

ABSTRACT:
TRENDS AND CHALLENGES IN RENEWABLE ENERGY SYSTEMS

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The world of renewable energy systems is moving towards the construction of large scale power generation facilities in the range of cents of MW, which is comparable to the power that can be produced by nuclear power plants.

These technologies, and mainly wind and solar, were not initially conceived to play such a role. Nowadays, far from being just the solution for feeding isolated networks, with no access to the standard electrical infrastructures, wind and PV are claimed to play an outstanding role in the next decades. In fact is it foreseen that in the next 35 years these technologies should provide the 50% of the electrical power.

The major trends in the design of Large Scale Wind and PV Power Plants, and the associated research and technology challenges, will be discussed in this lecture.