



Negative Effects of Antimonopoly Regulation on the Russian Electric Power Industry

Elena NEPRINTSEVA*, Stanislav SHUBIN**

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ABSTRACT

With the antimonopoly regulation in the domestic economy getting more stringent an analysis of the current measures of antimonopoly regulation in terms of their efficiency is now becoming ever more relevant. The aim of the study - analyze how the measures of antimonopoly regulation affect competitive relationships in the electric power industry. The following methods have been used in this work: empirical method, cause-effect method and scientific abstraction method. The article sets out an analysis of the antimonopoly regulation measures that the antimonopoly authority applies. It also provides an assessment of consequences that follow from such methods being applied for the promotion of competitive relationships on the market of electric power and capacity. A conclusion has been reached that the antimonopoly regulation measures being applied impede the progress of competitive relationships on the market of electric power and capacity. The continuing process of reformation in electric power industry aims to liberalize relationships in the area of electric power production. Yet, as a result of this process, generating capacities are becoming increasingly more concentrated mainly around state companies. This is mainly caused by the lack of certainty regarding the results of the industry reformation and a more stringent state regulation over the last years of the reforms. At the same time, for the purposes of limiting the market force, measures of antimonopoly regulation are being applied to generating companies. Such measures have an adverse effect on competitive relationships and stimulate further concentration.

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1. Introduction

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2. Principal measures of antimonopoly regulation in the electric power industry

In accordance with article 25 of Federal Law No. 35-FZ dated 26 March 2003 "On electric power industry" (the Electric Power Industry Law) the antimonopoly authority may apply, in relation to the wholesale market participants, including those that have a power to manipulate (according to the Electric

* Moscow State University of Technology "STANKIN", Russia,** Analysis and Markets Development Department of Association "Council of Power Producers", Russia. E-mail addresses: elvin-a@list.ru, (E. Neprintseva), shubin_stanislav@list.ru (S. Shubin)

Power Industry Law to manipulate means to perform economically or technologically unjustified actions, including with the use of dominant position, that result in a significant change of prices on electric power and/or capacity) the following measures of regulation as determined by the Russian Government:

- ✚ *state regulation of prices (tariffs);*
- ✚ *limitation of prices in price applications;*
- ✚ *introduction of limitations in the form of a condition that only price-accepting applications may be filed (a price application that reflects the participant's intention to sell the specified volume of electric power at any price, which may be formed as a result of a competitive procedure. If the volume of price-accepting applications is greater than the volume of electric power or capacity in demand, zero prices are formed on the market);*
- ✚ *the obligation to provide the maximum volume of electric power and capacity.*

Clause 8 of the Rules of Antimonopoly Regulation and Control in electric power industry approved by Resolution No. 1164 of the Government of the Russian Federation dated 17 December 2013 (the Rules of Antimonopoly Control) lays down that the antimonopoly authority, after analysing the state of competition on a commodity market, may introduce additional requirements to price applications for capacity, such requirements including:

- ✚ *that the same prices should be specified in price applications filed by groups of persons within the limits of free transfer to the competitive capacity auction;*
- ✚ *that a price application for selling the supplier's capacity should specify prices that are not greater than the price calculated under the method of checking whether price applications for selling capacity conform to feasibility requirements;*
- ✚ *that the volumes of electric power (capacity) for which price-accepting applications are filed should be established.*

In accordance with clause 13 of the Rules of Antimonopoly Control, after examining petitions requesting the federal antimonopoly authority to determine the conditions of participating in a competitive capacity auction, the above authority may issue a decision or an instruction setting out conditions or limitations with regard to participating in a competitive capacity auction:

- ✚ *that the same prices must be specified in applications of a group of persons within the limits of the free transfer zone;*
- ✚ *that a price application for selling the supplier's capacity should specify prices that are not greater than the price calculated by the federal antimonopoly authority under the method of checking whether price applications for selling capacity conform to feasibility requirements.*

3. Procedure for applying measures of antimonopoly regulation

The Rules of Antimonopoly Control and the Wholesale Market Rules do not contain either an exhaustive list of grounds for taking decisions to apply antimonopoly regulation measures or a procedure for introducing and ceasing to apply such measures.

Owing to the lack of regulation the antimonopoly authority has wide discretionary powers regarding this issue. It allows for various decisions to be taken under comparable conditions on whether or not to apply measures of antimonopoly regulation, as well as to apply various requirements to business entities operating under comparable conditions.

A serious problem that complicates to a large extent the activity of generating companies in the examined conditions of antimonopoly regulation is the fact that the antimonopoly authority does not have an obligation to hold a high-quality analysis of the market structure and competitive relationships of business entities operating on it to confirm that it is necessary to apply the selected measures of antimonopoly regulation and to justify them.

