Renewable Energy Generation and its Integration: Challenges and Solutions

Keynote Session A II

Date: Friday, Dec 17, 2021 Time: 09:00 AM-09:55 AM Speaker: Janaka Ekanayake, Professor, University of Peradeniya, Sri Lanka

Abstract:

Many governments are encouraging an increase in the share of renewable energy (RE) in their national electricity generation mix. It is already evident that RE generators are being connected in all voltage levels. The intermittent and variable nature of the resource, the fluctuation caused by cloud cover and wind turbulences, and the single-phase nature of some REs causes many challenges for network operations and control. In this talk, the challenges faced by the modern grid with high penetration of renewables and possible solutions are discussed in detail while emphasising real-world examples.