



Supervisory Framework of China

Electric Power Universal Service

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Abstract

The industry of electric power possesses obvious character of semi-public goods, which may induce market failure. In order to ensure basic living uses needed by residents especially for those residents living in rural poor, remote and border areas, the industry of electric power can not completely depend on market mechanism to resolve, and as the necessary in modern society, the electric power possesses the nature of universal service, and the government should actualize the aim of electric power universal service and implement the responsibilities as a supervisor. It is the necessary premise to confirm the aim and tasks of supervision for the implementation of governmental supervisory responsibilities, and this article mainly analyzes the basic supervisory framework of electric power universal service.

Keywords: Electric power universal service, Supervisory aim, Supervisory framework, Governmental supervisory responsibility

The industry of electric power possesses obvious characters of network, natural monopolization and semi-public goods, and all these factors may induce market failure. In order to ensure basic living uses needed by residents especially for those residents living in rural poor, remote and border areas, the industry of electric power can not completely depend on market mechanism to resolve, and as the necessary in modern society, the electric power possesses the nature of universal service, and the government should actualize the aim of electric power universal service and implement the responsibilities as a policy constitutor and a supervisor.

1. Electric power universal service and its supervisory aim

Most countries in the world definite the total aim of electric power universal service as providing reliable electric power with reasonable price and fulfilling the electric requirements of civilians who can not use electric power or can not afford electric power. Referring to relative the theory and practice of universal service, combining with Chinese actual situations, we define the electric power universal service as offering and fulfilling civil basic living use requirements of the whole society with price which can be universally accepted. As viewed from experiences of other international and domestic industries, with continual developments and improvements of relative technologies and operations, correspondingly the concrete contents and aim of universal service also are continually evolved. At present, the economic development levels and electric power development levels in various regions of China have biggish differences and the requirements of different groups are very different, so the aim of electric power universal service in China should be gradually actualized by region, phase and layer. How does the rural electric power social universal service of China establish its aim? First, the universal service should adapt to the national condition and power. Second, the universal service should adapt to the development of electric power. Third, the universal service should fulfill the actual demands and likelihood of various areas without electric power. The constituted aim should consider actuality as well as development and regional nature. So we should constitute reasonable and actual phase aim according to the development level of different regions. The aim should embody the principles of equitableness, universalism and care. Concretely speaking, first, the qualitative aim should be established, for example, how many households without electric power can use power in certain phase, how the quality requirement of power use service

(such as aims of “three publicities” and “four to household”) can be solved, and how the equitableness of electric price (same network and same price in city and village) can be completed. Second, the quantitative aims (lifeline electric consumption and electric price level) should be established. Third, according to the international recognized special objects of universal service, the normal objects of electric power social universal service in China should include the following groups such as handicapped, unemployed personnel, retirees over certain ages, undeveloped areas of minority, family with low income, household enjoying the five guarantees, revolutionary martyr’s family, compulsory education institution in undeveloped areas and nonprofit medical organizations, and the favor service or benefit of electric charge even decrease to some extent should be adopted according to different situations and different objects.

The supervisory aim of electric power universal service is to gradually actualize electric power universal service in China, put the aim of electric power universal service into effect and ensure the equitableness of the supply of electric power universal service. The implemental process of electric power universal service is a mutual process of social public, government and various direct providers, which includes four parts such as the expression of social demands and willing, governmental decision-making and organizational arrangement, the front line service to social members offered by direct providers, and the accountability system of public service. As viewed from the domestic and international experiences, the public service process operating well should possess the following characters: publicity, clarity, social participation, high efficiency, convenience, timing, acquirability, justice, impartiality, equality, manners, benefiting weak and poor groups and accountability, which requests the government not only ensures the accomplishment of supervisory aim but also ensure the equitableness and clarity of the process in the supervisory process of electric power universal service.

2. Supervisory tasks of electric power universal service

Through policies and supervisions constituted by the government, the aim of electric power universal service can be put into effect, the equalization of electric power universal service can be realized, and the residents’ supply of basic living use can be ensured. Concretely speaking, the supervisory tasks of electric power universal service can be put into effect mainly surrounding three aspects including quantity, quality, financing and capital use of electric power universal service.

