Multiple Benefits Assessment of the Low Emission Development Strategies in Asian cities

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Keynote Speaker

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Short Biography

Hooman Farzaneh is an associate professor at Kyushu University, Japan. He obtained his Ph.D. degree in energy systems engineering from the science and research branch of Azad University, Tehran, Iran. His research interests span both quantitative and qualitative studies, focusing on developing research patterns of low carbon energy scenarios and policy implementations designed to tackle air pollution problems at both regional and local scales. Much of his work has been on improving the understanding and designing of sustainable energy systems, through data mining, statistics and developing different tools and modeling approaches. Before joining Kyushu University, Hooman worked at the Institute of Advanced Energy, Kyoto University and the United Nations University. Dr. Farzaneh has more than ten years' experience teaching energy-science-related subjects at various universities in Iran and Japan and is currently the principal investigator of a funded research project entitled "Clean Energy Development in Asia-Pacific Cities" at the Kyushu University Platform of Inter/Transdisciplinary Energy Research. He is also serving as the head of the Energy and Environmental Systems (EES) laboratory at the Interdisciplinary Graduate School of Engineering Sciences (IGSES).

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Abstract:
Cities throughout Asia have experienced an unprecedented economic development over the past decades. In many cases, this has contributed to their rapid and uncontrolled growth and has resulted in multiple problems, which include a rapid population increase, enhanced environmental pollution, collapsing traffic systems, dysfunctional waste management, as well as a rapid increase in the consumption of energy, water, and other resources. The twin challenges of global climate change and energy insecurity in Asian cities can only be solved with rapid devising of clean energy strategies, both for energy supply and energy efficiency. Moreover, this rapid development is needed globally. The big challenges concerning the clean energy development in Asian cities spring from the lack of awareness at the local government level and the limited institutional capacities and arrangements. Comprehensive policies focused on clean energy and mitigation do not currently exist at the city level in Asia, and only a minority of developed countries such as Japan and Korea have started formulating such policies. Development processes in Asian cities have generated many social and economic benefits in the last decades, but the patterns of urban development have shown themselves to be deficient in a number of areas. Consequently, urban areas in Asia contribute increasingly to climate change, as well as suffering many of its impacts.
The objective of this research is to demonstrate a new strategic planning mechanism for achieving multiple energy, environmental, public health, and economic benefits of clean energy development strategies in the selected megacities in Asia, together with a robust analytical framework that can be used to assess those benefits during the development and implementation process. By evaluating potential clean energy policies with criteria that cut across the multiple benefits, localities can select options that facilitate the achievement of multiple goals and avoid options that may impede key priorities. This research is financially supported by the Japan Society for the Promotion of Science (JSPS), the Asia-Pacific Network (APN) and the Hitachi Global Foundation. The research findings were collected in the following book:
"Hooman Farzaneh, Devising a clean energy strategy for Asian cities, Springer, 2018"