

## LEGALIZATION ADMINISTRATION OF DEVELOPMENT AND UTILIZATION OF GEOTHERMAL RESOURCES IN CHINA

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### ABSTRACT

This paper expounds the necessity of scientific legalization administration of geothermal resources development and utilization. The process of establishment and adjustment of relevant laws concerned geothermal resources development is reviewed. Some concerned geothermal rules and regulations issued from state or locality before. It is necessary to issue a unified national geothermal law, in order to propel a legalization administration for the development and utilization of geothermal resources.

**Keywords:** geothermal resources, development, utilization, administration, law, standard

### 1. NECESSITY OF EXPLOITING GEOTHERMAL RESOURCES BY LAW

There are abundant geothermal resources in China. They are widely used in power generation, space heating, industrial use, medical treatment, bathing, tourism, agricultural greenhouse planting and aquaculture breeding, mineral water bottling and irrigation etc. aspects. In recent years, the annual used energy for geothermal direct use has an increasing speed of 10%. In 2005 it reached 10,779 GWh. This is the first place in the world. Geothermal development and utilization in China has obvious achievement focusing people's attention upon. Geothermal development has gained better social and economical benefits, but some new problems have exposed in present market economy system. It disrupts the order of the market and the sustainable utilization of resources. The main problem is as following:

- 1) The administration system is not so smooth. The duty is not so clear in some areas.
- 2) The technique level of geothermal resources exploration and assessment is disequilibrium within the country. In somewhere the resources assessment lags behind the resources utilization.
- 3) Laws, rules and regulations do not match well.
- 4) The national geothermal investment is short. So the ability of research and development is insufficient. The technical level is lower. The efficiency of comprehensive utilization is lower.
- 5) The master plan and scientific exploitation scheme are imperfect in some areas. It leads to the reservoir pressure decrease and subsidence etc. environmental problems.
- 6) Some users or persons exploit geothermal resources without license. The geothermal market competition is irregular in some areas.

Geothermal resources are valuable mineral resources which integrated with heat, mineral and water together. If do not have restriction from laws and regulations, it would be no possible for scientific administration of geothermal market and effective protection of geothermal resources. The establishment of geothermal laws and regulations is necessary to fit with the growth of geothermal development. It depends on the basis of geothermal economy growth, but also serves the geothermal economy growth. We need pass through legislation to regularize the whole process of geothermal development, to rise up the level of geothermal administration, in order to fit with a rapid growth of geothermal market and satisfy the demand of sustainable development of geothermal resources.

### 2. LAWS AND ADJUSTMENT FOR ADMINISTRATION OF GEOTHERMAL & MINERAL SPRINGS

The confusion of administration is caused due to different knowledge to the property of geothermal resources. Even now, some provinces, cities or departments put geothermal and mineral spring into the administration of "The Law of Water", due to a deviation of knowledge or economic interests. The geothermal administration agencies belong to different departments, such as land & resources, water conservancy, urban construction, city planning or public utilizes etc., in different provinces and cities. This causes multi-administration, duty not clear, disputing over trifles, confused implementing and so on phenomena. Some events have resulted in lawsuit. Therefore, the Fujian, Tianjin, Liaoning and Hebei four local governments specially asked for instructions from the State Council respectively. As a result, the Legality Bureau of the State Council issued a document to the Ministry of Land and Resources and other concerned departments. It explains that the geothermal resource and mineral spring belong to mineral resources. Their exploration, development, utilization, protection and administration are suitable to apply "The Law of Mineral Resources" and its a "Implementing Detailed Rules". Their administration belongs to the system of Ministry of Land and Resources.

### 3. GEOTHERMAL SCIENTIFIC ADMINISTRATION AND CONCERNED RULES AND REGULATIONS

The legislation is the basis for energizing geothermal scientific administration. It is also the objective demand for keeping the order of geothermal administration and ensuring a sustainable geothermal development. It is unique when established a complete political legality system then there would be sufficient legal basis and political dependence for geothermal resources protection. In order to get a healthy growth of geothermal resources exploration, development and utilization, we have to energize scientific administration from government. Since later 1980s many provinces, cities and autonomous regions have established geothermal administration agencies progressively.

Geothermal administration is a governmental administration agency which owns administrative and legality rights and geothermal professional ability. Their main duties are:

- Organizing geothermal resources exploration;
- Drawing up the geothermal development plan;
- Approving new well drilling;
- Monitoring and controlling the application of existing geothermal wells;
- Checking and deciding the yield of exploitation for each user;
- Issuing the exploiting license for each user;
- Put on record for the reviewed geothermal reserves;
- Collecting the compensation fee for geothermal resources.

Accompanying with the establishment of geothermal administration agency, corresponding local rules and regulations were issued in these provinces, cities and autonomous regions. They are Beijing, Tianjin, Hebei, Jilin, Shaanxi, Xi'an, Fuzhou, Inner Mongolia, Dandong, Liaoyang, Liaoning, Hebi, Handan and Yinchuan etc. provinces and cities. These rules and regulations have displayed important function for local geothermal administration.

However, the legislation needs a process for continuous improvement from locality to the state. Some local rules and regulations are still "temporary" version at present. So it needs time to unify all local rules and regulations to establish a national geothermal law, in order to be suitable for overall the country.

### 4. LEGALIZATION ADMINISTRATION OF GEOTHERMAL DEVELOPMENT

During the eleventh five-years-plan we are facing new challenge. In order to ensure a well implementation of geothermal administration, we have to accelerate the legislation of geothermal law, and implement the legalization administration.

The main target of the geothermal administration is to apply national policies and follow geothermal characteristics and regulations for sustainable development. The main function of the geothermal administration is government's macroscopic regulating and controlling, and coordination and matching between higher and lower levels.

The legalization administration has to grasp three important nodes: transparency and fairness, proper policy decision and civilized implementation. "The Law of Renewable Energy" of PRC has been stated to implement on January 1<sup>st</sup>, 2006. Geothermal workers should work hard to draw up scientifically a plan for geothermal exploration and utilization, to abide by geothermal rules and regulations seriously, and to promote a real sustainable development for geothermal resources.

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