

Title: Modernization of Electrical Power Systems to accelerate Sustainable Development Goals

Sustainable Development Goals (SDGs) are the 2030 core agenda in sustainable development which was agreed upon by the world leaders on September 25, 2015, at the United Nations Conference. With 17 goals, 169 targets, and 247 global indicators, it's a global commitment toward achieving stability in three dimensions of sustainable development (social, economic, and environmental). In order to achieve these goals, intensive research and development in the various areas are essential aspects to be considered. The electrical power system is a potential area that can be improved to contribute to SDGs. Goal 7 on Affordable and Clean Energy and Goal 13 on Climate Action are two goals that are directly related to the electrical supply industry. For example, the application of renewable energy as a source of electricity is able to minimize CO₂ pollution and provide electrification in rural and remote areas. However, such an application possesses some technical challenges to the stability of the existing system. Furthermore, climate change also poses some threats to the operation of the power system in supplying reliable electricity. Therefore, modernization of the power system to be more flexible and adaptive to such changes is essential to be conducted. This talk will present the role of the power system in achieving SDGs through the application of renewable energies and making it resilient against catastrophic events. Some examples of conducted and potential research areas in making resilient electricity supply systems will also be discussed in this talk.