**TASDIQLAYMAN**
**Toshkent davlat tibbiyot**
**Universiteti Rektori**
**Sh.A. Boymuradov**
**“____” _____**

# TOSHKENT DAVLAT TIBBIYOT UNIVERSITETI

# REKTORINING BUYRUG‘I

## Universitetda energiya sarfini tahlil qilish va energiya auditi jarayonini tashkil etish to‘g‘risida

Universitet binolari va obyektlarida energiya resurslaridan foydalanish samaradorligini baholash, energiya isrofi yuqori bo‘lgan yo‘nalishlarni aniqlash, energiya sarfini kamaytirish imkoniyatlarini belgilash hamda energiya iste’moli monitoringini takomillashtirish maqsadida BUYURAMAN:

1. Universitetda energiya sarfini tahlil qilish va energiya auditi jarayonini tashkil etish bo‘yicha dastur 1-ilovaga muvofiq tasdiqlansin.

2. Energetika va xo‘jalik masalalari uchun mas’ul tarkibiy bo‘linma energiya tekshiruvlarini muvofiqlashtiruvchi mas’ul bo‘linma etib belgilansin.

3. Universitetning fakultetlari, klinikalari, markazlari, o‘quv, ilmiy va ma’muriy binolari hamda boshqa tegishli obyektlari rahbarlari tekshiruv uchun zarur energiya iste’moli ma’lumotlari va obyektlarga kirish imkoniyatini belgilangan tartibda ta’minlasin.

4. Mas’ul bo‘linma:

4.1. elektr energiyasi, issiqlik energiyasi va mavjud bo‘lgan boshqa energiya resurslari iste’moli haqidagi ma’lumotlarni yig‘sin va tahlil qilsin;

4.2. energiya sarfi yuqori bo‘lgan binolar, tizimlar va foydalanish yo‘nalishlarini aniqlasin;

4.3. yoritish, isitish, sovutish, ventilyatsiya va boshqa muhandislik tizimlarining energiya samaradorligini ko‘zdan kechirsin;

4.4. aniqlangan energiya isrofi va samarasiz foydalanish holatlari bo‘yicha tavsiyalar ishlab chiqsin;

4.5. tekshiruv natijalari bo‘yicha dalolatnoma yoki hisobot tayyorlab, universitet rahbariyatiga taqdim etsin.

5. Tekshiruvlar dastlab mavjud hisoblagich ko‘rsatkichlari, to‘lov hujjatlari, texnik hujjatlar va obyektlarni ko‘zdan kechirish asosida amalga oshirilsin. Maxsus o‘lchov uskunalari yoki akkreditatsiyalangan energiya auditi talab etiladigan holatlarda tegishli malakali tashkilot yoki mutaxassislarni jalb etish masalasi alohida tartibda ko‘rib chiqilsin.

6. Tekshiruv natijalariga ko‘ra aniqlangan kamchiliklarni bartaraf etish va energiya sarfini kamaytirish bo‘yicha takliflar, zarur hollarda alohida chora-tadbirlar rejasi shakllantirilsin.

7. Dastur ijrosi mavjud moliyaviy resurslar, texnik imkoniyatlar va amaldagi xarid tartib-taomillarini hisobga olgan holda amalga oshirilsin.

**1-ILOVA**

# UNIVERSITETDA ENERGIYA SARFINI TAHLIL QILISH VA ENERGIYA AUDITI DASTURI

## 1. Dasturning maqsadi

Universitet binolari va obyektlarida energiya iste’moli holatini tizimli o‘rganish, energiya isrofi yuqori bo‘lgan yo‘nalishlarni aniqlash, energiya samaradorligini oshirish imkoniyatlarini belgilash va rahbariyat uchun asoslangan tavsiyalar tayyorlash.

## 2. Tekshiruv doirasi

Tekshiruv universitetning o‘quv, ilmiy, klinik, ma’muriy va yordamchi binolari hamda tegishli infratuzilma obyektlarini qamrab oladi. Obyektlar ro‘yxati universitetning amaldagi balans va foydalanish ma’lumotlari asosida shakllantiriladi.

## 3. Tekshiruvning asosiy bosqichlari

| T/r | Bosqich | Mazmuni |
|---|---|---|
| 1 | Dastlabki ma’lumotlarni yig‘ish | Elektr va issiqlik energiyasi hisoblagichlari ko‘rsatkichlari, hisob-fakturalar, mavjud texnik hujjatlar va obyektlarning foydalanish rejimini yig‘ish. |
| 2 | Energiya iste’molini tahlil qilish | Obyektlar kesimida energiya sarfini davrlar bo‘yicha taqqoslash, yuqori iste’mol va keskin o‘zgarishlarni aniqlash. |
| 3 | Obyektlarni ko‘zdan kechirish | Yoritish, isitish, sovutish, ventilyatsiya, issiq suv va boshqa energiya iste’mol qiluvchi tizimlarning holatini ko‘rib chiqish. |
| 4 | Energiya isrofi manbalarini aniqlash | Keraksiz ishlayotgan uskunalar, samarasiz yoritish, issiqlik yo‘qotishlari, noto‘g‘ri foydalanish rejimlari va boshqa ehtimoliy isrof manbalarini qayd etish. |
| 5 | Tavsiyalar ishlab chiqish | Aniqlangan muammolarni bartaraf etish bo‘yicha tashkiliy, texnik va investitsion tavsiyalarni ishlab chiqish. |
| 6 | Hisobot tayyorlash | Tekshiruv natijalari, foydalanilgan ma’lumotlar, aniqlangan muammolar va tavsiyalarni hisobot yoki dalolatnomada rasmiylashtirish. |

## 4. Tekshiruv davriyligi va ustuvorlik

Energiya sarfi tahlili kamida yil yakunida umumlashtiriladi. Obyektlarni batafsil ko‘zdan kechirish energiya iste’moli yuqori bo‘lgan yoki sarfida sezilarli o‘zgarish kuzatilgan obyektlardan boshlanadi. Zaruratga qarab qo‘shimcha tekshiruvlar tashkil etiladi. Aniq davriylik va obyektlar ketma-ketligi mavjud ma’lumotlar hamda resurslardan kelib chiqib mas’ul bo‘linma tomonidan belgilanadi.

