

## 1. Introduction

Tariff regulation of the electric power sector in Russia is in the reforming phase. The implementation of a new tariff policy in the electric power sector began with the electric power retail sales segment. New calculation principles of retail markups of default electricity suppliers were approved in 2017. As a result, starting from the 2nd half of 2018, retail markups of default electricity suppliers are supplemented using the comparative method which is a part of incentive regulation methods.

In regulatory theory, the essence of comparative methods consists in defining requirements for a regulated organization on the basis of a relative effectiveness assessment of its business and subsequent comparison of the results with the most effective (yardstick) organizations' ratios [1; 2]. Based on the successful experience of foreign countries, the Federal Antimonopoly Service (FAS Russia) introduces incentive regulation using comparative methods in the sector's regulatory practices. According to the first practical results of the new method, it should be assessed how the comparative method has affected the value of retail markups of default electricity suppliers.

## 2. The comparative method: fundamental principles

The main legislative documents establishing new calculation principles of retail markups of default electricity suppliers are the RF Government Regulation No. 1178 dd 29.12.2011 The Basic pricing principles for administrated prices (tariffs) in electric power sector (Basic Pricing Principles No. 1178) with amendments ratified in July 2017 and in June 2018, and the FAS Russia Regulation No. 1554/17 dd 21.11.2017 On Approving the Practice Advisory on retail markups calculation of default electricity suppliers using the comparative method (Practice Advisory No. 1554/17) [3; 4].

There are some innovations provided for retail markups of default electricity suppliers established since the 2nd half of 2018. First, a gross revenue requirement of a default electricity suppliers was the first time directly determined for each group and subgroup of consumers in 2018. The traditional retail consumer structure was maintained and includes three main consumers groups: 'domestics', 'non-domestics' and 'distribution electricity network which bought electricity for compensation of electricity power losses'. Although the subgroups structure of non-domestic consumers has been changed. Instead of four consumer subgroups only three now are established (consumers with consumption less than 150 kW and with consumption from 150 kW to 670 kW, which were combined into one group). Second, a gross revenue requirement of a default electricity suppliers is determined as the sum of three components:

- i) 'yardstick revenue', which consists of permanent expenses, variable expenses and rate of return;
- ii) 'uncontrollable expenses', which include depreciation, taxes, capital investment, and write-offs of uncollectible receivables;
- iii) 'falling out (excessively received) income (costs)' for the period preceding the base regulatory period (a year before regulatory period).

Third, retail markups of default electricity suppliers for all categories of consumers are set in absolute value in rubles for kilowatt-hour of electric power (capacity), but not as formula (as it previously was);

The analysis of the Basic pricing principles No. 1178 and the Practice Advisory No. 1554/17 showed that developers turned away from itemized economic study costs and brought the technique to *yardstick revenue normalized costs*. The permanent part of expenses of yardstick revenue includes seven items of expenditure: 'remuneration', 'maintenance of premises', 'document printing and delivery', 'handling enquiries and informing by telephone communication', 'collection and processing of metered values', 'providing the consumer/buyer with the possibility of various contractual services, including direct payment to a default electricity supplier', 'overhead charges'. For each item of the permanent part expenses, the 'yardstick costs' templates were developed, fixed by the FAS Russia in 2016 prices in rubles for one consumption point (with the possibility of revision no more than once in 3 years) and differentiated by a number of features:

- i) by groups and subgroups of consumers ('domestic', 'non-domestic', 'networks');
- ii) by scope of activities of default electricity suppliers, determined by the number of consumption points (10 groups);
- iii) and by region of performance (21 region groups).

Accordingly, the formula for calculating the yardstick revenue "permanent part" expenses is as follows:

Permanent part of expenses = (yardstick costs × number of consumption points) × Consumer price index (CPI)

The variable part of expenses of yardstick revenue includes 'borrowing costs' and 'doubtful debts allowance'. For the variable part expenses of yardstick revenue, as well as for business profits (rate of return), standards were established as an interest-rate ceiling of the value of gross revenue. For example, the business profit of default electricity supplier is limited to 1.5% of the planned revenue in regulation period excluding transmission costs in the regulation period.

