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**LOCAL AND REGIONAL INITIATIVES IN THE RUSSIAN FEDERATION TOWARDS
SUSTAINABLE CONSUMPTION PATTERNS IN INDIVIDUAL HOUSEHOLDS**

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1. General Provisions. Goals of Restructuring

Recently economic reform in Russia has been concentrated in the housing and utilities sector. Efficiency in this sector is of great importance not only for resource-conservation, but also for improving the social and political situation in cities and regions.

Sustainability of consumption in the housing and utilities sector in Russia can be considered from two main points of view:

The attainment of indicators of quality of life and environmental well-being, in particular volume consumption of services (water, electricity, heat, gas, wastewater removal and treatment, and refuse accumulation, removal and reclamation);

Levels of natural-resource consumption and ecosystem disruption occasioned by the activities of utilities enterprises, including consumption of energy, water and land and pollution of the environment.

The reforms under way in the housing sector in Russia's regions and cities are aimed at: bringing consumption of services into line with the established social standards, cutting costs, conserving resources, and ensuring that housing and utilities can be provided without loss.

To achieve these goals in accordance with the blueprint for reform approved by the President, Russian regions and cities are undertaking the following activities:

1. Local-government authorities are creating systems of contractual relations which will ensure the reliability, sustainability and environmental safety of essential services;
2. Measures are being taken to create a competitive environment, eliminate monopolies and provide for State regulation of natural monopolies (power and water supply enterprises);
3. Financing and pricing systems are being improved: regions and cities are switching from the subsidizing of enterprises to full payment for services by the public. That will ensure price sensitivity to unreasonable consumption by households and the financial stability of service providers;
4. Resource-conservation is being promoted through auditing of the tariffs of monopoly enterprises and installation of devices to meter and regulate water and heat consumption;
5. Quality control is being applied to services, operation of lines, water intakes and treatment plants is being computerized, and environmental monitoring is being introduced;
6. A corpus of standards and regulations is being developed, so filling at regional level the gaps in the regulation of the reforms by federal laws and subsidiary instruments.

The philosophy behind the reform is the following: the depersonalized payment by taxpayers for housing and utilities irrespective of the volume and quality of the service received or of whether, indeed, the service is received at all, will be replaced by payment and monitoring

by the individual consumer of the services actually consumed, taking into account their reliability and sustainability and their impact on the consumer's environment.

This entails, at both the regional and the municipal levels, the resolution of a whole range of problems pertaining to the sustainable functioning of essential systems. The federal reform blueprint is being implemented within the framework of regional and municipal programmes that were elaborated in August and September of 1997 and cover a number of basic issues. Some of them contribute towards reducing consumption of water, heat and electricity or preventing pollution; others are aimed at creating the economic, legal and organizational conditions needed for sustainable consumption of services and resources. The programmes include specific targets and time limits for change; their implementation is financed from regional and municipal budgets.

2. Institutional reforms

The significant changes now occurring in the sphere of property rights are also of relevance to the sustainability of consumption of housing and utilities. The system of State ownership, with its absence of any obvious proprietor, is being replaced by a system where responsibility for facilities is more readily apparent.

In Kemerovo Oblast, a region where the delicate business of restructuring the coal industry is in hand, transfers of housing to municipal ownership totalled 3.3 million m² in 1993, 7.4 million m² in 1994, 2.3 million m² in 1995 and 0.3 million m² in 1996. The process of divestiture is, therefore, fairly intensive; in fact, in a number of areas the bulk of the housing stock is already in municipal hands.

