

Mariya Mozhevikina¹
**STATE REGULATION OF HOUSING AND PUBLIC UTILITIES
SERVICES AS A FACTOR OF SOCIAL AND ECONOMIC
DEVELOPMENT**

The article defines the key directions in state regulation of housing and public utilities services (PUS), and the ways of their improvement during the formation of market relations in the sector. The author justifies the socioeconomic effects of the state regulation of PUS and offers a new method of calculating the "investment rate" for services of the utility companies.

Keywords: natural monopolies; pricing; housing and public utilities services; investment rate.

Марія Можевікіна
**ДЕРЖАВНЕ РЕГУЛЮВАННЯ ЖИТЛОВО-КОМУНАЛЬНОГО
ГОСПОДАРСТВА ЯК ФАКТОР СОЦІАЛЬНО-ЕКОНОМІЧНОГО
РОЗВИТКУ СУСПІЛЬСТВА**

У статті визначено основні напрями державного регулювання житлово-комунального господарства, його вдосконалення в період становлення ринкових відносин в галузі. Обґрунтовано соціально-економічні ефекти державного регулювання ЖКГ та нову методiku розрахунку "інвестиційного тарифу" на послуги підприємств комунальної сфери.

Ключові слова: природні монополії; ціноутворення; житлово-комунальне господарство; інвестиційний тариф.

Форм. 1. Табл. 1. Літ. 27.

Марія Можевікіна
**ГОСУДАРСТВЕННОЕ РЕГУЛИРОВАНИЕ ЖИЛИЩНО-
КОММУНАЛЬНОГО ХОЗЯЙСТВА КАК ФАКТОР СОЦИАЛЬНО-
ЭКОНОМИЧЕСКОГО РАЗВИТИЯ ОБЩЕСТВА**

В статье определены основные направления государственного регулирования жилищно-коммунального хозяйства, его совершенствования в период становления рыночных отношений в отрасли. Обоснованы социально-экономические эффекты государственного регулирования ЖКХ и новая методика расчета "инвестиционного тарифа" на услуги предприятий коммунальной сферы.

Ключевые слова: естественные монополии; ценообразование; жилищно-коммунальное хозяйство; инвестиционный тариф.

1. Problem statement

State regulation, as a set of direct and indirect methods of influence on business entities, plays a key role in market reforms in the countries of the former Soviet Union. State regulation in the housing and public utilities sector (further – PUS) is important not only because it largely determines the prospects of this sector, but also because it bears the social burden as a direct impact on the living standards of population.

Analyzing the results of the housing and public utilities services reforms in the Russian Federation and the Republic of Kazakhstan, which began in the 1990s, it should be mentioned that with the help of methods of direct state influence certain goals were achieved: demonopolization of this sector of the economy, housing priva-

¹ Candidate of Economic Sciences, Senior Lecturer, D. Serikbayev East Kazakhstan State Technical University.

tization, transition to full payment of expenses for housing and utilities. However, the expected effect of the use of indirect methods of state regulation of public utilities has not yet been achieved, namely still lacking are the following: normative and regulatory documentation to meet the requirements of the sector, transparent pricing policy, socially and economically justified tariffs, implementation of the investment component into pricing etc. In Kazakhstan, regulatory documentation base of the PUS consists of 169 regulatory documents, in the Russian Federation – 158 laws and 3124 regulations adopted since 1992 (Slunyavin, 2013). But these documents neither fully meet modern requirements of PUS, nor stimulate the reduction of operating costs or investments introduction. There have not yet been developed any working mechanisms for effective funding of PUS, or the mechanisms of long-term and effective planning by state.

2. Literature review

At present, the general problem of management and efficient functioning of the housing and public utilities services is reflected in the writings of V.S. Bogolyubov et al. (1997), V.V. Buzurev and V.S. Chekalin (2001). The pricing methodology is covered in the works by M.S. Abryutina (2002), I.P. Denisova (1997), I.V. Lipsitz (2008). The problems of improving pricing and tariff policies in PUS are reflected in the works of F.G. Tagi-Zadeh (2000), L.N. Chernyshev (1998). In foreign literature, the issues of state regulation and pricing of natural monopolies are developed in the works of U. Baumol (1982), G. Demshets (1968), R.P. Ozner (1987), J. Stigler (1968), D. Hey and D. Morris (1999).

