# Renewable energy: wind and solar power

Component
École Nationale Supérieure d'Électrotechnique d'Électronique d'Informatique d'Hydraulique et des Télécommunications

# Presentation

## Objectives

Discover two renewable technologies for electricity generation: photovoltaic and wind power.

## Description

This course presents the technical and economic aspects of photovoltaic and wind power.

Photovoltaic: from photovoltaic cells to systems, solar radiation, photovoltaic conversion, photovoltaic panels, power plants, cost, environmental impact.

Wind power: characterization of wind resources, effects of altitude and wake, theoretical elements (Betz limit) on wind power production and the energy efficiency of wind turbines; mechanical control through blade adjustment, from start-up to safe shutdown.

Composition of electric wind turbines: nacelles with and without speed multipliers.


Non-contractual information.
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