



**17 – 19 September 2012**  
Grosvenor House, Dubai Marina, UAE

**COUNTRY OVERVIEW:**  
**SECTOR:**

**TUNISIA**  
**WIND AND SOLAR**

# TUNISIA

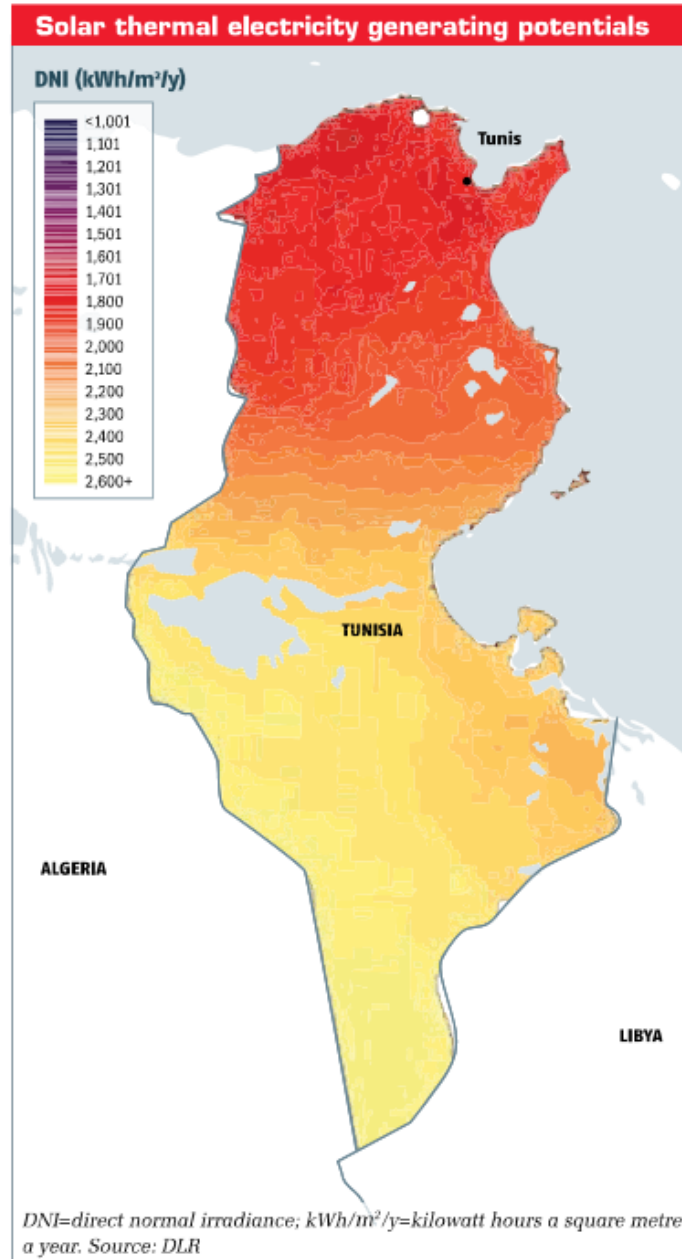
## Solar

Tunisia consists largely of desert, making it ideal for the production of solar energy. The country enjoys an average of more than 3,200 hours a year of sunshine and average daily solar radiation of 5-5.5 kilowatt hours (kWh) a square metre, with the highest levels being recorded in the south.

Tunisia's solar potential is still largely unexploited, with activity to date confined to small domestic solar heating systems and community projects. According to STEG, solar power production was just 2MW in 2010.

Tunisia plans to rapidly increase solar power capacity over the coming two decades. The Tunisian Solar Plan calls for solar capacity to reach 253MW by 2016, and 1,700MW by 2030 and includes 17 solar projects in six different categories. In addition to large-scale, rural and manufacturing projects, there are a handful of smaller solar heating schemes and 10 pilot projects.

Following the publication of the Tunisian Solar Plan, Germany's Lahmeyer undertook pre-feasibility and feasibility studies in the period 2008-10 on the local solar market, looking at potential sites for both photovoltaic (PV) and concentrated solar power (CSP) projects. Funded by the German government, the study was executed in co-operation with STEG.



## Selected projects planned under the Tunisian Solar Plan

<b>Large-scale</b>	A 150MW solar/thermal hybrid power plant, with a 25MW CSP element to be implemented by STEG
	A CSP plant of 75MW with production targeted solely or partly for export
	An ISCC plant at El-Borma to be implemented by Societe Italo-Tunisienne d'Exploitation Petroliere (Sitep)
	PV plants of 10MW each to be implemented by STEG
<b>Manufacturing</b>	PV plants of 10MW each to be implemented by the private sector
	A PV panel manufacturing plant with a minimum production capacity of 14MW a year
<b>Rural areas</b>	A 15MW PV programme covering 6,000 households and 1,000 public and private buildings
	Equipping 200 farms with PV water pumping systems for irrigation
	Providing electricity to 1,000 households and 100 farms using a combination of solar and wind energy
	Installing 0.5MW of PV capacity for street lighting
	Installing 100 PV systems at petrol stations

CSP=concentrated solar power; ISCC=integrated solar combined-cycle; PV=photovoltaic.  
Source: STEG

