

Title: Smart Grid Integration of DERs and DRs by Real Time Electricity Market
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Abstract: Both developed and developing countries around the world are committed to move towards a low carbon energy mix by increasing the penetration of renewable generation. Also the development of modern information and communication technology (ICT) and innovative market solutions can allow small end-consumers and small-scale distributed energy resources (DER) to actively participate in system operation with high penetration of renewable energy sources (RES). In this talk, a new real-time electricity market for European smart grid project – Ecogrid EU is introduced, which is designed for small-scale DERs and small end-consumers by responding to 5-min real time electricity prices. The new real time real-time electricity market will provide additional balancing power from distribution network to cancel out the production variation introduced by RES. It can enable the operation of a power system with more than 50% RES, which is a major contribution to the European 20-20-20 goals.