliances, captured funds and led the development and the demonstration of advanced propulsion and charging technologies for electric and hybrid electric vehicles. Programs culminated in successful product demonstrations in Europe and in the United States. He established and staffed an Energy Systems Development Laboratory to tailor EV power inverters for use in utility applications, auxiliary power inverters and fuel cell inverters

Dr. Wnuk also worked at Hughes Electronics where he managed programs involving analog and digital control systems, spread spectrum RF systems, electro-optical and laser systems. Lawrence holds a BS, an MS and a Ph.D. in electrical engineering from the University of California Los Angeles.

He is a board member of the Caltech/MIT Enterprise. He has also been active with or a board member on non-profit advanced technology coalitions.