Chernyshev (1998) in the 1990-s explored new methods of pricing in the PUS sector through the creation of competition and price regulation of local natural monopolies. He used the term "economically justified tariff", which, in consequence, has been used in many legal acts on PUS regulation. Also in the 1990-s, the available literature already presents a theoretical background to support the change of the system of indirect influence on utilities companies through pricing mechanisms. In particular, there was already an understanding that the current pricing methodology in the PUS sector was outdated. The common pricing method was based on the definition of the mean value of the economically justified tariff by the "reverse" calculation by dividing the total expected revenues by the total number of conventional units. However, in reality this issue still remains an open question.

3. Definition of the target problem for the analysis

The main objective of the study is to develop a methodological framework to improve the system of state regulation of the PUS. This objective necessitates finding solutions to the problems:

- state regulation of the PUS, during the transition to market economy;
- clarification of methodological approaches to price regulation in the PUS;
- development of recommendations to obtain socioeconomic benefits of state regulation of the PUS.

4. Presentation of the research material, including the description of the methodology and main results of research

Due to the fact that the housing and public utilities sector is represented by two basic interrelated elements – namely the housing and the public utilities, the mechanism of state regulation in these sectors has its own characteristics. In particular,

with regard to price regulation, methods and principles of pricing are significantly different from each other. Let us consider these features.

For example, active market pricing in housing and public utilities is not working, that is, the establishment of tariffs so that they would give to providers more profit by achieving a profitable relationship of "value of service to the cost of its production," and to consumers – the right to choose and evaluate the quality of a service according to the tariff, had not been achieved. Why did not the rates for public utilities become the instrument for regulating supply and demand, as the result of free market pricing? This is primarily due to the fact that the economic activity of enterprises – the providers of services, and these services themselves are characterized by the following features:

1) Indispensability. Consumers can not replace, abandon or significantly reduce the consumption of services at an increased tariff on them. Currently, the vast majority of providers of basic utility services occupy a dominant position at the market, giving them the opportunity to have a decisive impact on the tariffs. The dominant position of these economic entities – natural monopolies, is characterized by the market share of over 35%, without substitutes.

2) Continuity and reliability. Restricting the availability of services with the change of tariff rates becomes a tool of social discrimination, so the state is acting as a guarantor for the part of population that has low incomes.

Given the above, both in Russia and Kazakhstan up to this day, they have used the cost method of pricing for housing and public utilities services as the only method with objective features. The cost of services, according to this method, is calculated as the sum of production costs, and some amount of profit. Application of the cost method guarantees to producers the compensation of all incurred costs, regardless of their effectiveness, which leads to the lack of incentives to reduce production costs. Price, devoid of the regulatory function, becomes a tool for combating the interests of producers and consumers. The role of arbitrators in this fight belongs to government, public authorities and local governments. For arbitration, government can use direct and indirect methods of price regulation, including the development of regulatory and guidance documents.

The analysis of foreign experience shows there is a different pricing methodology using the "weighted average cost of capital" (WACC). In other words, today comes a new concept of pricing for the PUS – called the investment tariff rate, which takes into account the calculation of the investments required for repair and improvement of public utilities infrastructure. Application of WACC is becoming the norm for many countries, not only developed ones. This is partly due to the strong theoretical basis of the approach based on return on assets, as opposed to the approach based on the margin on sales, as a way of determining the appropriate level of profit. In addition, the approach based on return on assets, gives the company the right incentives for investment. The basis for the entry-level tariffs is given in (1):

$$P_0 = \frac{\left\{ \left[\sum_0^9 \frac{R_n - C_n}{(1+r)^n} \right] + \left(\frac{Inv_0}{2} \right) \times r \right\} + C_0}{kWh_0}, \quad (1)$$

where P_0 – the initial price; R_0 – projected earnings in year n ; C_0 – projected amount of costs (including depreciation but excluding interest, dividends and retained earnings) in the year n ; r – a weighted average cost of capital (WACC); Inv_0 – investments in year 0, kWh_0 – the amount of kW/h of accounts payable at year 0.

