

## ***Eco-Engineering: Building Sustainable Cities Forum***

*October 6, 2011*

### Panelist and Speaker Biographies

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#### **Professor Matthew Fraser**

Prof. Matt Fraser is the Director of Research Development in the Global Institute of Sustainability (GIOS) at Arizona State University (ASU), the Executive Director of the Quantum Energy and Sustainable Solar Technologies Engineering Research Center (QESST ERC), as well as an Associate Professor in the School of Sustainable Engineering and the Built Environment and the School of Sustainability at ASU.

The QESST ERC is an interdisciplinary team consisting of multiple universities, world-renowned companies, and leading PV entrepreneurs focused on building a strategic partnership to generate innovative solutions to sustainable electricity generation that will realize continuous improvements in performance (efficiency), cost and manufacturability of PV technologies through focused research on the underlying material science, energy conversion processes, and advanced manufacturing approaches; reinvigorate interest in science and engineering education at all levels by using renewable energy as an inspirational example that challenges intellectual capabilities, allows students to develop creative solutions, and solve important societal problems; and position the U.S. PV industry to lead through innovation and stimulate economic development in the expected trillion dollar PV market. More details at [www.qesst.org](http://www.qesst.org).

In leading the research development team at GIOS, Dr. Fraser is directly involved in initiating and promoting interdisciplinary research projects across ASU and building teams of researchers to respond to the grand challenges of global sustainability. The research portfolio at GIOS is valued at approximately \$10M per year and spans renewable energy and energy efficiency, water sustainability and climate, urban ecology and ecosystem services and international development and social sustainability.

As a faculty member, Dr. Fraser directs his own research projects on urban air quality. Dr. Fraser's research focuses on using organic speciation and receptor modeling to apportion ambient pollutants to their original source. To tackle this complex problem, Dr. Fraser's research group has been involved in field monitoring programs, source characterization studies, emission inventory preparation, and analytical method and instrument development projects. Prof. Fraser teaches courses related to energy and the environment, renewable energy, and the scientific basis for global environmental change.

Recently, Prof. Fraser has worked to initiate a series of research grants on the sustainability of energy systems, including:

*Energize Phoenix* – a \$25M collaborative effort between the City of Phoenix, Arizona State University and Arizona Public Service to catalyze an energy efficient culture in central Phoenix (funded by US Dept. of Energy)

*The Green Apple Study* investigating the indoor air quality and health outcomes of energy efficiency retrofits with the specific goal of quantifying how sealing a building envelope impacts indoor air pollution and associated health effects (funded by US Dept. of Housing and Urban Development)

*Quantum Energy and Sustainable Solar Technologies* A new Engineering Research Center to integrate research, education and industrial collaboration to accelerate the development of solar photovoltaic industry to reach a terawatt of production through linking fundamental research and systems engineering with sustainability considerations of PV (funded by the National Science Foundation).

Dr. Fraser received his Bachelors of Science (with University Honors) in Chemical Engineering from Carnegie Mellon University and his Masters and Ph.D. in Environmental Engineering Science from Caltech. Prior to joining the School of Sustainability at ASU, Prof. Fraser was on the faculty of Rice University in the Department of Civil and Environmental Engineering.

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**James W. Hunt, III**  
Chief of Environmental and Energy Services,  
City of Boston

Jim Hunt serves on Mayor Thomas Menino’s Cabinet as Chief for Environmental and Energy Services for the City of Boston. In this capacity, Jim Hunt is the Mayor’s lead advisor on environmental and energy policy and oversees several City agencies including the Inspectional Services Department, the Environment Department, Parks Planning, and Boston’s Recycling Program. Jim also serves as a Mayoral Appointee to the Board of Directors of the Massachusetts Water Resources Authority (MWRA) and as a Trustee on the Boston Groundwater Trust

The Menino Administration has implemented a number of sustainability initiatives under Jim Hunt’s leadership, particularly in the areas of climate action, green building policy, renewable energy and efficiency, and groundwater protection. In 2007, Boston became the first major city in the nation to require private development to follow the US Green Building Council’s LEED standards as part of the City’s zoning review process. And on Earth Day of 2010, the city unveiled a bold vision for reducing greenhouse gas emissions 25% by the year 2020, while reducing energy costs for homeowners and stimulating Boston’s clean energy economy. This commitment to sound environmental and energy practices has led to the City of Boston being ranked the “3<sup>rd</sup> Greenest City” in North America by Popular Science Magazine.

