

# Is Turkey's new renewables law the boost required

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The renewable energy regime in Turkey sparked in 2001 when the Electricity Market Law authorised the Energy Market Regulatory Authority (EMRA) to take the necessary measures to promote renewables. The Electricity Market Licensing Regulation followed in August 2002, which also set forth a number of pro-renewables provisions, and in 2005 specific legislation was enacted, in the form of the Renewable Energy Law. None of the legislation fully met the needs of renewable energy investors until now.

## New guaranteed price amounts

Turkeys new 2011 renewables law has increased the guaranteed price for the sale of electrical energy generated by Renewable Energy Resources (RER) certificate holders.

Before the 2011 law the guaranteed price was in the range of Eu0.05 to Eu0.055 per kWh for all types of renewable energy resources. The new minimum (price guarantee) amounts are more generous, especially for geothermal, solar and biomass:

### First 10 years of operation

	US dollar cents/kWh
Hydropower	7.3
Wind	7.3
Geothermal	10.5
Solar	13.3
Biomass (including landfill gas)	13.3

The Council of Ministers is authorised to determine the fixed guaranteed prices and the terms for renewable energy types that are not included in the table above: Note that the guaranteed prices before the new law were based on euro cents/kWh and are now based on US dollar cents/kWh.

The new prices are expected to apply only to power plants commissioned on or before 31 December 2015. The fixed guaranteed prices and the terms applicable for power plants to be commissioned subsequent to 31 December 2015 shall again be determined by the Council of Ministers, but such prices shall not exceed the above-stated prices.

## Domestic production incentive

In addition to the guaranteed prices, the new law includes a domestic production incentive for projects commissioned by

31 December 2015 that use mechanical and/or electromechanical components produced in Turkey. The level of additional incentives will depend on the share of domestically produced components used in the plant. The additional incentives will be available for 5 years from the date of commencement of commercial operation of the plant. Annexed to the new law is a chart stating, in detail, the incentive level for each type of component.

Like the price guarantees, the Council of Ministers is authorised to determine the domestic production incentives available for renewable plants commissioned subsequent to 31 December 2015. A regulation shall be issued by the Ministry of Energy and Natural Resources (MENR) regarding the procedures and principles for definition of the scope of domestic production, its standards, certification and related inspection procedures.

### **Parties subject to the Purchase Obligation**

Under the Renewable Energy Law 2005, retail sale license holders are subject to a purchase obligation. The new law, however, uses the expression suppliers that supply electricity to consumers instead of retail sale license holders. Since the Electricity Market Law defines the term supplier as covering cover generation companies, auto-producers, and auto-producer group companies and wholesale companies in addition to retail sellers, the new law may be interpreted as widening the scope of the entities subject to the purchase obligation, to the extent that they sell electricity to consumers, i.e., those users that purchase electricity for their own use.

### **New method for purchase arrangements**

Under the Renewable Energy Law 2005, retail sellers are obligated to purchase an amount of energy equal to a certain percentage of the electricity that they sold in the previous year from the entities holding an RER certificate. To perform this obligation, prior to the new law, retail sellers were required to sign bilateral energy purchase agreements with the RER certificate holders. The 2011 law, however, sets forth a new method for performance of the suppliers purchase obligation.

Rather than executing separate bilateral agreements for each sale transaction between a supplier and RER certificate holder, the purchase obligation is to be performed through a programme in which all suppliers subject to a purchase obligation and all willing RER certificate holders will participate.

Accordingly, the Market Financial Settlement Centre (MFSC) shall determine:

- (i) the total generation by each power plant included in this program for each invoice period and
- (ii) the price to be paid for each power plant. The sum of the prices determined for each power plant shall be determined and announced for each respective invoice period.

The purchase obligation ratio of each supplier shall be determined by MFSC by identifying the ratio of the amount of energy supplied to consumers by each of the suppliers for the same invoicing period to the total amount of energy supplied to all of the final consumers in Turkey. The amount corresponding to the share of each supplier shall then be calculated by multiplying the purchase obligation ratio of each supplier with the total price to be paid to the RER certificate holders. This shall then be notified to the parties and invoiced to the related supplier by MFSC. The price collected by MFSC shall be paid pro rata to the related RER certificate holders. Regulation on the principles and procedures of this implementation will be issued by EMRA.

The annual generation amount that will be included in the licenses of the electricity generation facilities shall be the maximum annual generation amount with respect to their current installed capacity according to their energy source. Existing licenses shall be amended accordingly, within three months of application by the relevant parties.

RER certificate holders are eligible to participate in this programme on an annual basis; i.e., once they participate they cannot terminate their participation during that year and participation in the program is allowed only at the beginning of each calendar year. However, RER certificate holders are not required to participate in the program. Those that do not wish to participate in the program may sell electricity to the liberal market and may sign bilateral energy sale/purchase agreements. In such cases, however, they would not be entitled to benefit from the purchase and price guarantee

incentives of the Renewable Energy Law 2005 as amended by the new 2011 law.

Inspections of the generation facilities under the Renewable Energy Law, and other facilities generating or distributing electricity, shall be executed by EMRA; or EMRA shall authorise an auditing company for such inspections, the costs of which shall be borne by the relevant facility. A regulation shall be issued by EMRA regarding the procedures and principles for the authorisation of such external auditors.