The main disadvantage of using the WACC approach in comparison with the approach based on margin, is the difficulty in obtaining reliable detailed information necessary for calculations.

The countries where the WACC approach is used are given in Table 1.

Table 1. Countries using the WACC approach

Country	Sectors	Since
Argentinas	electricity, gas, telecommunications,	1997
Australia	electricity, gas, telecommunications, transportation, water supply	early 1990s
Columbia	water supply	1996
Holland	electricity, gas, transportation	1999
India	electricity	early 1990s
Philippines	water supply	1999
Great Britain	electricity, gas, telecommunications, transportation, water supply	1989
USA	electricity, gas, telecommunications, transportation, water supply	1970s

Source: Agency for regulation of natural monopolies of the Republic of Kazakhstan, 2000.

It should be noted that in Kazakhstan, according to the program of modernization of the PUS for 2011–2020, the transition to investment tariff rates in the utilities sector is planned for 2015 (The Government Resolution of the Kazakhstan 30.04.2011. #473). For this the government developed the state regulation of public utilities companies: tariff regulation with the transition of natural monopolies to medium- and long-term investment programs, the budgetary allocation for entities owned by the state, conducting gradual revaluation of fixed assets to ensure necessary investments, development and approval of investment programs aimed at modernization and reconstruction of engineered networks. The transition of natural monopolies to the use of investment tariffs will provide consumers with the stability and predictability of tariffs, increasing quality of services at the expense of investments in the modernization of the assets, elimination of excessive losses, and reduced regulatory technical grid losses.

In turn, the optimization of technical regulations and the elimination of excessive losses can release funds and provide a source of funding for further development of the sector.

In accordance with the legislation on natural monopolies and regulated markets, it requires monitoring of the implementation of investment programs of natural monopolies. Evaluation of reports in the ongoing monitoring and implementation of control measures guarantees purposeful use of funds received from consumers for the implementation of investment programs. In the case when natural monopolies do not fulfill their investment programs, there will be used the following measures, provided by the legislation on natural monopolies and regulated markets: a temporary reduction in tariffs for regulated services and administrative fines and penalties.

To minimize the impact of tariff increases on the inflation rate, as well as to promote energy savings it is necessary to continue the practice of differentiated tariffs by consumer groups, depending on the consumption volumes.

The introduction of differentiated tariffs for consumer groups also improves the profitability of the utilities companies and, therefore, allows them invest more in modernization. In this case, prior to the introduction of differentiated tariffs, it is necessary to conduct an analysis of the impact of changes in the tariffs to the costs of production in related industries.

In Russia it is necessary to develop the concept of modernization of the PUS, implementing investment tariff rates, since economic growth in this sector is possible only with the flow of investments. Thus, it is critical to determine the main directions of state regulation in this area. The policy of state regulation of tariffs should be clear and transparent so that investors understand when and how they can return back the invested capital. The transition to the medium- or long-term tariff regulation is still an open question. According to the latest changes, approved by the Government of the Russia on 12.08.2013, #688, regulated tariff rates are effective for 1 year (The Government Resolution of the Russian Federation 12.08. 2013. #688).

As for the housing servicing sector, activities such as the maintenance and repair of housing, housing management can be carried out on the competitive basis. State regulation in this area implies the development and implementation of projects involving service companies for management, maintenance and repair of the common property of the condominiums; the development and introduction of new mechanisms for recurrent funding of repairs of the common property of condominium facilities. The implementation of the financial mechanism of repair work in the housing sector can be achieved through the use of the savings system by citizens and by providing housing assistance to low-income citizens. This requires legal methods of state regulation, and development of special legal acts etc.