Prior to joining the City, Jim Hunt served as Assistant Secretary for the Commonwealth's Executive Office of Environmental Affairs (EOEA) and was responsible for administering the Massachusetts Environmental Policy Act (MEPA). As administrator of the Commonwealth's MEPA program, Jim was in charge of major project reviews for the state including downtown waterfront development, MBTA transit projects, and a wide range of energy projects such as Cape Wind. Jim Hunt was recently appointed to the Commonwealth's Climate Protection and Green Economy Advisory Committee, which will advise the Executive Office of Energy and Environment on statewide measures to reduce greenhouse gas emissions.

An attorney, Jim received his Juris Doctorate from Suffolk University Law School and his Bachelors Degree from the University of Massachusetts, Amherst. Jim serves on several non-profit boards, including the Boston Latin School Association, the Boston Harbor Association, and the Dorchester Youth Academy, an alternative middle school serving the at-risk youth of Boston.



**Michinaga Kohno**

Senior Chief Engineer,  
Group Management Planning Office & Smart City Business Management Office,  
Hitachi, Ltd.

**CV:**

**Date of birth:** 21st November, 1948

**Place of birth:** Tokyo, Japan

**Education:**

1977 M.Phil, Department of Production Engineering, Faculty of Applied Science, University of Nottingham (UK)

1972 BSc, Department of Precision Machinery Engineering, Faculty of Engineering, University of Tokyo (Japan)

**Professional History:**

2010-Senior Chief Engineer, Group Management Planning Office & Smart City Business Management Office, Hitachi, Ltd.

2008 Senior Chief Engineer, Corporate Planning and Development Office, Hitachi, Ltd.

2006 Senior Chief Engineer, Corporate Technology Office, Hitachi, Ltd.

2004 Senior Vice President, Innovation Research Institute, Inc.

2000 Division President, Information Technology Division, Hitachi, Ltd. (Operation and development of internal information systems of the entire Hitachi Group; business applications and network infrastructure)1999Head of Office, Corporate Office For Y2K Readiness

1994 Deputy Head of Office, Corporate Information Systems Office, Hitachi, Ltd.1972 –1994 Production Engineering Research Laboratory, Hitachi, Ltd. (Production Automation, Robotics, Production Planning Systems)

1972 Joined Hitachi, Ltd.

### **Current Public Assignments**

2010-Vice Chair, Committee on Environment-friendly Urban Development, City and Regional Development Bureau, Ministry of Land, Infrastructure, Transportation and Tourism, Japan



**Robert Puentes**  
*Senior Fellow,*  
Metropolitan Policy Program,  
The Brookings Institution

Rob Puentes is a senior fellow with the Brookings Institution Metropolitan Policy Program where he also directs the Program's Metropolitan Infrastructure Initiative. The Initiative was established to address the pressing transportation and infrastructure challenges facing cities and suburbs in the United States and abroad.

Rob's work focuses on the broad array of policies and issues related to metropolitan growth and development. He is an expert on transportation and infrastructure, urban planning, growth management, suburban issues and housing.

Recent publications include: "A Bridge to Somewhere: Rethinking American Transportation for the 21st Century", "America's Infrastructure: Ramping Up or Crashing Down?", "Challenges Ahead: New Urban Demographics and Impacts on Transportation," "A Review of the Land Use Regulations in the Nation's 50 Largest Metropolitan Areas," "Prosperity at Risk: Toward a Competitive New Jersey," and "One Fifth of the Nation: A Profile of Change in America's First

Suburbs." He is a frequent speaker to a variety of groups, a regular contributor in newspapers and other media, and has testified before Congressional committees.

Prior to joining Brookings, Robert was the director of infrastructure programs at the Intelligent Transportation Society of America. He holds a master degree from the University of Virginia where he serves on the Alumni Advisory Board, and is an affiliated professor with Georgetown University's Public Policy Institute. He serves on a variety of boards and committees including, most recently, the Northern Virginia Transportation Authority, the Tysons Corner Tomorrow Advisory Task Force, and the Falls Church, Virginia Planning Commission where he lives with his wife and three sons.