### **Other incentives under the new law**

The new law also brings the following incentives for renewable energy projects (holding an RER certificate is not a pre-requisite for benefiting from such incentives):

Entitlement to construct additional capacity on the condition that such additional capacity will be constructed within the area specified in their licenses; however, the power delivered to the transmission system shall not exceed the installed capacity stated in their licenses.

Priority shall be given to renewable energy projects when evaluating the connection requests of generation license applicants to the transmission system.

In the event that the forests and lands under private ownership of the Treasury, or under the disposal of the State, are utilised for the generation of electricity from renewable energy resources, such lands shall be leased to, or the right-of-way or usufruct rights thereof, shall be granted to the relevant entities. Before the New Law, the fees for the grants of such rights were discounted by 85% for the first 10 years of operation. The New Law maintains such period and such discount amount.

Renewable energy projects can be developed in national parks, natural parks, natural protection zones, protected forests, natural sites, etc. on the condition of receiving an affirmative opinion from the relevant Ministry or the relevant general directorate of protection, as the case may be.

For the establishment of usufruct rights over the Treasury and State owned lands, in general, the right holder was required to pay 1% of its revenues to the Treasury in addition to the usufruct fee. The New Law removes this 1% payment obligation for renewable energy projects.

EMRA shall issue a regulation regarding the procedures for application, permitting, inspection, technical and financial matters for renewable energy based generation facilities within the scope of Article 3(3) of the Electricity Market Law (i.e., renewable energy based generation facilities with a minimum established power of 500kW and micro cogeneration facilities exempt from the obligation to obtain a license and establish a special purpose company). Individuals and legal entities generating electricity within the scope of this Article shall benefit from the above stated guaranteed prices for 10 years if they generate more than their needs and transmit such excess to the system.

In contrast to many other jurisdictions, the New Law does not introduce any tax incentive for renewable energy power projects.

### **Participation in the programme for 2011**

All the implementing regulations mentioned above need to be issued within 3 months of the effectiveness of the New Law. Facilities willing to participate in the MFSC program for the year 2011 must obtain an RER certificate and apply to EMRA within 1 month following the issuance of such regulations. The list of RER certificate holders participating in the program in 2011 shall be announced by EMRA with-in one month following the receipt of all applications.

### **Amendments specific to solar energy**

The New Law stipulates the following provisions regarding solar energy based power plants:

Standards and testing methods which shall be used for inspections and procedures; and standards regarding the

inspection of solar and hybrid power plant generation amounts shall be determined by MENR via regulation to be issued.

The information regarding transformer centers and their connection capacities applicable for each year until 31 December 2015 shall be announced by EMRA at once within 6 months of the effectiveness of the New Law. The information regarding transformer centers and their connection capacities for the years following 31 December 2015 shall be determined and issued annually by MENR. The first determination (applicable for the year 2016) shall be made on 1 April 2014.

License applications for solar energy based power plants must be accompanied by appropriate, standard compatible, measurements.

If the owner of a site where the solar power plant shall be located applies for a license, another real or legal person cannot apply for a license regarding the same site.

In the event there is more than one solar application regarding the same area and/or same transformer center; in order to determine which applicant shall connect to the system, a competition shall be held by an underbidding procedure with respect to the prices set forth within the New Law.

The total established capacity of solar energy based power plants, connected to the transmission system until 31 December 2013, shall not exceed 600MW.

## Conclusions

Turkey has vast potential for renewable energy reportedly an annual biomass potential of approximately 32 mtoe, a gross annual hydroelectric potential of 433,000GWh (almost 1% of the total world potential), wind power potential of approximately 10,000MW, solar energy potential estimated at 26.4 million tonnes of oil equivalent (toe) (thermal) and 8.8 million toe (electricity), and geothermal potential of approximately 38,000MW.<sup>1</sup>

The promotion of renewable energy is also important for Turkey given its need to reduce dependence on energy imports, strengthen security of energy supply, diversify its energy portfolio, protect its environment, and keeping in line with developments in Europe, as well as creating job opportunities.

The new law was enacted to provide further investment incentives. However, the level of increase in the guaranteed offtake prices has been lower than expected by the market, especially given (according to current foreign exchange rates) the \$0.073 per kWh (applicable for wind and hydropower under the new law) is lower than the Eu0.055 per kWh guaranteed under the previous regime. The guaranteed price for solar energy is particularly criticised for being lower by almost half than what was expected by the industry. The stated maximum capacity limit of 600MW for the connection of solar energy based power plants to the transmission system until 31 December 2013 seems to be another shortcoming of the new law.

The increase in the guaranteed prices for other types of renewable energy sources and the other incentives are certainly positive steps. However, their impact in the market remains to be seen with the implementation of, in particular, the new purchase and price mechanisms along with the content and implementation of the secondary regulations to be enacted.

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## Footnote

#1 Balat, M., The Use of Renewable Energy Sources for Energy in Turkey and Potential Trends, Energy Exploration & Exploitation, August 2004, vol. 22, no. 4, pp. 241-257; Özgener, O., A Small Wind System (SWTS) Application and Its Performance Analysis, Energy Conversion and Management, 47, 1326-1337, 2006.

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