Certain problems arise in the municipalization of utilities infrastructure (i.e., heat-, power- and water-supply facilities). When they encounter economic difficulties, the major industrial plants around which some Russian cities were built not infrequently take advantage of their title to the infrastructure to sell power or water to the municipality at high monopoly tariffs. And, whether they belong to the Government, a large industrial firm or a municipality, entities in a monopoly position on a services market knowingly overstate their sales figures. Nevertheless, municipalization enables more integrated and efficient regulation of utilities' reliability, sustainability and environmental effects. For example, Novgorod Oblast was one of the first oblasts in Russia to complete municipalization and has thus been able to put into widespread use a harmonized system of resource-consumption standards. In turn, the clearer ownership structure and the introduction of a utilities-management system which is oriented to resource-conservation have attracted World Bank loans for the construction of treatment plant and the rebuilding of water-supply networks. This will not only improve the quality of life in Novgorod Oblast, but also help to protect the environment throughout north-western Russia.

There is experience of joint ownership of utilities infrastructure by major industrial plants and municipal authorities. In such instances, the owners jointly define the objectives of, and constraints on day-to-day activities and development, as well as the plans for allocation of the service between the public, industries and publicly-financed social organizations. Examples of this can be found in such multifunctional cities as Norilsk, Naberezhnie Chelny and others.

The regions of Russia have virtually completed the process of housing privatization: almost two thirds of the housing stock - ranging from one-household structures through structures for a few households to apartments in municipally- and State-owned buildings (under the operational management of major industrial plants) - is now privately owned. The secondary housing market is now a reality. Since 1992 the number of people registered on local-government waiting lists for public housing has fallen by 25%.

Undoubtedly, housing privatization has had more of an impact and the secondary housing market is more active in the big cities, where contracts for housing maintenance are being concluded with home owners, population mobility is higher, and the changes in social status and household income levels that create demand for better-quality housing are more marked. In such cities, associations regulated by the federal Associations of Housing Owners Act are being established and, in consequence, condominiums are being formed. One powerful incentive for the formation of condominiums and associations of housing owners is the practice of a number of regions (for example, the city of Ryazan) of transferring to such entities municipal subsidies that previously were allocated directly to communal undertakings.

Housing privatization, the setting-up of associations of housing owners and the building of new housing by private financial-and-construction companies are creating a new category of owners who are actively involved in seeking to cut maintenance costs per m² of dwelling space and have a vested interest in keeping down water and energy bills. For this reason, the first step of some associations of housing owners in Moscow, Ryazan and other cities has been to instal meters and regulatory devices on buildings' supply lines. For the consumer, this cuts the volume of heat to be paid for by 25-40%.

Owners or bodies authorized by owners are starting to build databases on their properties, so creating a basis for the compilation of uniform property registers, the optimization of services and more efficient use of resources. Building and apartment logbooks are being introduced in Moscow, Volgograd and other cities; they contain information on the properties' technical characteristics and amenity levels and on the related regulations and quantitative standards for services.

The ownership changes now under way in the housing and utilities sector make it possible to attain what are, in relation to the country's economic and natural potential, reasonable social and economic indicators (degree of crowding, level of communal services for households) and to do so while observing resource and environmental constraints.

3. Management, monitoring and accounting

The day-to-day operation and the development of essential services are the responsibility of local authorities, which use a variety of ways and means of protecting the interests of consumers and their city. In 70% of the regions they have created Municipal Consumer Services to formulate municipal orders for housing and utilities and thereby regulate tariffs, quantitative consumption standards and criteria for the reliability, sustainability and environmental impact of services. In smaller cities this is done by the local administration.

In addition, management companies are being set up - often as commercial structures - to manage housing stock. Municipal bodies or other housing owners sometimes select such companies on a competitive basis. This is unquestionably a positive move that deserves to be copied.

Both Consumer Services and management companies are answerable to the owner of the fixed assets (housing or utilities infrastructure) for concluding and monitoring agreements with contractors, including monitoring the sustainability of service provision and consumption. Sometimes a Consumer Service acts as an intermediary regarding customers' accounts, checking that the amounts paid correspond to the actual reliability and volume of consumption of the service.

Building standards have been amended to make it compulsory for all new buildings and all buildings that undergo extensive renovation to be equipped with meters.