*Uncontrollable costs* of a default electricity supplier and *falling out (excessively received) incomes (costs)* retained the principle of itemized study [3]. It's worth mentioning that falling out (excessively received) incomes (costs) calculation was formalized. Thus, the legislation allows for the next factors of falling out (excessively received) incomes (costs):

- i) costs due to connection of consumers of a supplier which has been deprived of a default electricity supplier status and due to the margin between retail markups of default electricity suppliers and a supplier which has been deprived of a default electricity supplier status;
- ii) deviation of actual inflation values (consumer price index) and number of consumption points;
- iii) deviation of actual uncontrollable costs of a default electricity supplier;
- iv) costs due to connection of new consumers;
- v) deviation of actual net electricity supply.

That is in case of the absence in an area of a supplier which has been deprived of a default electricity supplier status most of these revenues (expenses) is due to the deviation of the actual inflation values, the number of consumption points and the net electricity supply of the planned values taken into account in the retail markups calculation [3].

That is, the factors for falling out (excessively received) incomes (costs) set forth in the new method do not affect the deviation of actual expenses included in the yardstick revenue from the approved values. This means that default electricity suppliers have the ability to manage yardstick revenue themselves in the event of cost savings included in the yardstick revenue. If the best practices in calculation of 'yardstick costs' in this area are used, default electricity suppliers will be encouraged to improve their operational activity and minimize their costs. At the same time, cost minimization of a default electricity supplier included in yardstick revenue will not decrease retail markups due to preservation of a default electricity supplier's savings in the approved yardstick revenue.

As a result, in accordance with the new method of retail markups calculating, the cornerstone of yardstick revenue calculating of a default electricity supplier is a 'yardstick costs' indicator. Not only the possible increase in the retail markups of default electricity suppliers during the transitional period but also the possibility of a default electricity supplier saving actual costs in comparison with the approved parameters of a yardstick revenue will depend on the extent to which the standards of 'yardstick costs' are correctly and reasonably determined by the Federal Antimonopoly Service of Russia. However, mechanism and procedure for determination of value of yardstick costs in the current regulatory framework is not disclosed by the FAS Russia.

Thus, retail markups calculating of default electricity suppliers by the comparative method contains embedded mechanisms for growth of gross revenue requirement and retail markups but limits them by the following factors: changes in number of consumption points; changes in consumer price index (rise in inflation); revision of 'yardstick costs' (not more than 1 time in 3 years); and deviation of falling out (excessively received) incomes (costs) (the list of which was formalized and limited by fluctuations in inflation and changes in scope). In other words, in the absence of qualitative changes in the scope of a default electricity supplier and the revision 'yardstick costs' standards, the growth of sales markups of default electricity suppliers will be largely limited by the rate of inflation.

In its current form, the method does not limit the growth of sales markups by providing incentives to improve the operational efficiency of default electricity suppliers, as it does not provide any tools for assessing the effectiveness of default electricity suppliers and taking into account the results of this assessment in retail markups calculation.

### **3. The new method's impact on retail markups value**

In accordance with the current legislation, the retail markups of default electricity suppliers are set forth for a six-month period. At the same time, the retail markup during the first half of another regulatory period is still set at the level of the retail markup of the second half of the previous regulatory period. Due to the mismatch between the regulatory period (on which the gross revenue requirement is calculated) and the period of validity of the retail markups, the impact of changes in the gross revenue requirement and the volume of useful issue of the next period of regulation is actually reflected in the retail markups of the second half of the year. In order to offset the impact of fluctuations in retail markups for six months and to

assess the total effect of the comparative method, it is advisable to use a weighted average retail markup calculated as the ratio of the approved gross revenue requirement to the approved productive supply of a default electricity supplier for the regulatory period. Figure 1 shows arrangement of 77 largest default electricity suppliers by the growth rate of the weighted average retail markup for the period 2017 – 2019.

Analysis of weighted average retail markups for 2017-2019 by 77 largest default electricity suppliers showed that the growth rate of the weighted average retail markup exceeded the consumer price index for this period (8,045%) by 69 retail companies and ranged from 9% to more than 100%. In addition, since the adoption of the new regulatory method, the retail markup for 2 of 69 default electricity suppliers has increased more than twice. A moderate increase of weighted average sales markup (within inflation range) was observed at 4 default electricity suppliers. The decrease in weighted average retail markups in 2019 compared to 2017 was recorded for 4 default electricity suppliers, in two of which gross revenue requirement was approved taking into account the regulation of the FAS Russia to exclude excessively received income of previous periods, which led to a temporary decrease in gross revenue requirement and in retail markups accordingly [5].

