

Egypt – New Law to Boost Renewable Energies

by Dr. Kilian Bälz

By 2020, a total of 20% of Egypt's electricity shall be generated from renewable energy sources. The natural conditions in the country, without doubt, are favourable for this endeavour. Egypt is part of the North African "sun belt" and therefore an ideal location for solar plants (in particular using concentrated solar power technologies). In addition, the wind conditions on the western coast of the Red Sea are among the most favourable in the world. Nevertheless, the "2020 target" is ambitious, to say



Wind engines in Egypt

the least. In 2005, fossil energy sources accounted for as much as 86% of the Egyptian electricity generation (76% gas and 10% oil). Of the 14% non-fossil energy sources, large hydropower (normally not counted as a renewable energy source) accounts for most of the rest, with the Assuan High Dam playing a prominent role. The share of renewable energies in overall energy supply is as little as 0.2%.

In order to promote renewable energies, the Egyptian government set up the New and Renewable Energy Authority (NREA) in 1986. NREA has a broad mandate, which includes, in addition to technological research and policy promotion, the development and operation of renewable energy plants, thus effectively acting as a state-owned developer. With the pioneering 360 MW wind farms at Zafarana, NREA has played a major role in paving the way for the use of renewable energies in Egypt and the region. Irrespective of these achievements, the renewable energy potential remains by and large untapped and the ambitious targets cannot be achieved without an increased participation of the private sector. This, moreover, is expected to contribute to the development of a local renewable energy industry, what makes the promotion of renewable energies attractive from the perspective of economic development, too.

So far, the focus is on the development of wind energy, where, according to the Egyptian Supreme Council of Energy, a total of 7200 MW shall be installed until 2020. This translates into an amount to be invested in the range of EUR 10 billion. Implementation of the Mediterranean Solar Plan, one of the cornerstones of the Union for the Mediterranean proclaimed on 13th July 2008, may also substantially boost solar technologies.

The Draft Electricity Law 2009

The draft Electricity Law (EL), which was submitted to the Egyptian Council of State for review in January 2009, for the first time envisages specific incentives for the generation of electricity from renewable energy sources (Art. 45 to 50 EL). The lack of an

adequate regulatory framework has been identified as a key obstacle to an increased use of renewable energy sources in Egypt. In view hereof, the draft law, if enacted as drafted, will be a major step forward and, moreover, will set the pace for renewable energy regulation in the MENA region. The draft law defines the term "renewable energies" broadly to comprise all "non fossil energy sources which are used for electricity generation" (Art. 1 EL). In addition to conventional renewable energies (wind, solar, biomass, small hydropower) the wording of this definition also comprises large hydropower, what is rather unusual. Possibly, the broad definition was chosen intentionally, as otherwise the 2020 target would be over-ambitious.

The key provisions of the draft law relate to attracting the private sector to invest in the production of green electricity. Here, the draft law does not curtail NREA's role as public sector developer and operator of wind and solar plants. Nevertheless, the draft law provides specific incentives for private investors engaging in green production. Renewable energies, in the best case are "near commercial", what means, in economic terms, that even wind farms, which are based on a mature technology and benefit from excellent wind conditions at the Red Sea, depend on a financial support structure to attract private investors (be it a subsidy, tax benefit or price mechanism).

Incentive for Green Electricity

The key provisions of the draft law are the following:

- **Grid Connection:** The grid operator is obliged to connect renewable energy plants to the grid (Art. 46). Access to the grid infrastructure, thus, is guaranteed as a statutory right.

- **Competitive Bidding:** A competitive bidding procedure allows to award concessions for the construction and operation of renewable energy plants to private sector investors (Art. 45 (1) EL). The first tenders shall be launched in the second half of 2009. This mechanism primarily targets large scale wind projects (in the several hundred MW range) which shall be tendered on the international level. The tender model conforms to the regional practice, where, in the absence of a statutory feed in tariff, a long-term power purchase agreement (PPA) is awarded to a private investor and the revenue flow from this agreement is used as a basis for project lending (what also is referred to as "regulation by contract").

- **Feed in Tariff:** The grid operator may, subject to approval of the Cabinet of Ministers, set a feed in tariff for electricity generated from renewable energy sources (Art. 45 (2) EL). This mechanism targets smaller renewable energy plants (up to 50 MW), which are expected to be built and operated by local investors and where a tender process would be unduly burdensome. It is expected that a feed in tariff will be set as soon as the competitive bidding process has revealed some more information on adequate pricing levels.

- **RE Fund:** A fund for the promotion of electricity generation from renewable energy sources shall be established, which shall be financed from the government budget, other allocations and income from

investment (Art. 47 to 50 EL). The fund shall, inter alia, compensate the grid operator for the additional costs which arise from the purchase of green electricity from private producers at a price which is above the cost of electricity produced from conventional sources.

The draft law, for the first time, provides the basis for an incentive structure drawing on international best practices. Important details, however, such as the feed in tariffs, are left to the implementing rules. This will allow to take on board the experiences from the competitive bidding procedures that will also serve as a test case for investors' expectations regarding offtake conditions.

The Way Forward – Issues and Challenges

Although the draft law is an important step forward, many and important issues remain open. First, at the time of writing this article, it was uncertain when the Egyptian Parliament will pass the draft, albeit it seems unlikely that this will be the case before the fall session 2009. The Egyptian Ministry of Electricity nevertheless has announced that the first private financed wind farms with a total capacity of 250 MW shall be tendered before the end of 2009, possibly before the new law will enter into force. It however has been argued that the tender procedures can also be based on the existing BOT legislation, so that a delay in passing the law will not necessarily mean that the tendering procedure will altogether have to be postponed.

Second, and maybe more importantly, standards for private sector financed renewable energy projects need to be developed. Although there already are some private financed renewable projects in Egypt, mostly in the field of autoproduction, important issues such as the terms and conditions of land use, security rights and power purchase agreements need to be clarified. Egypt can build here on a rich tradition of project financing, in the oil and gas as well as the real estate sector. These practices and standards however need to be adapted to the peculiarities of renewable energy financing.

Third, in connection with the Mediterranean Solar Plan, one of the key areas of the Union for the Mediterranean, proclaimed on 13 July 2008 by the French President Sarkozy, envisages a large scale export of green electricity from the MENA countries to the EU. This, if implemented in the right way, may help MENA countries substantially in bridging the incremental costs which presently make the use of renewable energy sources more costly than their conventional counterparts. The new EU Renewable Energies Directive, as agreed by the European Parliament on 17 December 2008, in its Art. 9 for the first time outlines a respective regulatory framework. What will be needed for implementation, however, is an interconnection of grids around the Mediterranean as well as implementing rules on both sides.

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