In some cities (Tambov, Volgograd, Siktivkar) the possibility is being studied of setting up municipal billing companies with responsibility for installing and maintaining meters. In Tambov this responsibility will be integrated with the above-mentioned intermediary function. Providing for interaction with consumers in this way will reduce defaulting on bills for housing and services by 20-25% and cut water and electricity consumption by as much as 30%.

Water consumption in Russian cities averages over 300 l/person/day; leaks and water undertakings' deliberate exaggeration of their sales figures account for much of this total. The first step towards containing this clearly excessive consumption is the setting of a consumption standard of 185 l/person/day. This will provide a basis for payments to service providers and the allocation of subsidies to low-income families. Consumption standards are being set for other services too.

For example, the city of Petrozavodsk (Republic of Karelia) has set the following standards: water - 170 l/person/day, heating - 0.02 Gcal/m²/month, hot water - 0.25 Gcal/person/day, removal of solid household waste - 0.075 m³/person/month. All these standards are somewhat below the actual levels of consumption, a fact that encourages the service providers not only to refrain from overstating their sales (sales above the levels set in the standards are not subsidized either by the municipality or by the regional authorities) but also to seek ways of conserving resources.

Standards of similar kinds (with levels corresponding to the local climatic and demographic conditions and planning decisions) have been set in other regions of Russia too. The more sales figures were inflated in the past, in the days of the command economy, the more effective the standards.

It is very important to inform the population of the changes that are made and to check how they are perceived by ordinary people.

In Tambov, rent advices carry on their reverse a list of questions about the quality of services. This results in the collection of fairly extensive information from which the public's opinion of the reforms can be assessed month by month.

4. Demonopolization, creation of a competitive environment, regulation by the State

The inherited preference for administrative methods of management and the desire to keep enterprises' advantageous monopolistic positions have a negative impact on the operation of communal infrastructure. With a view to ensuring sustainable consumption, preserving the quality of the environment and implementing the federal Protection of Consumers' Rights Act, monopolies are being restrained through the following activities:

Subjection of communal undertakings to contractual obligations concerning the price, reliability and sustainability of services;

Monitoring by Consumer Services, housing inspectorates or monopoly-control agencies of compliance with those obligations according to uniform criteria and standard procedures.

Owners of housing (whether it is municipal property or private property belonging to individuals or legal entities) are increasingly exercising their right to select managing companies and contractors.

Examples from a number of cities show that, when money is tight, owners have to find the “cheapest” contractor. Competitive selection can bring down the cost of services per m² of floor space by 20% or more. Virtually all the administrative districts of Moscow now hire contractors to maintain their housing stock through competitive selection. Orders for improvement works and road repairs are also awarded on a competitive basis.

Monopoly heat, power, gas, water and sewerage enterprises are typically reluctant to change their volume of production and the quality of their services in step with the changes in consumer preferences. What interests them is keeping up sales without changing quality.

All the same, some attempts are being made to create a competitive environment for such enterprises too. These attempts are based on introducing new technologies as alternatives to the existing centralized systems. However, the new technologies must be offered by a range of enterprises. Otherwise, in a given municipality there will be only one economic agent using alternative technologies. Hence, the use of local sources for power supply is changing the situation in the heat and power sector. Competition between forms of energy supply will help to save resources and energy.

Analysis of the situation in a number of the cities has proved that the quantities of water and heat paid for by consumers but not in fact supplied to them amount to as much as 44% of total sales.

In addition, experience shows that monopoly enterprises tend to use their acquired rights to issue permits and approvals for connections and the installation of meters, etc. to prevent competitors from entering the market. Regional bodies and local authorities therefore find themselves faced with the tasks of stripping the natural monopolies (the existing utilities enterprises) of their licensing functions and of encouraging new, variously-owned economic agents to offer services by providing them with equal rights and by creating a competitive environment on the basis of the use of alternative technologies. Dividing a production cycle into a series of stages each performed by a different economic agent merely increases the number of monopoly enterprises without reducing the level of monopolization. It therefore fails to solve the problem.

