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September 29, 1933

A Science Service Feature

? WHY THE WEATHER ? Mailed September 22, 1933

HARNESSING THE WINDS

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The idea of utilizing windmills to generate electricity has never lost its hold on popular imagination since it was first brought to the fore in 1881 by Sir William Thomson (later Lord Kelvin) in his presidential address before the mathematical and physical section of the British Association for the Advancement of Science. Wind power is inexhaustible and costs nothing. It is available over a much greater area of the earth's surface than its rival, water power. No wonder, therefore, the world has been looking forward hopefully for half a century to the installation of wind-driven electric power plants on a scale so vast as to solve the problem of a waning fuel supply.

This dream is still far from realization, but such plants have at least ceased to be purely experimental. Many firms on both sides of the Atlantic are now engaged in the business of installing them, and marked progress in their design has been made within the past ten years. The most striking improvements have been in the design of the wind-wheel. The multi-bladed wheel, as commonly employed in American windmills, has lately given place to two-armed and four-armed wheels, the blades of which are modeled more or less closely after the propeller of an airplane. In some cases the blades are of stream-line shape, so that the wind not only exerts a maximum pressure at the front but also a maximum suction effect in the same direction at the rear.

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