

Geothermal Energy Regulations and Incentives Under Turkish Law

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Introduction

Although the most suitable energy resources should be not only affordable and safe, but also environment-friendly and sustainable, use of unsustainable energy resources are widespread. Since unsustainable energy resources have several disadvantages such as being hazardous to environment and limited usage, renewable energy resources have become very important worldwide in recent decades. Consequently, most of the states have considered regulating the renewable energy field in such a way that will encourage investors for investing in this area and provide financial assistance. Among renewable energy resources, owing to the growing technological developments, geothermal energy has definitely got the potential to make the most significant contribution to such emerging necessity.

Geothermal energy can be briefly defined as literally the heat contained within the earth that generates geological phenomena on a planetary scale. Geothermal resources have three main components, namely (i) heat source, (ii) fluid carrying heat from the earth's crust to the surface, (iii) sufficient rock permeability to circulate thermal water.

What makes geothermal energy more preferable to other types including solar or wind energy is that it does not depend on or is affected by weather conditions or seasonal factors. However, it should be noted that the effectiveness and advantages of geothermal energy may be mitigated, whereby the suitable environment for geothermal energy is situated in a very deep distance from the earth' surface. Therefore, its competitiveness in the market is dependant on its cost level to the extent that it can be generated cheaper than the other resources such as crude oil or natural gas which their prices have raised dramatically.

The first use of geothermal energy resource for heating purpose in Turkey dates back to the central heating system of Gönen Park Otel in 1964., Although the utilization of geothermal energy has increased dramatically in Turkey since then, taking into account of Turkey's potential, the current usage is still far behind from the expected level.

Nevertheless, the government in Turkey has recently regulated the renewable energy including geothermal energy and has provided several incentives to encourage the market.

Legal Framework for Geothermal Energy in Turkey:

In Turkey, geothermal energy is separately regulated by the Act numbered 5686 (Jun 3rd, 2007). Law on Geothermal and Mineral Resources. ('Geothermal Energy Law') along with the Geothermal and Mineral Resources Law Implementation Regulation numbered 26727 ('Regulation').

The Geothermal Energy Law in Turkey regulates geothermal resources along with natural mineral water resources and geothermal-related gases in terms of the procedures of ownership rights, licences and their assignment or transfer.

Ownership:

According to the Article 4 of Geothermal Energy Law, the ownership of above-mentioned resources is deemed to belong to the government rather than to the property-owner where the resources are located. Any activity relating to the resources will be subject to obtaining the necessary licenses set out into the same law. The real persons having Turkish citizenship or legal entities, duly incorporated under the Turkish Law, are entitled to apply for the related licences.

There are two types of licences; namely prospecting licence and operating licence. The former enables its holder to carry out prospecting activities in a specific area based on the project; the latter enables its holder to produce the geothermal related-water, gas and steam and utilize them.

Prospecting Licence:

According to the Article 5 of Geothermal Energy Law and Article 6 and 7 of the Regulation, the applicant may apply to the Provincial Special Administration ('Administration') for the licence with the prospecting project, stating plate name and its coordinates drawn to a scale of 1/25000, provided however that it does not exceed 5000 acres. In case of more than one application for the same location, the first one will normally have priority over others. However, the Administration may give priority to another project with a more suitable proposal, in the event that there is more than one application at the same time.

The duration of prospecting licence is three (3) years, commencing as of the date of the registration of the licence and may be extended up to one (1) year with the consent of the Administration on the condition that the revised project is satisfactory to the Administration. As long as the activities are not hazardous to the environment; the production may be operated with a trial purpose during the licence term.

