EUROPASS CERTIFICATE SUPPLEMENT

1. TITLE OF THE PROFESSION

07134009 Megújuló és egyéb primer energiaforrású kiserőmű erősáramú létesítője

2. TRANSLATED TITLE OF THE PROFESSION

High current installer of renewable and other primary energy power plants
(THIS TRANSLATION HAS NO LEGAL STATUS)

3. PROFILE OF SKILLS AND COMPETENCES

- The high current installer of renewable and other primary energy power plants (household-sized small power plant, non-licensed small power plant) - carries out the electrical construction, preparation and construction of the network connection, as well as the commissioning of the equipment in a small power plant or independently established storage capacity;
- plans work processes, materials, tools and human resources, manages and prepares the documentation, interprets them, corrects them if necessary, uses software for this;
- performs measurements with instruments that measure electrical and other physical quantities related to the primary energy source of the production equipment and prepares reports based on these;
- installs, checks, and troubleshoots electrical machines, power electronic devices, and auxiliary energy sources. Installs and sets parameters for protection, automation and control devices;
- inspects and examines the high-current equipment they have installed, conducts operational tests, commissioning, and conducts trial runs;
- performs their work at high standards, independently and responsibly, in compliance with the professional rules: standards, regulations, technical regulations, the relevant work, fire, environmental and health protection and safety regulations;
- Note: the high current installer of renewable and other primary energy power plants qualification alone does not provide authorization to operate equipment with a voltage level exceeding the upper limit of low voltage (1000 VAC, 1500 VDC) (under the law, only a person with a professional qualification as an electrical network operator or electrical substation operator is authorized to do so)..

4. CLASSIFICATION OF THE VOCATIONAL TRAINING ACCORDING TO THE ISCED FIELDS OF EDUCATION AND TRAINING (ISCED-F)

0713 Energetics and electricity

(*) Explanatory notes:

[1] In the original language. | [2] The translation of the designation is provided for information purposes only. | [3] Fill it out if necessary. The certificate supplement provides additional information on the qualification but have no legal value in itself. The format of the description is in conformity with Decision (EU) 2018/646 of the European Parliament and of the Council of 18 April 2018 on a common framework for the provision of better services for skills and qualifications (Europass) and repealing Decision No 2241/2004/EC.

5. OFFICIAL BASIS OF THE CERTIFICATE

Name and status of the authority issuing the certificate

Name and status of the national/regional authority providing accreditation/recognition of the certificate

Ministry for Innovation and Technology

Level of the certificate (national or international)

NQF level: 4

EQF level: 4

Digital Competence Framework level: 5

Grading scale / Pass requirements

Five -grade:
5 excellent
4 good
3 satisfactory
2 pass
1 fail

Certificate number: CXK A

Serial number: 123456

Certificate issue date:

2023.12.07

Designation of the theoretical and practical subjects of the vocational qualification examination and their grades according to a five-grade scale

written		
Basic knowledge on renewable and other primary energy power plants	100%	5
project exercise		
Installation of high current renewable and other primary energy power plants	100%	5
Result of the qualification examination	100%	5

Access to next level of education/training

International agreements

Other information concerning the vocational training process

Ministry of Urban and Municipal Management Decree 1/1956. (VII. 24.); Ministry of Labour Decree 2/1959. (IV. 10.); Ministry of Labour Decree 13/1969. (XII. 30.); Ministry of Culture Decree 18/1986. (VIII. 26.); Ministry of Labour Decree 7/1993. (XII. 30.); Ministry of Education Decree 27/2001. (VII. 27.); Ministry of Education Decree 37/2003. (XII. 27.); Ministry of Education Decree 1/2006. (II. 17.); Government Decree 150/2012. (VII. 6.); Ministry of Heavy Industry Decree 5/1972. (V. 16.); Ministry of Construction and Urban Development Decree 18/1972. (XI. 17.); Ministry for Metallurgy and Machinery Decree 1/1972. (VI. 14.); Ministry of Culture Decree 16/1984. (IX. 12.);

Legal basis

Government Decree 12/2020 (II. 7.) on the Implementation of the Vocational Education and Training Act,
Government Decree 319/2020 (VII. 1.) on the amendment of Government Decree 12/2020 (II. 7.) on the Implementation of the Vocational Education and Training Act,
Government Decree 11/2020 (II. 7.) on the Implementation of the Act on Adult Education,
Government Decree 292/2023 (VII. 6.) on the amendments to government decrees due to the ex-post impact assessment of the transformation in vocational education and training.

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

Description of the sectoral basic training and the theoretical and practical vocational training	Distribution of programme elements in percentage
Total duration of the education/training	500 hours

Entry requirements:

- Educational attainment: secondary school-leaving examination
- Professional qualification: Electrician: pursuant to Ministry of Urban and Municipal Management Decree 1/1956. (VII. 24.) on local industrial training, Ministry of Labour Decree 2/1959. (IV. 10.) on the vocational examination of students of industrial (technical), agricultural and commercial studies as well as non-student work, Ministry of Labour Decree 13/1969. (XII. 30.) on the execution of Act VI of 1969 on apprenticeship training, furthermore pursuant to Ministry of Culture Decree 18/1986. (VIII. 26.) on the majors and professions to be taught at vocational secondary schools and vocational training schools provides qualification for no. 625 Electrician, no. 503 Electrician, no. 505 branching Electrician 505-1 Electrical equipment repairer, 505-2 Building electrician, 505-3 Railway electrician, 505-4 Electrical network technician, no. 506 General Electrician, furthermore pursuant to Ministry of Labour Decree 7/1993. (XII. 30.) on the National Qualifications Register, Ministry of Education Decree 27/2001. (VII. 27.), Ministry of Education Decree 37/2003. (XII. 27.) and Ministry of Education Decree 1/2006. (II. 17.) no. 07 2 7624 02 31 17 Electrician, no. 33 5216 03 Electrician, no. 33 522 04 1000 00 00 Electrician and Government Decree 150/2012. (VII. 6.) on the National Qualifications Register and on the procedure for the amendment of the National Qualifications Register 34 522 04 Electrician 33 5222 03 Electrician and appliance repairer Government Decree 12/2020. (II. 7.) on the execution of the Act on Vocational Training no. 4/17 4 0713 04 07 Electrician; -Technician: Ministry of Heavy Industry Decree 5/1972. (V. 16.) on technician qualification, Ministry of Construction and Urban Development Decree 18/1972. (XI. 17.) on technician qualification, Ministry for Metallurgy and Machinery Decree 1/1972. (VI. 14.) on technician qualification, furthermore pursuant to Ministry of Culture decree 16/1984. (IX. 12.) on technician and skilled worker training in technical secondary schools, provides qualification for (41.) (21-0600) Electrical power industry technician, (36.) Building electrician technician, (42.) Electrical equipment and device technician, (10.10) Electrical equipment device and machine manufacturing technician and pursuant to Ministry of Labour Decree 7/1993. (XII. 30.) on the National Qualifications Register, Ministry of Education Decree 27/2001. (VII. 27.), Ministry of Education Decree 37/2003. (XII. 27.) and Ministry of Education Decree 1/2006. (II. 17.) 52 5422 01 Electrical technician, 52 5422 02 High-voltage electrical technician, 52 5422 03 Electrical equipment device and machine technician, 07 5 3118 16 30 18 Electrical equipment device and machine technician, 54 522 01 0000 00 00 High-voltage electrical technician and provides a certificate of vocational secondary school education with the following entry: provides qualification for electrical power industry works. Government Decree 150/2012. (VII. 6.) on the National Qualifications Register and on the procedure for the amendment of the National Qualifications Register 54 522 01 High-voltage electrical technician Government Decree 12/2020. (II. 7.) on the execution of the Act on Vocational Training 5 0713 04 04 High-voltage electrical technician; -Engineer: Electrical engineer (BsC, MsC), in the case of graduates from the power engineering major, if: the diploma includes one of the following specializations (branches): electrical works, electrical machines, electrical energy, building electrification Insofar as only the Electrical engineer qualification is listed in the diploma and the electrical engineering specialization cannot be determined, the specialist qualification is to be determined from the registration book.
- Medical Fitness requirement: necessary

Further information:

WRITTEN EXAMINATION EXERCISES
MSZ 1585 standard knowledge; technical terms, personnel, organisation, communication, tools, structures, tools, working without voltage, under voltage, in proximity to voltage, technical rescue and first aid; symbols, pictograms; connection of a small power plant to the public network; Operating Regulations, Distribution Regulations; characteristics of electrical networks; alternating current energy system, star point management methods, network topologies, free wire and cable assemblies, wire materials, cable cross-sections, typical transformer stations, switchgear; safety technology; lightning protection, overcurrent protection, overvoltage protection, electric shock protection, fire isolation; photovoltaic systems; Solar panel, inverter, DC system, AC system; calculation task; Low-voltage line sizing for voltage drop, power loss, loop resistance calculation, starter and section fuse sizing for load and protection against electric shock. Calculation of electrical characteristics of consumer equipment. Calculation of equipment's dedicated short-circuit power, checking of switching devices for short-circuit strength. Determination of motor, capacitor bank, battery bank overcurrent protection.

PROJECT EXERCISES
Examination part no. 1: presentation of training portfolio. The portfolio is a self-drafted outline, which includes the schematic presentation of the following subject fields and related notions: -structure of the electricity system from producers to consumers, - topological design of different voltage network systems, - protection of different voltage network systems against short circuits, overload, overvoltage and electric shock, - small power plants in the electricity system, - electrical safety technology, - photovoltaic generating equipment, - handover/acceptance of the work area, on-site supervision, - creation of a voltage-free work environment, - technical rescue and first aid provisions. and includes the documents created during the practical sessions: - presentation of small power plants, electrical devices, and equipment learned in practice, - completed calculation tasks, - protocols completed in practice, commissioning instructions, - protocols of measurements carried out during training. Portfolios are to be submitted to the examination centre for evaluation 10 days prior to the examinaton!
Presentation of a case study, answering the exam board's questions. The case study consists of the presentation of the sub-task of the establishment of a high-current small power plant, including the outline of possible solution, the analysis of the proposed solution, with which the fulfillment of the theoretical and practical learning outcomes, as well as the clear, decisive communication are to be measured and evaluated in one of the following topics: - DC-side design of photovoltaic equipment, - the design of the medium voltage equipment of a small power plant with renewable and other primary energy sources, - the establishment of a storage capacity connected to the producer's distribution network or featuring an independent public network connection, - the commissioning procedure of a small power plant.

You can find more information on the Programme and System Requirements in the following link: https://ikk.hu
This certificate supplement was elaborated in accordance with the programme requirements registered by the minister responsible for VET.

National Reference Point: National Office of Vocational Education and Training and Adult Learning: https://nrk.nive.hu

Head of Examination Organiser:
Issue date: 2023.12.07

SEAL