The main ways of restraining monopolies in the sectors where they perform the principal type of activity are:

- Regular independent audits (i.e. audits paid for by the municipality, not the enterprise) of tariffs;

An audit of this kind at a water-supply company in St. Petersburg proved that the tariff was 36% too high, as a great deal of repair work for which customers were being charged was not being carried out.

- Combining of economic and administrative incentives through the development of contractual relations, especially through the system of municipal orders for services;

In addition to municipal orders establishing the general limits on tariffs for each group of consumers and obligations to meet quantitative supply standards and reliability, sustainability and environmental safety criteria for the city as a whole, contracts may be concluded with particular consumers of services, such as the industrial plant around which a town may have been built or the various types of owners of housing stock.

- Gradual introduction of competition when concluding contracts. This entails attracting competing economic agents, i.e. enterprises and organizations that belong to a similar

branch in other cities (or even other countries, perhaps to the point of awarding a concession) or to a related branch in the same city. This method has already been employed in Russian cities.

In some cities, water companies supply water to residential buildings according to a schedule: 2-3 hours in the morning and a few hours in the evening. To take as examples two cities employing such a system, household water consumption is about 160 l/person/day in Kursk and more than 200 l/person/day in Tambov. Decisions to supply water according to a schedule are taken on the basis of water-source constraints. However, the public's reaction to them tends to turn a potential water shortage into an actual one. Before the supply is halted, every household creates its own reserve by filling baths and other containers with water. Once the supply is resumed, the reserve is discharged into the sewers. This operation is repeated twice a day. This, naturally, causes significant over-consumption of water and failure to attain the desired social and economic results.

Municipal authorities' task in dealing with such critical situations is not an easy one: they have to turn down the monopoly enterprises' proposals for further increases in their water-intake capacities and, within the framework of a municipal order, to encourage water companies to create systems for optimizing network operation, monitoring pressure at crucial points and reducing water loss and leakage. On the basis of this and of the fact that development of utilities infrastructure is still financed mainly from municipal budgets, local governments approve investment programmes oriented towards resource-conservation. This approach is used in particular in implementing water-supply development projects carried out jointly with the World Bank.

Another problem is wastewater. In Russia, about 17% of all wastewater from the housing and utilities sector is discharged into surface water-bodies. Wastewater treatment is not efficient, and water pollution is therefore increasing. About 25% of samples taken from drinking-water sources have failed to meet bacteriological standards. For this reason, both the requirements applicable to, and expenditure on water treatment are being raised. However, development of communal wastewater treatment facilities creates not only organizational and financial problems, but also the problem of sewage-sludge storage and disposal. The major industrial plants around which some towns have been built lack their own treatment facilities and therefore discharge into the municipal sewers effluent containing salts of heavy metals and other toxic substances which make it impossible to use the resultant treatment sludge as fertilizer. Large areas have to be set aside for storing this residue.

A sewage-sludge incinerator has been built in St. Petersburg. As a result, it will no longer be necessary to store sludge in the suburbs, the cost of transporting sludge to storage sites will be cut by 90% or more and the heat generated by burning the sludge will be usable to cut fuel consumption. The incineration will yield a non-toxic ash which can be used in the construction industry.

In order to develop resource-efficient, environmentally friendly facilities, local governments are beginning to make active use of the scope they have under Russian law to regulate the activities of monopolies that provide essential services. To this end, they are applying quantitative standards set with local circumstances in mind and drawing on special-purpose, non-budgetary sources of financing.

5. Resource conservation and the system of financing

The reforms in the housing and communal sector aimed at ensuring the sustainability of essential services, cutting consumption of all kinds of resources and protecting the environment are closely connected with reform of the financing and pricing system. Raising charges for the

use of housing and services to the level of the actual cost creates a very powerful incentive to reduce unreasonable consumption and, accordingly, to cut the consumption of primary natural resources and energy by utilities enterprises.