For quantity, according to research results, the lowest aim of electric power universal service is to ensure the lowest standard that every household has 10 kilowatt-hour of monthly average electric power consumption in the whole China. Furthermore, considering the actuality and developmental foreground of China, this group detailedly enacts the objects and concrete standards of electric power universal service. And the objects of electric power universal service include three groups such as town low income, rural areas and jumping-off, and the basic standards are respectively enacted under the basic life condition and well-off life condition according to actual institutions.

For quality, the power supply reliability and security of all residents should be ensured, the quality of power supply service should be enhanced, the yearly MTTF of all rural residents can be increased possibly, and the MTTR of power supply service can be reduced possibly. The electric power universal service should pursue cheap in price. The demand and supply relationship between power supply network and consumers is usually in the institution of absolute monopolization, which is decided by the character of grid scale economy, so the rigidity between power use demand of consumers and price is very strong. In order to protect consumers’ benefits, the grid company should try to make the sales price of electric power possible cheap and the supervisory department of electric power should supervise the costs of the grid companies and restrict their excess profits.

For the financing and use of capital, we advise that the funds of electric power social universal service should be collected, China National Grid and China Southern Power Grid implement the social universal service of electric power, the capital resources and investment payment of funds are managed by four Chinese national banks or policy banks, the Chinese Financial Ministry manages the approving, providing and authorization of capital use, the Electric Power Supervisory Committee is responsible for the comprehensive supervision which includes the auditing and supervision of fund use plan, final yearly financial accounts and project financial accounts for electric power social universal service of China National Grid and China Southern Power Grid, fully guaranteeing special funds for special use and transparent use, and finally making the aim of electric power social universal service put into effect.

3. Governmental responsibilities in the supervision of electric power universal service

The universal service of electric power includes three principal parts on different layer. The first one includes the central government and national supervisory management department of electric power, and the second one includes power supply enterprise and relative generate electricity enterprise of renewable energy, and third one includes the objects of electric power universal service. The basic frame of whole electric power universal service system arrangement should be a sort of triangular relationship, where the first party includes suppliers and demanders of electric power universal service, i. e. the providers and consumers of electric power universal service, and the second party includes the governments which offer supervision and management for the electric power universal service.

In the supply of electric power universal service, the government should play the role of supervisor well, which relatives to whether the aim of electric power universal service can be actualized and is one core problems whether China electric power universal service succeed. In order to ensure the offer of electric power universal service, the government must carry out

following responsibilities in the supervision.

3.1 Establishing measurable standards of electric power universal service

The concrete measurable standards include three layers. The first is the covering degree and range of electric power service which mainly means the covering areas of electric grid network and the country areas that the power supply enterprises can benefit, and this index has biggish limitation because in some areas of China West the living use of rural residents can not be actualized through electric network, and it only can be realized by utilizing local advantages of geographical environment and natural resource such as developing small-sized water and electricity and sun energy. The second is the connecting degree of rural communities. To a developing country such as China, the economy is not strong enough, the country areas are large, the geographical conditions are complete, so it is unpractical to make electric grid network cover every place. The proper index is the generalized electric power service, and its measurable index is the regional proportions that the electric power can achieve, such as the power connecting rate of town, village and natural village, and the aim of “Village to Village” provided before in the electric power universal service of China. The third is the household power use rate of rural resident, and this index means the proportion of households which obtain the electric power service. It includes two meanings, the first one is to realize living power through electric network, and the second one is to obtain living power supply by renewable energy and the every household power connected is established on the base of outspread electric network but in the villages without power of rural areas in China West, because of bad geographical environment and quite expensive power line costs, its social costs are very huge and the social effects are not perfect. Therefore, the household power connecting rate doesn't adapt to Chinese actuality and situation. If we use this index to measure the level of electric power universal service in China, the result will induce misguidance, and even biggish social costs may be difficult to realize the aim provided by the government finally. Household power use rate can scientifically, objectively and completely reflects the level of rural electric power social universal service, and has strong practical operation in the future phase. The confirmation of service standards for rural electric power social universal service should be constituted according to the differences of various areas, and dynamically adjusted with the development of country economy and the enhancements of living level of rural residents.