To ensure the realization of these directions it is necessary to create a data-processing system, with constantly updated status indicators of housing and municipal utilities infrastructure that would allow monitoring the conditions of housing and evaluating the effectiveness of interventions. Creating a data-processing system will allow modelling the options and the potential for further development of the industry, to assess the amount of resources and to forecast the impact of ongoing activities.

Modernization of the public utilities sector with the course taken by the industrial-innovative development of the country will require a systematic design and implementation of new technologies, which, in turn, requires more research and development activities.

In order to ensure the technological development of the sector there must be a reevaluation of all legal and technical documentation every 5–10 years, including review and approval of about 20 normative documents annually. One of the main goals in the development and improvement of normative and technical documents is to encourage the use of new resource-saving technologies.

For the sufficient staffing of the industry it is important to improve the training of specialists in organizations of higher, technical and vocational education, by increasing the proportion of practical training, training of scientific personnel for the PUS, development of the system of ongoing training and retraining.

Thus, the study of government regulation as a combination of regulatory and pricing mechanisms aimed to impact economic entities, is in need of an integrated approach, especially in the transition period. After all, each of us is a consumer of

utilities, and each of us feels the impact of this complex mechanism of utilities regulation through the amount of payments for housing and utilities services and the quality of such services. The socioeconomic impact of government regulation of the housing and utilities services should be expressed as follows:

– for public: improving the quality of housing and public utilities services and stabilization of their costs; guaranteed targeted financial support for low-income population, creation of incentives to rationalize the consumption of utilities, and their savings;

– for housing management and utilities companies: the elimination of the deficit of funds through the implementation of the investment tariff rate; reduction of non-payments; attraction of investments to modernize the infrastructure, improvement of internal efficiency of the sector; production costs reduction; competition in the sector;

– for the government: ensuring absolute targeting of financial support for low-income population; optimization of financial investments in the sector; formation of a competent strata of managers and specialists of housing and public utilities services.

Conclusions and prospects for further research

Government regulation of the economy at different levels is inherent to any economic system. In an economy, based on market competition and macroeconomic regulation, the state is given a very significant role. Regulation of the housing and public utilities services, that provide vital services to each person and supply industries with necessary infrastructure, is carried out to ensure the progressive changes in the economic activity of the PUS companies, to create conditions for competition and to prevent negative social consequences for population. That is, government regulation of the housing and public utilities sector today is an important factor of socioeconomic development.

The most important task of state is the modernization of the housing and utilities sector, which would directly affect the quality of housing and public utilities services. The basis for evaluating the effectiveness of state regulation of the PUS is the system of quantitative indicators of the general parameters in the functioning of main economic agents in the industry: state budget, housing and utilities enterprises and households. The system performance parameters are shown below.

- 1) The level of budget expenditures on housing and public utilities.
- 2) The level of budget expenditures for the payment of housing and utilities assistance.
- 3) The volume of investments into the enterprises of housing and utilities services.
- 4) Reduction of the unit costs for utilities production.
- 5) The level of energy and resource consumption of basic services.
- 6) The reduction of the housing deterioration.
- 7) The level of aggregate expenditures of the population for housing and utility payments.

In conclusion, it should be noted that the issue of state regulation of the PUS is now required to take a central place in the current theoretical and practical developments of economic scientists. The use of indirect methods of regulation in the PUS should lead eventually to structural changes in the sector, ensuring optimal reproduction process and the general sustainability of the sector.

References:

- Абрютина М.С.* Ценообразование в рыночной экономике: Учебник — М.: Изд. "Дело и сервис", 2002. — 256 с.
- Алферов В.Н.* Выбор эффективных организационно-экономических форм управления жилищно-коммунальным хозяйством муниципальных образований: монография. — М.: Наука, 2009. — 140 с.
- Боголюбов В.С., Васильева Н.В., Иохведов Ф.М.* Управление развитием жилищной сферы в условиях реформирования ЖКХ / Под ред. Боголюбова В.С. — СПб.: Роза мира, 1997. — 131 с.
- Бузырев В.В., Чекалин В.С.* Экономика жилищной сферы: Учеб. пособие. — М.: ИНФРА-М, 2001. — 256 с.
- Демин А.В.* Управление жилищно-коммунальным хозяйством муниципальных образований. — М.: Изд-во АСВ, 2011. — 159 с.
- Денисова И.П.* Цены и ценообразование: Учеб. пособие. — М.: Эксперт. бюро М, 1997. — 63 с.
- Комбинированная модель расчета тарифа на тепло и электроэнергию. Агентство РК по регулированию естественных монополий, защите конкуренции и поддержке малого бизнеса, 2000 // www.ask.gov.kz.
- Липиц И.В.* Ценообразование: Учебник. — 4-е изд., перераб. и доп. — М.: Магистр, 2008. — 527 с.
- Ляхов А.Ю.* Структурная модель системы управления жилищным фондом муниципального образования // Экон. науки. — 2009. — №1. — С. 227–231.
- Методы определения монопольно высокой (низкой) цены и монопольной прибыли / Батаева Н.С., Гречишниккина И.В., Никифоров А.А. и др. Под ред. Шаститко А.Е.; Бюро эконом. анализа. — М.: ТЕИС, 2001. — 207 с.
- Модели управления стратегическим развитием муниципальной жилищно-коммунальной сферы: монография / С.В. Величко [и др.]. — Воронеж: Науч. книга, 2009. — 159 с.
- Постановление Правительства РФ от 12 августа 2013г. № 688 "О внесении изменений в Постановление Правительства РФ от 22 октября 2012г. № 1075" // www.garant.ru.
- Программа модернизации ЖКХ РК на 2011–2020 гг., утверждена Постановлением Правительства РК от 30 апреля 2011г. № 473 // www.adilet.zan.
- Регулирование ценообразования в Жилищно-коммунальном хозяйстве. Изд. 3-е, измен. и доп. — М.: ЦНИС, 2000. — 308 с.
- Слюнявин И.Н.* Выступление на заседании Госсовета по вопросам ЖКХ, 31 мая 2013г. // www.kremlin.ru
- Стрельченко В.В.* Организационно-экономический механизм обеспечения инновационного развития жилищно-коммунального хозяйства: (на примере Московской области): Автореф. дис. ... канд. экон. наук / Балт. акад. туризма и предпринимательства. — СПб., 2012. — 27 с.
- Таги-Заде Ф.Г.* Затратные цены как антистимулы // Жилищно-коммунальное хозяйство. — 2000. — №4. — С. 7–10.
- Таги-Заде Ф.Г.* О задачах новой тарифной политики в коммунальном хозяйстве // Жилищно-коммунальное хозяйство. — 2000. — №12. — С. 2–8.
- Тумакова Е.И.* Трансформация экономических отношений в ЖКХ: муниципальный аспект: Монография / Е. И. Тумакова, И. А. Кузнецов; М-во образования и науки Российской Федерации, Гос. образовательное учреждение высш. проф. образования "Тамбовский гос. ун-т им. Г.Р. Державина". — Тамбов: Изд-во ТГУ, 2011. — 179 с.
- Хэй Д., Моррис Д.* Теория организации промышленности: В 2 т. / Перевод с англ. под ред. А.Г. Слуцкого. — СПб.: Экономическая школа, 1999. — Т. 2. — 592 с.
- Чернышов Л.Н.* Ценовая политика в ЖКХ / Науч. ред. — акад. Басин Е.В. — М.: Книжный мир, 1998. — 248 с.
- Якобсон Л.И.* Государственный сектор экономики: экономическая теория и политика. — М. — ГУ ВШЭ, 2000. — 367 с.
- Vauntol, W.* (1982). Contestable Markets and the Theory of Industry Structure, Harcourt, Brace, Jovanovich.
- Demsetz, H.* (1968). Why Regulate Utilities? Journal of Law and Economics.
- Posner, R.A.* (1987). The Regulation of the Market in Adoptions, 67 B.U.L. Rev. 59.
- Shepard R.W.* (1981). Cost and production functions.
- Stigler, G.* (1968). The Organization of Industry. Homewood, ILL.: Richard D. Irwin.

Стаття надійшла до редакції 18.09.2013.