The changes in the machinery for financing housing and communal services are being accompanied by a redistribution of this sector's sources of financing, with an increase in the share being paid by the public and a considerable reduction in the budget allocations that formerly went mainly as direct subsidies to the housing and utilities enterprises to cover the difference between their real costs and the amounts charged the public.

In 1993, for example, the proportion of housing and utilities enterprises' costs covered by payments by the public was only 5%; now it is over 35% in most Russian cities and regions. For 1998, payments by households have been set at the level of 50% of the economically justified tariffs. This will go some way towards making the sector attractive to investors, including for the implementation of resource-conservation projects. In particular, this level of payments, together with even the already very limited support from the budget, will be sufficient to ensure recovery of the amount invested in installing meters. At the same time, an analysis of demand elasticity shows that it will not considerably reduce unreasonable consumption. Possibly, tariffs for the general public will have a more marked restraining effect by 1999, when they will be equivalent to 70% of actual costs and, in accordance with regional and municipal programmes, meters will have been installed in all apartments in new and restored buildings and on the supply lines of all old residential buildings.

How much the public pays for services also depends heavily on the quantitative consumption standards. Sometimes housing and utilities enterprises lower their base charge per service unit (for example, per m³ of water) under pressure from the pricing agencies, but set the consumption standard too high. There are cases where the assumed standard consumption of water varies between cities in the same region from 180 to 300 l/person/day. This naturally has a considerable influence on how much households have to pay and requires a quick transition to payment according to meter readings. That, in turn, requires the creation of a normal system of financing.

Regional standards for transition to the new system of payment for housing and services are being developed alongside the federal ones. Adherence to these standards will be encouraged by the reallocation of budgetary funds both between the constituent entities of the Russian Federation and between the municipalities within each such entity.

Local governments are entitled to adopt their own parameters for transition to the new conditions of payments for housing and services. However, when actually allocating budget funds to local governments, the amount of financial support needs to be reduced to take account of the additional subsidies to the housing and utilities sector of regions and cities that result from deviation from the regional standards.

The following standards have been established:

Living-space standard (18 m² of total floor area per person);

Maximum cost of housing and communal services per m² of total floor area (in 1997 - from 1 to 3 United States dollars, depending on the regional peculiarities);

Tenants' payments as percentage of economically justified tariffs for housing maintenance and repairs and utilities (1997 - 35%, 2003 - 100%);

Maximum proportion of aggregate household income payable by tenants for housing and utilities, based on the living-space standard and the services-consumption standards (1997 - 16%, 2003 - 25%).

Among the new developments in the sphere of financing and pricing is the possibility of financing the extended reproduction of fixed assets, i.e. the possibility of covering not only current operating expenses, but also the costs of major repairs to, and upgrading and building of infrastructure. This will enable utilities enterprises to make the change to more resource-efficient technology and equipment on their own, thereby reducing unreasonable consumption and their own expenses.

For this, the amounts charged to tenants for housing should include the costs of major repairs and rent, while utility tariffs should include provision for investment expenses.

The need to include these cost components stems from the use of loans or credits to develop utilities infrastructure. The inclusion will help to smooth out the effect on tariff levels of the intermittent nature of investment spending, to spread the recovery of investment costs evenly over protracted periods and to keep housing and utility charges at a level the public can afford.

Some cities are developing economic machinery to stimulate city-wide resource conservation. Of the 30-40% savings on heating and hot-water costs they expect from installing meters on building supply lines, it is planned to allocate part to the setting-up of billing companies (or similar bodies) and part to the consumer (or to the city, where it is the owner of the apartment blocks or public-financed buildings or premises concerned), and to place part in a special resource-conservation fund (with a falling discount) with a resource-supplying company.