The above gaps in the practice of applying the measures of antimonopoly regulation give rise to excessive risks for companies operating in electric power industry, such risks connected with administrative and financial burden being imposed on them.

It is notable that, under article 25 of the Electric Power Industry Law, the antimonopoly authority may apply measures of antimonopoly regulation in relation to entities that have market power (an opportunity to manipulate prices), but do not make use of it. Bearing in mind that certain measures of antimonopoly regulation may be regarded as sanctions, the antimonopoly authority is essentially empowered to punish an entity operating on the wholesale market before it violates antimonopoly legislation.

4. The practice of applying the measures of antimonopoly regulation on the electric power market

On 15 March 2011, when approving the acquisition of generating units the Russian Federal Antimonopoly Service issued an instruction to PJSC Inter RAO UES stating that, in relation to each generating entity (station) located within the territory of the First Price Zone (Europe and the Urals, an equivalent of geographical borders on the electric power market), the company must, among other things:

- ✚ *submit price-accepting applications for the volume of electric power production no less than 70% of the relevant volume of maximum (operating) capacity of the generating entity;*

✚ when forming price applications take account of the weighted average price of fuel used for generating electric power and capacity on the relevant generating equipment.

We will examine each of the above restrictions.

1. The instruction to increase the price-accepting volume in price applications submitted on the electric power market has led to an artificial exclusion of a number of generating companies from price competition owing to the fact that none of the stations (even the most efficient one) cannot compete with the price-accepting volume.

The reduction of demand to a level below Q_2 (Figure 1) leads to the formation of zero prices and to negative cash flow being created for both the generating company in relation to which the instruction has been issued and the entire market.

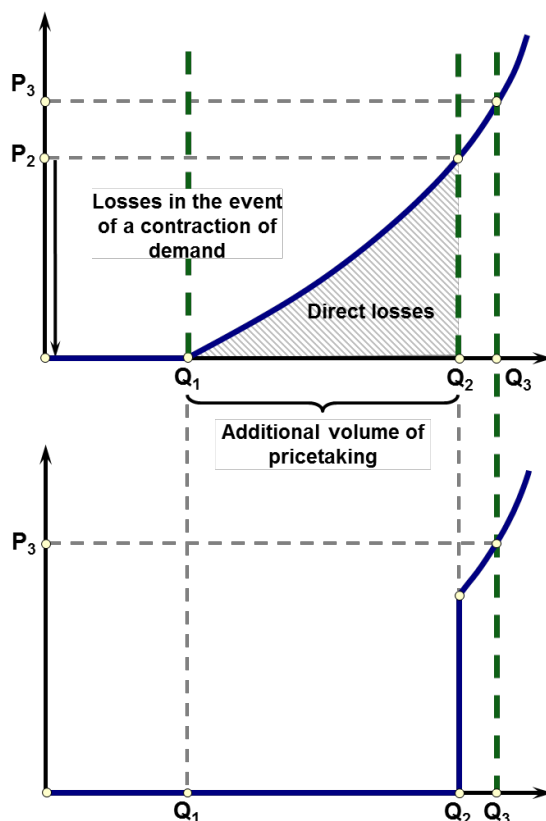


Figure 1. Consequences of the instruction to increase the price-accepting volumes

Source: Shubin, 2013

On 29 October 2012, under the influence of the market community, the antimonopoly authority decided to cancel the above instruction, but the mere fact that it was issued shows the hit-or-miss quality of the antimonopoly regulation. In addition, this measure of antimonopoly regulation is preserved in the Electric Power Industry Law, and there is no guarantee that generating companies will not face it in the future.

2. The instruction of the Russian Federal Antimonopoly Service to file price applications for selling electric power at the average weighted value of the fuel being used.

The pricing on the wholesale electric power market is based on the market mechanism of supply and demand interaction. The electric power supply curve is formed based on marginal production costs and the demand curve is formed based on the consumers' price applications. This predetermines that a price cannot be formed at a level above the demand curve.

As a result, the market purchases, in the first place, the volumes of electric power that are generated with minimal marginal costs, i.e. in heat extraction mode (which is a combined production of heat and electric power). For instance, for a T-180 turbine operating in heat extraction mode the fuel consumption rate is 240 grams of reference fuel / KWh.

After that, market participants purchase the volumes of electric power generated in condensing mode (where only electric power is produced), for instance, on a condensing turbine K-300 with the fuel consumption rate of 310 grams of reference fuel / KWh. At the end point of the supply curve are the volumes of electric power produced in the least efficient way with additional condensation loading of T-180 turbine and a fuel consumption rate of 350 grams of reference fuel / KWh.

