

ESTABLISHING 'GREEN ENERGY' WORKSHOPS IN VOCATIONAL SCHOOLS AND TRAINING MID-LEVEL SPECIALISTS FOR THE TRANSITION TO A GREEN ECONOMY

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ABSTRACT

The article discusses the organization of necessary workshops and laboratories in the vocational education system to effectively utilize renewable energy sources and train mid-level specialists in this field. Establishing these practical training workshops aims to contribute to the development of "green" energy, especially through the widespread adoption of renewable energy sources, increasing energy efficiency, and contributing to the national economy through production. Additionally, this initiative will create an opportunity for vocational schools to generate supplementary income.

Keywords: "green economy," sustainable development, environment, renewable energy, profession, green energy, "green" jobs, electrical energy, professional education.

¹[The resolution of the President of the Republic of Uzbekistan, Sh. Mirziyoyev, on "Approving the Strategy for Transition to a Green Economy in the Republic of Uzbekistan for 2019–2030" (No. PQ-4477, dated October 4, 2019) highlights the significant importance of transitioning to a green economy in our country. According to the resolution, one of the urgent tasks of today is diversifying the energy mix by extensively utilizing renewable energy resources and replacing traditional fuel types with renewable energy sources to reduce their share in electricity and heat energy production. Moreover, the use of renewable energy types contributes to improving the ecological state of industrial zones.

Target parameters for developing renewable energy have been approved. By 2025, the share of renewable energy sources in the structure of electricity production capacity is planned to increase from 12.7% to 19.7%. This includes growth from 12.7% to 15.8% for hydropower, 2.3% for solar energy, and 1.6% for wind energy. Furthermore, within the framework of investment projects for the development of renewable energy, it is planned to implement 810 projects worth a total of \$5.3 billion from 2017 to 2025.]¹

²[Between 2017 and 2021, 17,251 heating boilers were replaced in 6,333 budgetary organizations under the Ministry of Preschool and School Education, the Ministry of Health, and the Ministry of Higher Education, Science, and Innovations.

During the same period, 879 pumps and 1,523 electric motors were replaced in the water management organizations of the Ministry of Agriculture and Water Resources.

Besides, ensuring environmental protection, ecological and energy security, solving social tasks, improving the quality of life of the population, and preserving non-renewable hydrocarbon energy resources for future generations are the main factors driving the development of renewable energy sources.

Currently, significant organizational and practical measures are being implemented to expand the use of solar energy. Given Uzbekistan's favorable geographic location, with 320 sunny days per year, utilizing solar energy holds great potential.]₂

₃[Today, alternative energy plays an increasingly important role in developing the global fuel-energy complex. The depletion of natural resources and the environmental harm caused by industrial emissions are driving the growth of this sector. As a result, significant investments are being made in alternative energy and, in particular, renewable energy sources, despite global economic challenges.

For instance, at the Shirin Energy College in Shirin City, Syrdarya Region, young specialists are being trained for professions such as "technician," "operator," and "dispatcher" of alternative energy stations under the order of the Saudi Arabian company ACWA Power. The company has funded the construction of a modern workshop, laboratory, and dormitory worth \$2.8 million at the college. This success demonstrates the possibility of implementing similar projects in other vocational education institutions across the country.

In particular, efforts to develop the green economy include a project to produce alternative energy at Uzbekistan District Vocational School No. 1 in the Fergana Region. The district has over 20 large enterprises, more than 500 small and medium-sized business entities, and more than 100 public organizations. Many of these are expected to transition to green energy sources in the near future.

The goal is to prepare mid-level specialists in this field, meet the district's staffing needs, assist in reducing unemployment, and generate off-budget revenue. As part of this initiative, a pilot training and practice workshop will be established at the school.

Experimental equipment: Solar panels, batteries, inverters, and other devices will be installed on a laboratory table. Practical work plans will be developed based on this laboratory.

Professional standards: Introducing technical service professions for renewable energy sources in all professional educational institutions across the Republic, developing professional standards, qualification requirements, and model curricula for these professions.

Significance: Considering the importance of energy sector reforms, training highly qualified and competitive personnel in renewable energy sources is one of the main goals of professional educational institutions.

The installation of alternative energy sources and the production of electricity as part of the transition to a green economy will help meet the country's energy needs, create new jobs, and improve employment efficiency among young people]

Conclusion

The establishment of green energy laboratories and workshops in vocational schools will help meet future demands for specialists in this field. Mid-level specialists trained in renewable energy—such as installers, service technicians, and dispatchers—will secure jobs in the green energy sector. These workshops and laboratories will contribute significantly to the labor market while also generating additional income for vocational schools.

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