## 5. Hisobotning minimal tarkibi

• tekshirilgan obyekt nomi va tekshiruv sanasi;

• ko‘rib chiqilgan energiya resurslari va foydalanilgan ma’lumotlar manbalari;

• energiya iste’moli bo‘yicha mavjud ko‘rsatkichlar va taqqoslash davri;

• aniqlangan yuqori sarf yoki ehtimoliy energiya isrofi nuqtalari;

• tavsiya etilgan tuzatish choralari va ularning kutilayotgan natijasi;

• qo‘shimcha o‘lchov yoki professional audit zarurati.

## 6. Mas’uliyat va natijalardan foydalanish

Mas’ul bo‘linma tekshiruvlarni muvofiqlashtiradi, ma’lumotlarni umumlashtiradi va natijalarni universitet rahbariyatiga taqdim etadi. Tarkibiy bo‘linmalar tegishli ma’lumotlarni taqdim etish va obyektlarni ko‘zdan kechirishda hamkorlik qiladi. Tekshiruv natijalari energiya samaradorligini oshirish bo‘yicha keyingi qarorlar va chora-tadbirlar rejasini ishlab chiqishda foydalaniladi.

**APPROVED**
**Rector of Tashkent State Medical University**
**_____ Sh.A. Boymuradov**
**“ ” _____ 2025**

# ORDER OF THE RECTOR OF TASHKENT STATE MEDICAL UNIVERSITY

## On Establishing an Energy Review and Energy Audit Process at the University

In order to assess the efficiency of energy use in University buildings and facilities, identify areas with high energy wastage, determine opportunities to reduce energy consumption and improve energy-use monitoring, I HEREBY ORDER:

1. The University Energy Review and Energy Audit Programme shall be approved in accordance with Annex 1.

2. The structural unit responsible for energy and facilities management shall coordinate the University's energy reviews.

3. Heads of faculties, clinics, centres, academic, research and administrative buildings and other relevant facilities shall provide the energy consumption information and access required for reviews in accordance with established procedures.

4. The responsible unit shall:

4.1. collect and analyse available data on electricity, heat and other energy resources;

4.2. identify buildings, systems and operations with high energy consumption;

4.3. review the energy performance of lighting, heating, cooling, ventilation and other engineering systems;

4.4. develop recommendations concerning identified energy wastage and inefficient use;

4.5. prepare review records or reports and submit them to University management.

5. Initial reviews shall be based on available meter readings, billing records, technical documentation and site inspections. Where specialised measurement equipment or an accredited energy audit is required, the engagement of a qualified organisation or specialist shall be considered separately.

6. Based on review findings, recommendations and, where necessary, a separate action plan shall be developed to address identified issues and reduce energy consumption.

7. The Programme shall be implemented subject to available financial resources, technical feasibility and applicable procurement procedures.

## ANNEX 1

# UNIVERSITY ENERGY REVIEW AND ENERGY AUDIT PROGRAMME

### 1. Purpose

To systematically examine energy consumption across University buildings and facilities, identify areas with high energy wastage, determine opportunities to improve energy efficiency and prepare evidence-based recommendations for University management.

### 2. Scope

The Programme covers the University's academic, research, clinical, administrative and auxiliary buildings and relevant infrastructure. The list of facilities shall be established using the University's current asset and facility-use records.

### 3. Main Review Stages

| No. | Stage | Description |
|---|---|---|
| 1 | Collection of initial data | Collect electricity and heat meter readings, invoices, available technical documentation and information on facility operating schedules. |
| 2 | Analysis of energy consumption | Compare energy use by facility and period and identify high consumption levels and significant changes. |
| 3 | Site inspections | Review the condition and operation of lighting, heating, cooling, ventilation, hot-water and other energy-consuming systems. |
| 4 | Identification of energy wastage | Record unnecessary equipment operation, inefficient lighting, heat losses, inappropriate operating schedules and other potential sources of wastage. |
| 5 | Development of recommendations | Prepare operational, technical and investment recommendations to address identified issues. |
| 6 | Preparation of reports | Document the review findings, data sources, identified issues and recommendations in a report or inspection record. |

### 4. Frequency and Prioritisation

Energy consumption analysis shall be consolidated at least annually. Detailed site reviews shall prioritise facilities with high energy consumption or significant changes in consumption. Additional reviews may be arranged as needed. The responsible unit shall determine the sequence and detailed frequency based on available data and resources.

### 5. Minimum Contents of a Review Report

• name of the facility reviewed and date of review;

• energy resources examined and sources of information used;

• available energy consumption figures and comparison period;

• identified high-consumption areas or potential energy wastage;

• recommended corrective measures and their expected outcomes;

• need for additional measurements or a professional energy audit.

### 6. Responsibilities and Use of Findings

The responsible unit shall coordinate reviews, consolidate information and submit findings to University management. Structural units shall cooperate by providing relevant information and access to facilities. Findings shall inform subsequent decisions and action plans to improve energy efficiency.

Note: This Programme is intended to organise internal energy-use analysis and preliminary reviews. It does not replace a formal energy audit for which legislation may require a licence, accreditation or specific professional qualifications.