As a result, if applications are filed based on the average weighted value of the fuel being used, this may lead to stations being loaded in non-optimal ways. If the heat extraction and condensation production costs are averaged, the fuel consumption rate for a T-180 turbine during the period of autumn and winter

loads will amount to 260 grams of reference fuel / KWh. As a result, the primary loading will fall on the condensation volumes of the T-180 turbine with the K-300 turbine, which is more efficient in condensing mode, being substituted for.

This effect leads to the loading of combined heat and power plants in the condensing mode being increased and the loading of regional power stations being reduced in the same way. As a result of such change there will be an increase of aggregate expenses on fuel used for generating the same volume of electric power and, as a consequence, the energy intensity of economy will also grow.

In addition, the competitive relationship between combined heat and power plants will be affected: instead of competing in efficiency of their operation in the principal (i.e., heat extraction) mode, stations will compete in efficiency of average expenses on operating in heat extraction and condensing modes. At the same time, it is sufficient to have lower volumes of production in condensing mode, fewer (or no) restrictions in terms of gas supply or a lower volume of production on a more expensive type of fuel (for instance, on fuel oil) and a station, which is less efficient in terms of its costs in heat extraction mode, becomes more efficient in terms of its average expenses.

A similar situation will be seen in competitive relationships between regional power stations: the averaging of the fuel price will lead to less efficient stations that are under no restrictions in terms of gas supply will be loaded in the first place, including for the volumes of fuel oil.

The main argument that the antimonopoly authority puts forward to support its decisions consists in the following question: why must the consumer pay the price formed by the fuel oil "tail"? As a result, the fuel oil "tail" will form the marginal price for the entire market, while the volume of electric power attributable to such "tail" is rather low (this point was formulated by Anatoly Golomolzin, deputy head of Russia's Federal Antimonopoly Service, at the meeting of the Expert Council for Electric Power under the Federal Antimonopoly Service that took place on 21 February 2013).

As the price on the electric power market is formed under the influence of supply and demand, such price may not be higher than the price that the consumer is ready to pay, in other words, that the consumer believes to be economically justified for the relevant volume of electric power. Consequently, the argument that the antimonopoly authority presented attests to the fact that it applies the measure of antimonopoly regulation, which is being examined, not for the purpose of preventing abuses on the part of entities holding a dominant position, but for the purpose of indirect regulation of free prices on the wholesale electric power market. Yet, it is possible that no reduction of prices in flat rate terms (price of electric power plus price of capacity) will occur, as the price applications for capacity must take account of the anticipated profit from participating on the electric power market. Consequently, if the prices on the electric power market fall, the prices on the market of capacities will grow. In such a situation, the actions of the antimonopoly authority are not entirely explainable.



As a result of such an interference of the antimonopoly authority in the pricing mechanism the price signals on the wholesale market are being smoothed. This makes it impossible for the electric power market to complete its primary tasks, i.e. to reflect short-term and mid-term trends stimulating a more accurate planning of consumption, to promote the introduction of power saving technologies implement measures to develop the transfer capability of power supply networks or solve the problem with restrictions in fuel supplies. At the same time, as a result of an artificial reduction of prices on electric power, the incentive to upgrade the existing capacities will cease to exist in the short run and this will lead to the growth of prices due to the reduced productiveness in the long run.

Please note that high prices *per se* do not mean a violation of the antimonopoly legislation. High prices serve as an incentive for existing suppliers to expand production and for potential suppliers to enter the market. In turn, with the price being artificially reduced the market will lose its attractiveness with a subsequent anticompetitive effect.

5. The practice of applying the measures of antimonopoly regulation on the capacities market

Order No. 475 of Russia's Federal Antimonopoly Service dated 12 July 2012 approved additional requirements to price applications submitted by suppliers willing to participate in the 2013 competitive capacity auction, such suppliers holding: a dominant position in the free transfer zone (the FTZ - an equivalent of geographical borders on the capacities market) of Vyatka and Volga; a dominant position in the FTZ of Siberia and the installed capacity of the generating equipment greater than 3,000 MW.

Under the above order the specified suppliers of capacities had to file price applications:

-  *specifying the same price, which is determined as the average weighted value of capacities in all generating units;*
-  *for the volume of capacities not exceeding 10% of the total volume of the price and price-accepting applications of this supplier.*

We will examine each of the above restrictions.

1. The requirement to file average weighted price applications leads to lower competition on the capacities market owing to a number of relatively efficient heating stations becoming unable to withstand the

price competition. This also creates artificial competitive advantages for the entities that hold a dominant position.

The average weighted price of a dominant entity, which includes several price applications, may turn out lower than the prices of competitors even if it has been formed out of price applications that are higher than the price applications of competitors (Figure 2). Consequently, by issuing the relevant decision the antimonopoly authority encouraged a cut price being formed on the capacities market with the competitors of the dominating entity being pushed out of the market and with an incentive being given for a further consolidation of capacities suppliers.

