

Resilient and Sustainable Future Grid for Asian Countries and Islands

Ryuichi Yokoyama,
Waseda University, Japan

The widespread damage of electric power systems occurred in Asian countries has made people keenly aware of the need for households, offices, factories, community and local governments to maintain their own power sources that are not completely dependent on electric power utilities. In constructing such power sources, locally generated and consumed renewable energy from solar and wind sources would be mainly utilized. However, such power sources would affect the power grid through fluctuation of power output and the deterioration of power quality. Therefore, a new social infrastructure to supply electric power would be required for resilient and sustainable regional communities. As a countermeasure of the problem, it would be suitable to create resilient and expandable distribution networks that are of appropriate scale for their respective regions instead of large-scale networks all at once. Advanced solutions and energy management systems for natural disaster-damaged areas and islands are also introduced in this presentation.

Ryuichi YOKOYAMA in Waseda University will serve as a Chairman of this Panel Session.



Ryuichi Yokoyama received the degrees of B.S., M.S., and Ph.D. in electrical engineering from Waseda University, Tokyo, Japan, in 1968, 1970, and 1974 respectively. He is a professor of the Graduate School of Environment and Energy Engineering in Waseda University. His fields of interests include planning, operation, control and optimization of large-scale environment and energy systems, and economic analysis and risk management of energy systems and markets. He is a fellow of IEEE and a senior member of IEE of Japan, and a member of CIGRE. Chairman of Standardization Commissions of Electric Apparatus in METI Japan. The president of Consortium of Power System Technology of Japan and Chairman of Smart Community Project Commission.