



University:Namangan Engineering-Construction Institute (NamECI)Country:UzbekistanWeb Address:<a href="https://www.nammgi.uz/">https://www.nammgi.uz/</a>

[2] Energy and Climate Change (EC)

### [2.1] Energy Efficient Appliances Usage









#### Energy Efficient Appliances Usage (made by Professors of NamECI)

#### Description:

Example:

A set of processes aimed at efficient, that is, rational use of energy resources is the primary definition of energy efficiency. Achieving the desired result at the expense of less energy consumption for the energy supply of buildings or production processes is also an indicator of efficiency. At the current level of technical and technological development, achieving economically based efficiency in the use of fuel and energy resources, as well as compliance with the requirements of environmental protection, are among them. The set of concepts and knowledge related to energy efficiency is located at the intersection of engineering, economics, law and social spheres and is formed in the "necessary form" for each society.

According to the laws of physics, energy does not exist from nothing, only its form (type) changes. Even today, electricity is obtained by generating a magnetic field in exchange for a rotating mechanical movement. Because there is no way to grieve or save it. The speed of movement of electrical energy is equal to the speed of light, and it is consumed as soon as it is produced. And mechanical energy appears at the expense of thermal energy (in steam-gas devices), and this process cannot be imagined without oil-gas products or coal fuel. And our natural resources are innumerable. In addition, conventional electricity generation is an indicator of environmental sustainability. Therefore, the institute is working to provide all buildings with renewable energy sources.

The institute has an energy efficiency plan to reduce overall energy consumption. Based on this, the institute signed a contract with "SUN-HIGHTECH" LLC for 330.0 million soums on the condition of delivery and installation of a 30 kW network solar station, and 57 mini-stations with 30 kW solar panels were installed on the roof of the 3rd Campus of the institute.

Appliance	Total Number	Total number energy Efficient appliances	Percentage
LED Lamp	4500	3850	85%
Solar panels	1128	1128	100%

Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):

https://nammqi.uz/sdg-721-energy-efficiency-standards-1 https://nammqi.uz/sdg-724-reducing-overall-energy-consumption





Coverage of the solar panels installed at the Namangan Engineering Construction Institute in mass media

The solar panels installed in the buildings of the institute were widely covered by the media center of the institute, Namangan regional television and radio and Uzbekistan 24 TV channels, as well as social networks.

Broadcast by NamECI media center



Ўзбекистон 24HD телеканали орқали берилган эфир







### Broadcast by Namangan MTRK TV channel







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## [2.3] Smart Building Implementation

### \*Min. at least five requirements for each building

No.	Name	Place	acitemetice	automation			salety			energy		water		Indoor	environment			:	lighting		Building Area (m²)
			B1	B2	<b>S1</b>	<b>S2</b>	<b>S</b> 3	<b>S4</b>	E1	E2	A1	A2	11	12	13	14	L1	L2	L3	L4	
1	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> Campus	12, Islam Karimov st. Yangi Namangan region, Uzbekistan			x	x	x	x				x					x				28706
2	4 <sup>th</sup> Campus	1, Anorzor st. Yangi Namangan region, Uzbekistan				x	x	x									x				<del>9554.92</del>
3	5 <sup>th</sup> Campus	6, 8-March st. Yangi Namangan region, Uzbekistan				x	x	x									x				<del>12353.31</del>
4	6 <sup>th</sup> Campus	106, M.Murodov st. Namangan city, Uzbekistan				x	x	x									x				<u>2878</u>
5	7 <sup>th</sup> Campus	1, Temur Malik st. Yorkurgan village, Uychi district, Namangan region, Uzbekistan				x	x	x									x				<del>11837.74</del>
6	Student Dormitory	27, Islam Karimov st. Yangi Namangan region, Uzbekistan				x	x	x									x				<del>1013</del>
		Total																			28706

- Please compile one row for each building (or homogeneous part of it) by ticking with a "X" for each requirement —

#### Smart building implementation

 $\frac{total\ smart\ building\ area}{total\ building\ area} \times 100\%$ 

Example:

\*Total Building Area: 66343 m<sup>2</sup>

$$\frac{28706m^2}{66343\,m^2} \times 100\% = 43.26\%$$

*Note:* One building could be classified as a smart building if it has a minimum of 5 features. Please add the total smart building area from buildings which are classified as smart buildings.





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## [2.5] Renewable Energy Sources in Campus



Example of Solar Panels (Namangan Engineering-Construction Institute, Uzbekistan)

### **Description:**

On roofs of administration building, library, laboratory building, school factories and other teaching buildings and dormitories, solar PV power station of total 537KW/H is installed.

According to the laws of physics, energy does not exist from nothing, only its form (type) changes. Even today, electricity is obtained by generating a magnetic field in exchange for a rotating mechanical movement. Because there is no way to grieve or save it. The speed of movement of electrical energy is equal to the speed of light, and it is consumed as soon as it is produced. And mechanical energy appears at the expense of thermal energy (in steam-gas devices), and this process cannot be imagined without oil-gas products or coal fuel. And our natural resources are innumerable. In addition, conventional electricity generation is an indicator of environmental sustainability. Therefore, the institute is working to provide all buildings with renewable energy sources.

https://nammqi.uz/en/imtiyozli-shartlarda-quyosh-panellarini-ornatib-tekin-va-uzluksiz-elektr-energiyasigaega-boling





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### [2.6] Electricity Usage per Year (in Kilowatt hour)



#### **Description:**

The total electricity usage of Namangan Engineering-Construction Institute ]form November 2022 to October 2023 \*() is 1 011 352 kWh. All campus area of Namangan Engineering-Construction Institute electricity is used for lighting, cooling, heating and laboratory appliances.

### Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):

### https://nammqi.uz/moliyaviy-faoliyat

N⁰	2022	electricity usage of all campuses of Namangan						
		Engineering-Construction Institute						
1	November	153217						
2	December	157196						
	2023							
3	January	101 571						
4	February	185 299						
5	March	69 526						
6	April	59 313						
7	May	55 691						





	Total	1 011 352 kWh
12	October	52 539
11	September	43 952
10	August	39 652
9	July	36 970
8	June	56 426





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### [2.8] ratio of renewable energy production divided by total energy usage per year



#### **Description:**

No	Renewable Energy	Production (in kWh)
1	Solar panel	1 197 725
	Total	1 197 725

Nº	2022	Production (in kWh
1	November	128 880
2	December	94 512
	2023	
3	January	85 920
4	February	90 216
5	March	98 808
6	April	107 400





7	May	111 696
8	June	115 992
9	July	106 541
10	August	96 230
11	September	84 202
12	October	77 328
	Total	1 197 725 kWh

## 1197725/ 1011352 (Electricity usage) = 1.18 %

Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):