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Project fiche

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Sahara Trade Winds to Hydrogen

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Since November 2007, scientists from the France, Germany, Mauritania, Morocco and Turkey have worked on a project to use the prevailing trade winds over the Sahara Desert to produce hydrogen for sustainable energy systems. The trade winds that blow along the Atlantic coast from Morocco to Senegal have the greatest wind potentials of any place on earth. Because of the erratic nature of winds however, wind electricity cannot be integrated into the local electricity grid on any significant scale, unless efficient means for storage are developed.

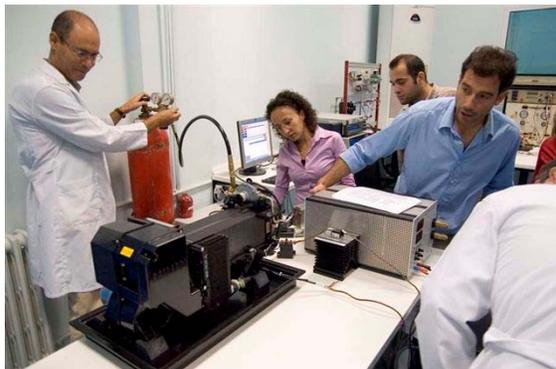
Hydrogen produced by wind-driven electrolysis can be used for power storage to stabilize the electricity grid and also for fuel or chemical feedstock in specific industries. The project involves building research platforms at Morocco and Mauritania's main research centres. The aim is to integrate intermittent sources of renewable energy into the weak grid infrastructure of the Saharan/Sahel region. This initiative will later be extended to other countries in the region that also possess extremely limited electric generating capacities.

This project is intended to help to counter the rampant desertification that threatens these largely agriculturally-based societies where very high demographic pressures are seen as a significant threat to the stability of the region.

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Duration: 3 years; expected completion by 29 November 2010



Left: Participating engineers prepare fuel cells for testing.

Right: Team members stand under a research wind turbines installed at the Coastal Sahara Desert.

Photos courtesy of Sahara Wind Inc., Morocco