Thus, for 90% of the studied default electricity suppliers the growth of weighted average retail markups exceeded the inflation rate since the transition to a new method (in the absence of significant changes in the number of consumption points), that is surpass growth limits of retail markups (in form of consumer price index and scope of activities) in the new calculation method.

The analysis of tariff decisions of regional regulatory authorities on the establishment of retail markups of default electricity suppliers for 2018 and 2019 revealed additional growth factors of weighted average retail markup in the transitional period. Among them one can mentioned the understatement of the gross revenue requirement of a default electricity supplier, determined by the method of economically feasible expenses, approved by regional regulatory authorities in 2017, which is basis of defining variant of the transition to regulation using comparative methods. The normative instruments specified that:

i) the gross revenue requirement of a default electricity supplier in 2018 (first regulation period in the transitional period) has been calculated as a sum of proportions of two components: the yardstick revenue in 2018 (determined by the comparative method) and the gross revenue requirement of a default electricity supplier, determined by the method of economically feasible expenses, approved in 2017 which has been taken with excluding lost or excessively received income and with a lowering coefficient of 0.9.

ii) in case of exceeding the yardstick revenue over the gross revenue requirement of a default electricity supplier determined by the method of economically feasible expenses (excluding lost or excessively received income), the schedule of gradual growth of the gross revenue requirement of a default electricity supplier to is approved. The collegiate body's minutes of meetings analysis showed that schedules of bringing the gross revenue requirement to the yardstick rate within three years for 45 subjects of the Russian Federation had been adopted and published in official sources. In other words, there were default electricity suppliers in 60 % of the Russian regions, which was foreseen for the growth of the gross revenue requirement during the transitional period (from a few tens of percent to 7 times).

In addition, it is possible that the 'yardstick costs' standards used to calculate the yardstick revenue of a default electricity supplier and approved by the FAS Russia in rubles per consumption points' unit are somewhat overstated. However, as noted above, it is not possible to estimate this because of the opacity of the "yardstick costs" standards setting mechanism.

#### **4. Conclusion and Policy Implications**

In the transitional period the use of a comparative method has led to a significant increase in retail markups value of default electricity suppliers.

After the transitional period ends in 2020 the regulation of retail markups of default electricity suppliers will be implemented solely on yardstick revenue basis calculated by the comparative method. If no changes are made to the existing regulations before the adoption of tariff decisions in 2020, we suspect that the amount of the gross revenue requirement of default electricity suppliers for 2020 will exceed the gross revenue requirement of 2019 from 2 to 6 times. This is due to the excess (up to 3 times) of the yardstick revenue of the majority of large default electricity suppliers over the gross revenue calculated by the method of economically feasible expenses, and the transfer by some regional regulators of the basic growth rate of the gross revenue requirement for 2020, by establishing the minimum possible growth rates for 2018 and 2019.

We assume that after 2020, the change in the gross revenue requirement and retail markups of default electricity suppliers will have a moderate rate and be within the consumer price index. This is due to limited composition of growth factors set forth in the comparative calculating method of retail markups

(scope of activities of a default electricity supplier, inflation, revision of yardstick costs no more than once in 3 years, as well as deviation of falling out and excessively received income). In addition, normalized costs will partially smooth out significant fluctuations in retail markups fixed for the half-year period, since Practice Advisory No. 1554/17 provided that in cases where the weighted average retail markup for a group (subgroup) of consumers does not exceed the retail markup fixed for the second half of the base regulation period, the retail markup shall be fixed for the first and second half of the estimated regulation period at the same level.

Thus, the current calculating method of retail markups of default electricity suppliers during the transitional period led to a qualitative shift (growth) in the value of retail markup of a default electricity supplier and during the transitional period did not provide a reduction and (or) limiting the growth rate of retail markups of default electricity suppliers. However, the formed estimates are not final and require additional research after the adoption of tariff decisions in next regulated period.

### **List of References**

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