

## Background on the Sahara Wind Project

If we take the growing needs for electricity worldwide, their environmental impacts and the latest European energy trends, wind power as an inexpensive source of renewable energy is gradually becoming one of the best alternatives to supply this very large electricity market. The development of wind power is a European success story, and its potential may in fact be big enough to cover all of the continent's electricity needs.

This perspective may be more difficult to implement in Europe as land based electricity production from wind will be hampered by higher population densities and its corresponding intensive use of land. This leads to significant reductions of usable lands on which the wind resource can be exploited. In Germany for instance (one of the World's leader in wind power), the wind energy potential is limited in comparison to the need of its large domestic power consumption, and would already imply the successive use of worse sites where annual wind productions are low, resulting into higher electricity costs. If the growth rates remained as high as they were a few years ago (they have since dropped significantly) most of the productive sites would have been already equipped. Such perspectives could leave a growing wind energy industry with a notable deadline that may prevent it from having any significant impact on a more sustainable European energy supply scheme.

While Germany and Denmark were pioneers, other European countries like Spain could be faced with the same difficulties. Thus, and in order to sustain the future of this promising renewable energy technology, other alternatives are currently being sought such as to utilize offshore wind potentials. In Europe however, there are large industrial regions, if not entire countries with high energy consumptions that don't even dispose of an access to the sea.

It is therefore conceivable that some countries would consider importing significant amounts of low-cost wind generated power from other windy regions. There are huge areas with excellent wind conditions around Europe where population densities are one hundredths that of Europe, and where the same can be said about electricity needs.

The Saharan coast from Morocco to Senegal represents one of the most extensive, windiest and least populated areas worldwide within reach of the European electricity grid. In this region, an expected yearly production of more than 4500 Full Load Hours can be derived at some sites, where wind measurements are being made.

The size of the wind catchments area is huge as the sole coastline, just to mention, spreads for over 2000 Km (1250 miles).

Considerable amounts of wind generated electricity could be transferred using optimized grid infrastructures. In order to avoid unacceptably high losses, High Voltage DC techniques could be engaged as for large capacities exceeding 5 GW, existing technologies can limit transfer losses at full load, to less than 10% over 3000 Km (1800 miles). This distance is long enough to deliver wind generated electricity from the Saharan plateaus of Tarfaya to Germany.

The existing Euro-Mediterranean economic framework is likely to enable this vast wind energy source to become one of the main economic drivers of a sustainable development for the entire region. Taking advantage of the relative proximity of both continents to tap into a widely available clean and renewable power source serves two complementary objectives, namely to satisfy the significant European energy needs while strengthening through the deployment of a green economy North Africa's integrated industrial, social and economic take-off.

Our project development activities at Sahara Wind Inc are aimed at concretizing this vision through the Sahara Wind Project which highlights the value of the significant trade wind resource, facilitating thereby your access to all relevant information on the topic.