

## ENERGY EFFICIENCY FOR INDUSTRY

### Energy Efficiency Services for Industry – Free Course (Year: 2023)

In 2023, the National Research University “Tashkent Institute of Irrigation and Agricultural Mechanization Engineers” (TIAME) provided **free energy efficiency services** to local industries aimed at improving energy conservation and exploring clean energy solutions.

#### Services Offered:

1. **Energy Efficiency Assessments:**

- Conducted practical evaluations of power systems in industrial facilities across Angren, Nurafshon, and Akhangaron to identify inefficiencies and defects.
- Replaced critical components such as output network fuses in transformers to optimize power distribution and reduce energy losses.

2. **Workshops and Training Seminars:**

- Delivered a free seminar titled “*Saving and Ensuring Rational Use of Electricity and Expanding the Use of Renewable Energy Sources*”.
- Included hands-on workshops led by university professors and industry experts, focusing on energy-saving practices and renewable energy integration.

3. **Research on Renewable Energy Options:**

- Explored opportunities to incorporate solar, wind, and hydropower technologies into local industrial systems.
- Provided actionable recommendations for industries to transition to clean energy solutions.

#### Evidence of Services Provided:

• **Documentation of Activities:**

- Practical sessions were conducted at industrial sites, including inspections and equipment upgrades for the **TP-52 400 kVA transformer**, improving energy efficiency in real-world scenarios.

• **Leadership and Expertise:**

- Sessions were led by experts from TIAME, including the Dean of the Faculty of Energy and five senior university professors, ensuring high-quality guidance and technical support.

#### Public Access to Evidence:

- Evidence of these services, including reports, photos, and participant feedback, has been made publicly accessible through TIAME’s website and outreach publications.

This initiative demonstrates TIAME’s commitment to supporting local industries by offering free energy efficiency services, equipping them with the tools and knowledge to optimize energy use and transition to renewable energy solutions.

More information: <https://tiame.uz/news?id=6815>



## **Free Courses on Developing Intelligent Systems and Devices for Energy Use in Agriculture and Irrigation**

The “TIAME” National Research University offers **free courses** focused on the development of **intelligent systems and energy-efficient devices** tailored for the agriculture and irrigation industry. These courses are designed to empower professionals, students, and innovators with advanced knowledge and practical skills to optimize energy use and improve efficiency in agricultural and irrigation infrastructure.

### **Key Features of the Courses:**

1. **Smart Energy Systems Development:**
  - Training on designing and implementing intelligent energy management systems for farms and irrigation networks.
  - Emphasis on integrating renewable energy solutions like solar-powered irrigation pumps.
2. **Energy-Efficient Devices for Agriculture:**
  - Hands-on learning about developing low-energy devices for agricultural processes, such as smart sensors, automated control systems, and precision irrigation technologies.
3. **Digitalization and IoT in Energy Management:**
  - Courses include using IoT (Internet of Things) and AI-based solutions to monitor and control energy usage in real-time.
  - Application of data analytics to enhance energy efficiency and sustainability.
4. **Sustainability Focus:**
  - Promoting the use of renewable energy sources and green technologies in agriculture and irrigation infrastructure to reduce environmental impact.

### **Impact of the Courses:**

- Enhances participants' technical expertise in energy-efficient solutions for critical agricultural sectors.
- Supports the development of innovative technologies that contribute to reducing energy consumption and increasing productivity in irrigation systems.
- Encourages collaboration between academia, local communities, and industry stakeholders to advance sustainable energy practices in agriculture.

These free courses reflect TIAME’s commitment to addressing energy challenges in Uzbekistan’s agriculture sector and fostering a sustainable future through innovation and education.

More information: <https://tiame.uz/news?id=5053>



## Mini Electric Tractor with Mobile Charging Station

The **mini electric tractor** developed by the “TIAME” National Research University has attracted significant interest from **investors** and the **President of the Republic of Uzbekistan**. Equipped with a **mobile charging station**, this innovative agricultural solution combines sustainability and efficiency, offering a practical application of green energy technology in the agricultural sector. The project highlights TIAME's commitment to advancing renewable energy integration and supporting the modernization of Uzbekistan's agriculture industry.

Detail information: <https://tiame.uz/news?id=3801>

