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DESIGNING BUILDINGS TAKING INTO ACCOUNT THE RANGE OF NATURAL ENERGY RESOURCES

Annotation: This article provides information on the sharp increase in natural gas and electricity prices in Uzbekistan, the resulting increase in demand for energy-efficient buildings, and the general legal provisions for energy-efficient building design.

Key words: natural gas, electric energy, energy saving, thermal insulation.

Our country has been developing rapidly since its independence. As the number of citizens of our country increases, more and more civil buildings, industrial buildings and agricultural buildings are being built and used. This leads to an increase in fuel and electricity consumption from year to year. In order to compare ourselves with developed countries and achieve the results they have achieved, many of our standards and regulations are being analyzed, revised and implemented in practice by our government. One of these is natural gas and electricity. The Cabinet of Ministers of the Republic of Uzbekistan has imposed

restrictions on the consumption of natural gas and electricity by the population and manufacturing enterprises, that is, set a quantity, starting from January 1, 2024. This quantity is set not for the number of people or families in a household, but for one household. Therefore, a large part of the income of the population is spent on the consumption of natural gas and electricity. Some households are forced to live in cold rooms in winter and hot rooms in summer. This ministry is allegedly going against the President's policy of "We need to please the people." Thus, the Ministry has set the following rates for natural gas and electricity starting from May 1, 2024.

Fixed amount for natural gas

S/n	Consumer name	Unit of measurement	Prices per unit of measurement (including VAT, so‘ms)		
			From May 1, 2024	From 1 June 2024	2025 From April 1
1.5.	For utility and household needs, the population (if gas metering devices are available):				
	a) Based on monthly consumption during the months of November-February:				
	- up to 500 cubic meters per month;	cubic meter	650	650	1000
	- from 501 cubic meters to 2500 cubic meters per month;		1500	1500	1800
	- from 2501 cubic meters to 5000 cubic meters per month;		1 950	1 950	2100
	- from 5001 cubic meters to 1000 cubic meters per month;		2 275	2 275	2500
	- from 10001 cubic meters and above per month	cubic meter	2600	2600	3000
	b) based on monthly consumption during the months of March-October:				
			650	650	1 000
	-up to 500 cubic meters per month;		1 500	1 500	1 800

	- from 501 cubic meters to 2500 cubic meters per month;		1 950	1 950	2 100
	- from 2501 cubic meters to 5000 cubic meters per month;		2 275	2 275	2 500
	- from 5001 cubic meters to 10000 cubic meters per month;		2 600	2 600	3 000

A fixed amount for electricity.

S/n	Consumer name	Unit of measurement	Prices per unit of measurement (including VAT, so‘ms)
1.2.1.	For household consumers living in multi-apartment buildings and dormitories equipped with centralized electric stoves for cooking, based on monthly consumption:	kWh	
	- up to 200 kWh per month;		225
	- from 201 kWh to 1000 kWh per month;		450
	- from 1001 kWh to 5000 kWh per month;		675
	- from 5001 kWh to 10000 kWh per month;		787,5
	- 10000 kWh per month and above.		900
1.2.2.	For other consumers, based on monthly consumption:		
	- up to 200 kWh per month;		450
	- from 201 kWh to 1000 kWh per month;		900
	- from 1001 kWh to 5000 kWh per month;		1 350
	- from 5001 kWh to 10000 kWh per month;		1 575
	- from 10 000 kWh per month and above		1 800

For this reason, the demand for energy-efficient buildings, that is, the demand for increasing the energy efficiency of buildings and their construction, is increasing.

It is natural for people to ask the question "how can I spend less energy on heating a building (creating a moderate room temperature) in the winter and less electricity on cooling a building (creating a moderate room temperature) in the summer?". Let's give some information about this:

The moderation in the room is lost through the external barrier structures of the building. The external barrier structures of the building include: roofs, roofing, walls, foundations, floors, doors and windows.

These are different ways to increase the thermal conductivity resistance, and we will consider each structure individually.

Covering the underside of the roof structure and the top of the roof structure with thermal insulation material,

Increasing the cross-sectional dimensions of the walls, laying bricks with a gap in the brickwork, covering them with thermal insulation materials,

Increasing the cross-sectional dimensions of the floors or covering the underside with thermal insulation material,

Covering the foundations with thermal insulation materials from the outside,

Making doors and windows from PVC material and increasing the number of glazing units. By building such energy-efficient buildings, an energy-efficient house saves up to 50% of natural gas and electricity compared to a regular house.

In conclusion, we can say that the number of people in our country is increasing from year to year. As a result, the demand for natural resources is also increasing. For this reason, saving natural resources, designing and constructing energy-efficient buildings and structures and devices remains one of the important issues.

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