6. Social and economic consequences of creating a sustainable housing and utilities system

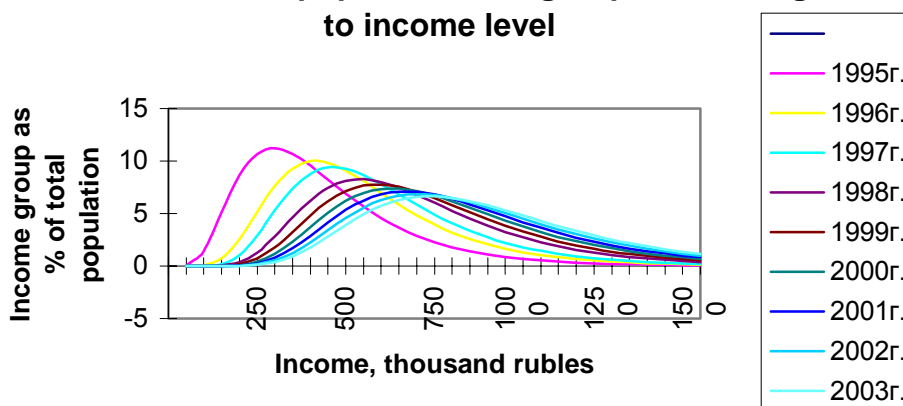
Changes in the financing and pricing machinery affect not only the interests of municipal enterprises, but the interests of the population as well. Hence, selecting the most sensible pricing strategy and assessing its social and economic consequences are among the most important aspects of the reform process.

Selecting a sensible pricing strategy and ensuring that the transition to the new system of payment for housing and services is as painless as possible for the public require that projections be made both of tariffs and of household incomes.

By and large, the social and economic consequences of the reform depend on the following: evaluation of the population's spending on housing and utilities and of the trend of that spending as a proportion of consumer expenditure, and forecasting of the number of families in need of subsidies and of the sums required to provide subsidies during the transition to economically justified tariffs. In some regions of Russia such calculations are already being made as part of the process of monitoring the progress of the reform. In Yaroslavl, Tyumen and Novosibirsk oblasts, the Yamal-Nenets Autonomous Okrug, Krasnodar Krai and the Republic of Karelia they have been of help in selecting a judicious pricing strategy and setting standards for services.

Average indicators characterizing the social and economic consequences of reforming the system of financing and pricing are presented below:

Distribution of population into groups according to income level



Table

Indicators of the social and economic consequences of switching to a new system of payment for housing and utilities

Periods	Housing and utilities as percentage of household consumption expenditure	Households in need of subsidies, %*	Annual need for budget funds to provide subsidies (as % of estimated level of payments)
1997	6.1	9.2/6.0	1.5
1998	7.5	13.5/8.9	2.9
2000	9.4	23.0/15.0	6.7
2003	11.8	29.0/19.0	12.1

* Numerator: calculated figure; denominator: expected actual figure

Another consequence of the reforms is that, because of the reductions in unit and aggregate consumption of water and heat, the need to increase the capacities of water-intake structures and heat sources is also lessened. This, in turn, diminishes the need for funds to spend on adding facilities. The chance that investment will be recouped is improved and spending can be reoriented towards the replacement of worn-out assets and the installation of more efficient equipment, thus augmenting the sustainability of essential services.

7. Conclusions

Consumption is being stabilized within the framework of the housing sector restructuring: consumption of heat, electric energy and water inside households is becoming more reasonable and amount of accumulated wastes and environmental contamination are reduced.

Regional and local (on the municipal level) initiatives give a possibility to implement general conceptual directions of the reform taking into account the whole range of climatic, economic, demographic and social conditions of the territory of Russia.

Primarily, reaching a reasonable level of consumption of housing and communal services depend on the formation of a layer of real owners who are interested in sparing resources, and on increasing of regulation and control effected by the local governments, on participation of the population in restructuring, on setting up the system of metering and control of heat and water consumption. At the present stage, reforming the system of financing and pricing and bringing the tariffs for the population to an economically viable level are the main factors providing for the efficiency and rate of transition to stable consumption. At the same time, social impact of this process requires estimation of outcomes of the decisions taken in this direction. The estimation is to be done within the framework of regular monitoring of the reform progress. This monitoring is done in many regions of Russia while implementing the programs of restructuring of housing and communal sector.