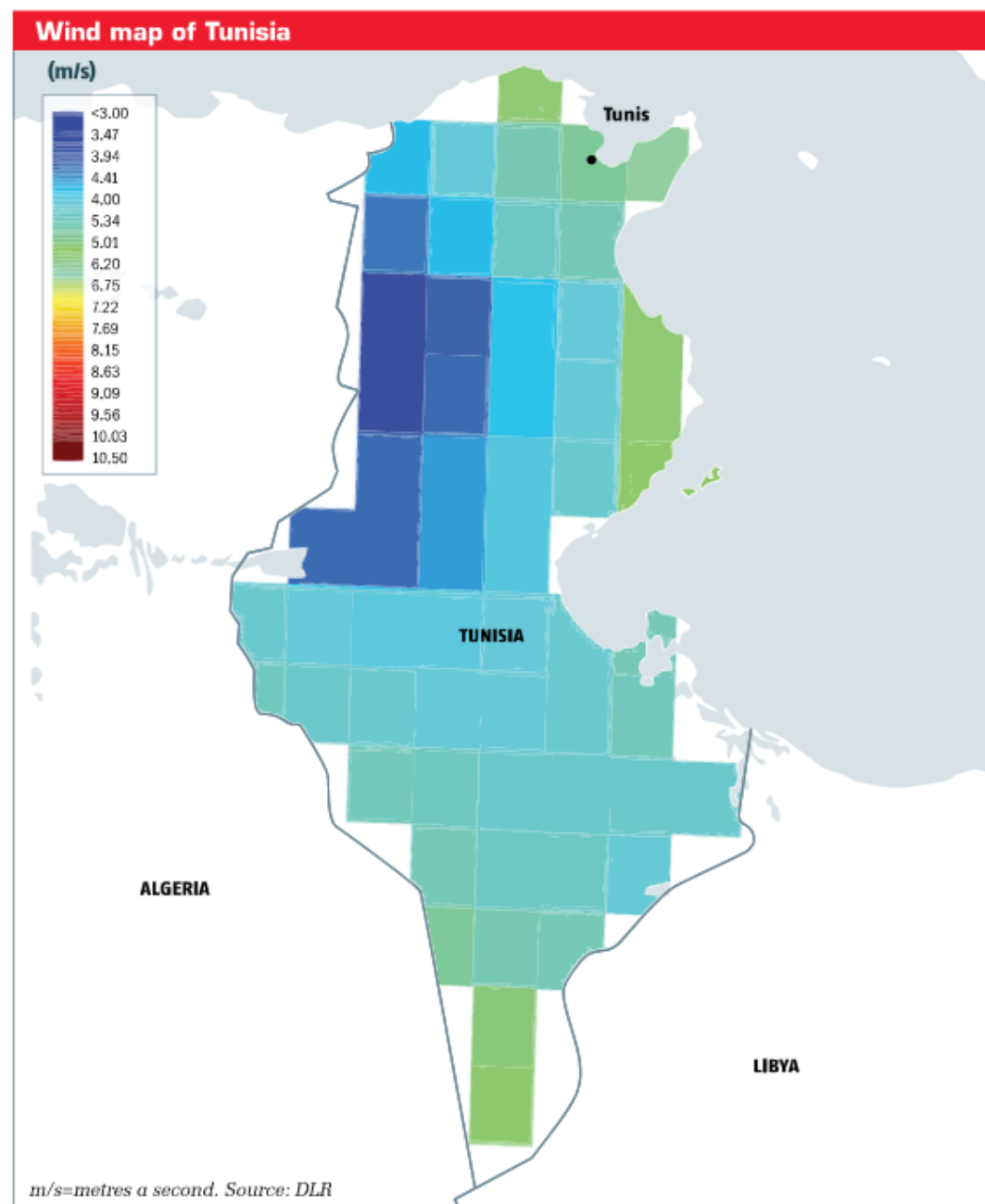
→ “Tunis plans to rapidly increase solar ... capacity over the coming two decades”

## Wind

Wind power has traditionally been the most active segment of the Tunisian renewable energy sector, although it still meets only a fraction of the country's electricity demand. Nevertheless, the development of wind power is the central pillar of the Tunisian Solar Plan, with the government aiming to increase wind power capacity to 505MW by 2016 and to 2,700MW by 2030.

A wind map of Tunisia was completed in 2009 by the Renewable Energy Centre of Spain (Cener) in collaboration with ANME, after a five-year wind measurement programme taking in 17 meteorological stations. The highest wind speeds in Tunisia are recorded in the north and northeast of the country where they can range between 7-10 metres a second. The region also benefits from easy access. The southeast of the country also has good wind speeds of 6-8 metres a second, although wind quality is poor.

In 2000, the country commissioned its first 10MW wind farm at Sidi Daoud on the Cap Bon northeast coast, comprising 32 turbines. A second phase, also of 10MW, was completed two years later and a third phase in 2008, which took overall site capacity up to 54MW. The wind energy sector will receive a significant boost in 2011 when two new wind farms, of 60MW each, are commissioned by STEG at Metline and Khabte in the



northern Bizerte region. A further 34.3MW is scheduled to be added to each site in September 2012. Once completed, wind power will account for almost 5 per cent of Tunisia's total power production.

The Tunisian Solar Plan sets out three main targets for the development of wind power. It calls for 189MW of capacity to be built by STEG, 100MW to be developed by the private sector, with output solely or partly intended for export, and 60MW of localised power generation to supply industrial users with high consumption. In addition, wind power will also be used together with solar generation for rural electrification schemes.

Although STEG has dominated the wind power sector so far, a series of privately backed projects are planned. According to Energy Ministry officials, six cement manufacturer Companies de Phosphate de Gafsa, propose to build a total of 60MW of wind farm capacity, with the first expected to come on stream at the Cimenterie d'Oum el-Khil near Tagerouine.

In 2009, Italy's Moncada Energy also announced its intention to build a 500MW wind farm in Tunisia and transport the generated electricity to Sicily via an undersea power link. However, little has been heard of the project since.



**Integrated solar combined-cycle projects existing, under construction and planned in the Mena region, September 2011**