Operating Licence:

Under the Article 6 of Geothermal Energy Law and Article 9 of the Regulation, the prospecting licence holder may apply with a project to the Administration for an operating licence until the expiration date of prospecting licence. The holder must specify a deadline to initiate the operation. The failure in starting the operation before the specified term will give rise to the cancellation of the licences and the guarantee deposited will be recorded as revenue by the state. The licence holder cannot make any amendment with regard to the project without the consent of the Administration. The licence duration is thirty (30) years, commencing as of the date of the registration of the licence and may be extended up to ten (10) year periods. After receiving the operating licence, the holder should obtain other required permits, including the Environment Assessment Report within three (3) months; otherwise the licence may be cancelled.

As per the Article 10 of the Regulation, the operation must be conducted under the supervision of an engineer from a related field as a technical responsible person. In the absence of such engineer during the operation, the amount deposited as a guarantee will be deemed to be recorded as revenue by the state and the operation must be halted in turn. Moreover, the technical responsible person must prepare operating and prospecting report to be annually submitted to the Administration until the end of March of the following year. In case of failure in submitting the report in due time, the amount deposited as a guarantee will be again deemed to be recorded as revenue by the state, yet the extension for the submission will be granted, provided that the doubled amount as a guarantee must be deposited. Otherwise, the operating licence may be cancelled. Furthermore, all activities regarding to licences are also annually monitored by the Administration. If the licence holder does not meet the criteria under the related law, the licence may be halted or even cancelled.

Assignment, Transfer upon Inheritance, Nationalisation and Easement

It is included in the Article 14 of Regulation that both the operating and prospecting licences can be assigned. In order to track the record relating to the assignment, mortgage, lien and any encumbrance, the Administration is required to have a registry mechanism in place under the Article 10-b of Geothermal Energy Law.

According to the Article 15 of the Regulation, obligations and rights as a whole are transferred to inheritors, and cannot be divided into parts without their consents. In the case of a dispute among inheritors, the issue may be resolved by the court, whereby the licence may be sold via tender.

If the prospecting activity requires the licence holder to access to a private property, the required permission may be obtained from the owner. If the owner withholds his consent, the holder may apply to the Administration for easement or nationalisation, whichever is necessary and such application must be determined within three months.

Incentives:

Article 26 of the Regulation explains the requirements for the entitlement to some specific incentives. If a company distributes or produces geothermal resources, it may be regarded as an industrial enterprise or a waste treatment enterprise and subsequently it may be granted a geothermal resource distribution or production certificate. The mentioned companies with these certificates are able to apply for any incentives including reduced electricity tariffs and rights which are peculiar to industrial or waste treatment enterprises. However, the validity of the certificate is dependant upon the existence of the operating licence, meaning that the cancellation of the latter results in invalidity of the former.

There are also other incentives regulated by the statutes other than Geothermal Energy Law. According to the Article 7 of the Law numbered 5346 regarding the Usage of Renewable Energy Resources for the Purpose of Electricity, any legal entity or real person, which uses geothermal resources in order to meet its specific amount of electricity needs, may be exempted from the service fee of particular plan and projects prepared by the Administration. Furthermore, as per the Article 8, the law indicates that fees of easement, lease and permission to use will be deducted in proportion of 85% within the first ten-year period for any property or land belonging to the use of government, provided however that the transactions which are the subject matter of the deduction must take place before 31st March 2012.

It must be also noted that according to the Article 7 of the law numbered 5346 if there is sufficient geothermal energy resource within the territory of a governorship and municipal borough, the priority in heating of domiciles will be given to the use of geothermal energy..

In conclusion, the usage of geothermal energy will probably become more common in Turkey for different purposes. . It can be used with the aim of generating energy which requires high level energy (more than 120 C in 2-3 km deep) or heating which requires low level temperature (less than 100 C in 4-5 km deep). Areas with volcanic activities are the most suitable places to obtain high temperature with low cost and Turkey is regarded as one of them, in addition to Iceland, Italy and Greece in Europe. However, it should be noted that in order to reach higher temperature, there is a necessity of deep drilling thereby being more expensive and reducing its competitiveness. As a result, considerable investment is needed to reduce the cost of production and to increase the competitiveness, whereby the government can encourage investors with some specific incentives.