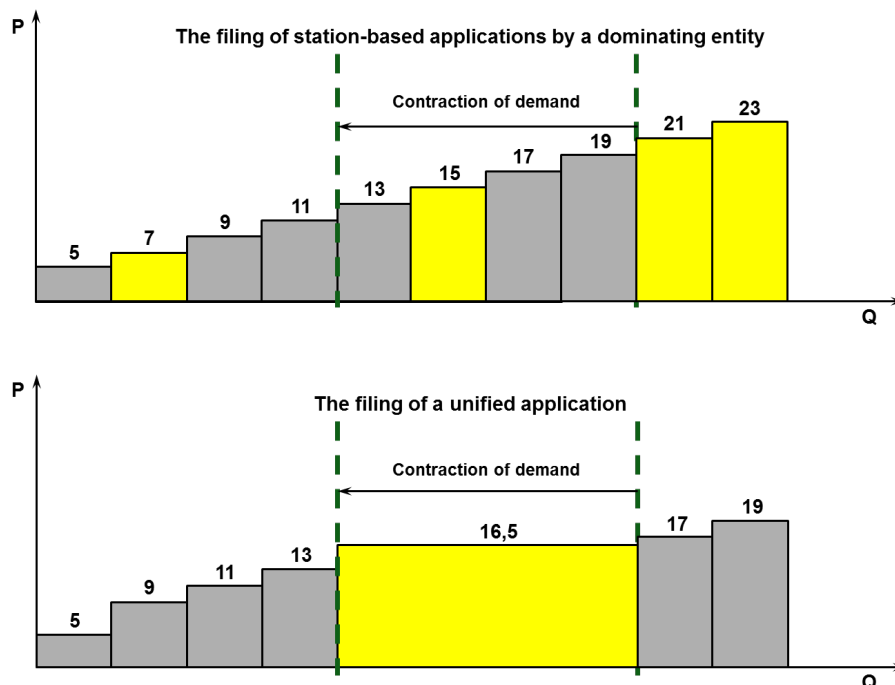


Figure 2. The filing of station-based and unified applications by a dominating entity
Source: Shubin, 2013

Under such conditions the dominating entity does not have an incentive to raise efficiency of all its assets. It is sufficient to have a number of relatively efficient generating facilities to achieve a competitive average weighted price application. The pushing out of generating facilities, which are more efficient as compared to individual generating facilities of a dominating entity (in our example in Figure 3 more efficient generating facilities of competing companies with price applications equal to 17 and 19 conventional units are pushed out of the market by less efficient generating facilities of the dominating entity with price applications equal to 21 and 23 conventional units, as the dominating entity's level of average weighted price application is equal to 16.5 conventional units) creates a probability that such dominating entity's generating facilities will become increasingly less efficient.

A reverse situation may come about if the demand for capacities falls (Figure 2). If the requirement to file a price application with an average weighted price is met, this may lead to a number of efficient heating stations being artificially pushed out of the price competition (in our example this is a generating facility with a price application equal to 7 conventional units) as a result of price applications for them becoming more expensive, with such stations being replaced by more cost-intensive stations of the entity holding a dominant position. This, in turn, will result in the increase of the equilibrium price.

2. The requirement of Russia's Federal Antimonopoly Service to file price applications for a volume of capacity not exceeding 10% of the aggregate volume of price and price-accepting applications gives rise to the consequences that are similar to those arising on the market of electric power subject to the order being performed to increase the price-accepting volume in price applications. Such consequences are examined in the previous section of the article.

6. Conclusions

With the antimonopoly legislation laying down a requirement to file price applications at an economically acceptable level and with the antimonopoly authority having the power to impose fines for manipulating prices on any entity, including an entity that does not hold a dominant position (*by Elena Neprintseva and Stanislav Shubin 2013*) the examined measures of antimonopoly regulation appear excessive and seem to be aimed at regulating prices and creating artificial obstacles for the promotion of competition.

Under the free market conditions an opportunity to generate profit motivates generating companies to boost their competitive advantages by upgrading generating capacities and improving their efficiency. In turn, the absence of a free market makes the promotion of competition impossible: either the costs are not compensated or the profit is seized. Under such conditions generating companies try to increase their market power by way of mergers and acquisitions. As a result, the market is becoming more monopolised and, consequently, there is a growth of accounting expenses (X-inefficiency). The industry is facing the same issues that were typical for tariff regulation and that the reform was supposed to solve.

With the weakening of competition in the industry tariff regulation will eventually become more efficient than antimonopoly regulation. The antimonopoly authority is only necessary in free market conditions. If the market is regulated, a tariff authority should take its place.

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