3.2 Confirming implementary principal parts of electric power universal service

The international universal methods to confirm the entity of universal service include three sorts. The first one is that the market with sufficient competitions assumed by all power supply enterprises together. The second one is that the entity is assumed by an appointed manager or operator which achieves certain market power level in the market mode dominated by operator. The third one is that the entity is confirmed through public bidding to make both demander and supplier achieve balance. Combining the actuality of China, the present method which should be adopted is assumed by all power supply enterprise together and the concrete projects should adopt public bidding to confirm.

3.3 Confirming the status of principal part for the government in the supply of electric power universal service

Experts universally thought that the principal status of the government in universal service is mainly embodied in three aspects, i.e. the government plays the direct supplier, coadjutant and supervisor of universal service. Concretely speaking, the government can exert following basic functions in the universal service supply. The first is to establish universal service policy. The government should constitute public service policy from the view of consumer but not supplier. The second is to supervise the production and supply of universal service. The third is payment. The government ensures and actualizes the equalization of basic universal service through “payment”. The fourth is to directly produce and offer universal service. For social universal service of rural electric power, the former items are indispensable.

3.4 Setting up the fund of universal service

The power supply enterprises after “Government and Enterprise Separation” and “Factory and Web Separation” are the power supply operators forced to push into competitive market. Business is business, so these enterprises cannot but take the maximization of benefit as their aim, and they can not offer universal service for undeveloped areas and disadvantaged groups in spite of enterprise benefits in this mechanism. So the special funds of electric power social universal service must be set up to compensate the power supply operators which offer favor services for undeveloped areas and disadvantaged groups. The universal service funds must be assumed by all electric power enterprises together including electric generation enterprises, electric transmission enterprises and power supply enterprises. On the one hand, the universal service funds are the bases to realize fair and effective competitions for electric power enterprises. The power supply service developed in undeveloped areas and disadvantaged groups possesses the characters of more investments and less outputs, and any enterprise in competitive market may not implement these investments and can not actualize social universal service of electric power. Therefore, all electric power enterprises should try to offer universal services for undeveloped areas and disadvantaged groups, and the universal service funds should be set up and compensate the power supply operators which offer universal service for undeveloped areas and disadvantaged groups to embody the equitableness of competition. On the other hand, the establishment of the universal service funds is the necessary requirements to carry through the spirit of Sixteenth CPC Congress and build a well-off society. The power supply for undeveloped areas and disadvantaged groups is the basic conditions to build a well-off society, so the enterprises which offer power supply

services for developed areas and disadvantaged groups should be compensated to ensure the power use demand of disadvantaged groups.

3.5 Establishing the management institution of universal service

In order to fully ensure the high efficiency and safety of operation of electric power social universal service funds, the basic premise is to set up equitable, stable and authoritative universal service management institution. According to foreign experiences, we can adopt various forms to establish management institution of universal service, and the institution can not only be charged and implemented by governmental professional management department, but also be consign to nonprofit professional companies or independent management institutions. Because of Chinese complex situations, we can consider the method combining various modes. And the total principals should ensure that the supervisory works should be operated by means of standardization and vitrification under public supervision.

3.6 Transforming governmental functions and conceptions and establishing relative perfect laws and rules

The universal service of electric power is a concrete measure for the government to reduce the gap between the rich and the poor and realize the aim of equitable development, which possesses vivid character of public service. The main responsibilities and core functions of modern government are to offer universal services such as electric power according to public demands, which also is the principle that the government must follow to actualize better administration. Fully considering the complex characters of rural society in China, the actual transformation of governmental function must strengthen the governmental function of social public service.

In order to effectively guarantee the aim of electric power universal service, the government must realize sustainable development by means of laws and principles of justice and efficiency. The practice of electric power universal service in China began lately, at present there has no a set of complete law policy, which directly influences the development of electric power universal service work. Therefore, in the present phase the relative laws and regulations should be urgently constituted.

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