



Left: Simulated electricity generation and mean wind speeds in idealized scenarios of complete coverage of the world with wind turbines of different installed capacities. The maximum generation results from reduced wind speeds at higher installed capacities. (Note that the maximum over land is broader than over the ocean and is reached at a higher installed capacity of $25 W_i$ m⁻².)

Right: Simulated drop in efficiency, defined as the capacity factor of a wind farm relative to an isolated turbine, with a greater wind farm area in an idealized scenario of offshore wind energy in the North Sea.