



Renewable Energy Services in Education and Training

Component
within project:
Decarbonisation
of the Electricity Sector
in the Western Balkans

**ERI
SEE** | Education
Reform
Initiative of
South
Eastern
Europe


german
cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by
giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



EduEnergy 2.0

Towards Shaping the Future of
Renewable Energy Transition in the
Western Balkans

30 October 2024

Online

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Title of the project		Green Agenda: Decarbonisation of the Electricity Sector in the Western Balkans
Commissioned		German Federal Ministry for Economic Cooperation and Development (BMZ).
Third component of the GA		Renewable energy services in education and training - RESET
RESET	Implementation period	01 October 2023 - 30 September 2025
	Duration	24 months
	Lead Partner	ERI SEE
	Budget	189.733,5€
	Goal	Promoting TVET for renewable energy services.
	Economies	Albania, Bosnia and Herzegovina, Kosovo*, Montenegro, North Macedonia and Serbia



Specific objectives

1. Development of recommendations to TVET decision makers to accelerate the labour market and energy developments for RE.
2. Raising awareness and promoting TVET/education for renewable energy services.

Objective 1: Development of recommendations to TVET decision makers



Output 1: Online regional conference for the presentation of the conclusions of the LM and ET studies

Output 2: Preparation of the material for the learning content for 2 occupations

- Analysis and translation of good practices from the EU for 2 occupations identified within Output 1

Output 3: Regional meeting for the recommendations and adjustment of regionally uniform learning content/framework

Output 4: Regional meeting for the development of action plan for the further developments in the LM and ET sector targeting renewable energy

Objective 2: Raising awareness and promoting TVET/education for renewable energy services



Output 1: Online regional conference the relevance of RE and its impact on ET and business, promoting RE occupations, qualifications and career prospects and joint regional actions

- EduEnergy Conference: Building Bridges for Sustainable Energy Learning, on-line, 15 March 2024

Output 2: 6 National events face-to-face by the national education agencies

Output 3: 6 online national events by the national education agencies

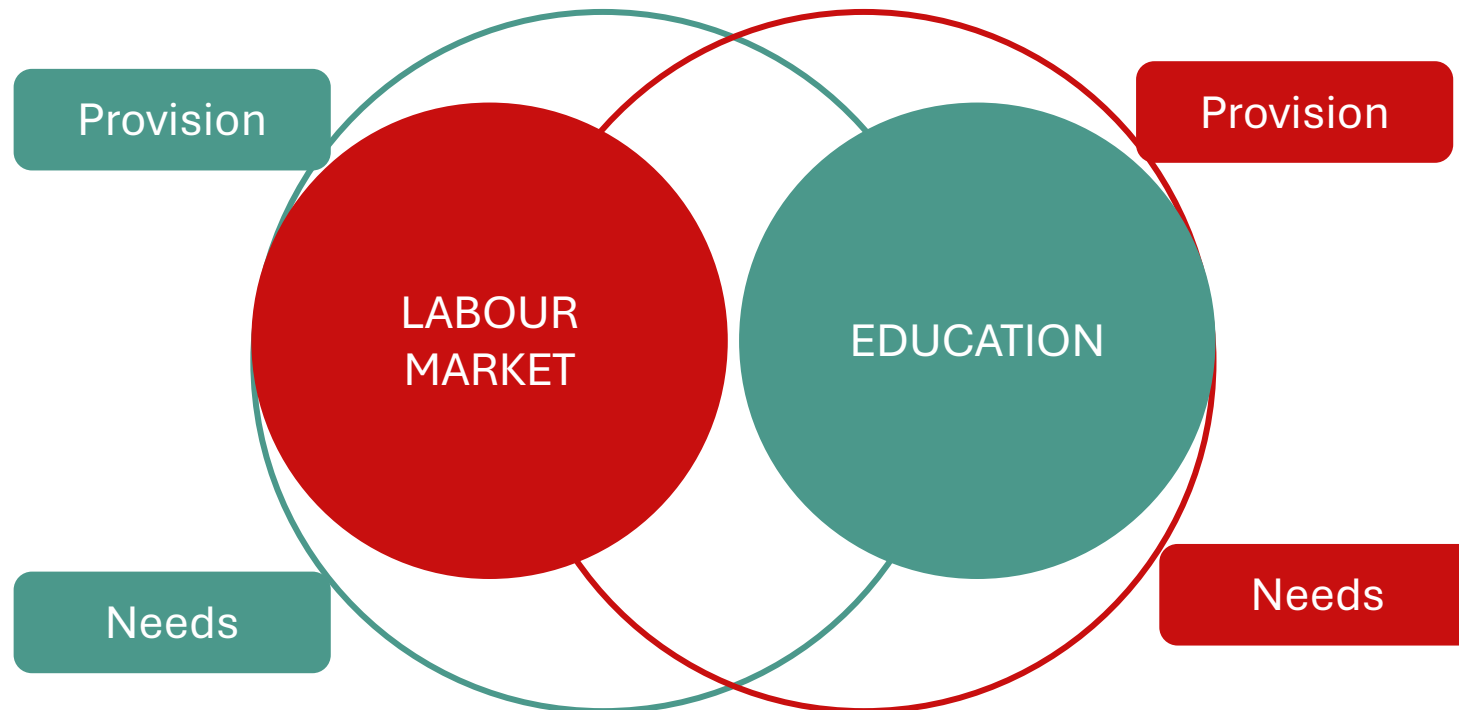
Output 4: PR: National and regional press work on all fields of action

- National promotion via national news articles
- To date published 11 articles in 6 economies aimed at promoting the EduEnergy Conference



Labour market analysis

Education Provision Mapping



A bit of background



LABOUR MARKET

Occupational standards/
consultations with
business

LM
incentive

Education

Qualification standards

Education
programmes

Education
material

Curricula

Not the same as
professions

VET QS
agencies

- National differences
- Length of the process

A bit of background



Labour market analysis

Energy Transition and Jobs in the Western Balkans -

Labor Market Effect Analysis

*‘Some professions that will be in demand in **solar energy production** include **solar engineers, solar system designers, solar project managers, solar panel installers, and solar service technicians.** A similar range of careers will also be available in **wind turbine energy production systems.**’*

Source: GIZ, 2024 (draft)

Education Provision Mapping

Baseline analysis of the (formal) PRE-UNIVERSITY education provision in the Western Balkans within electro and mechanical sector.



What did we wanted answered?

- Q1: What is the **educational offer** in the **electro** and **mechanical** sector (connected to the RE) in the WB6.
- Q2: What are the needs of the education sector related to the development of qualifications and educational material within two sectors.

Who did we ask?

- VET and QA agencies
 - 1 questionnaire per institution - total 7 questionnaires taken into the analysis
- VET and QA agencies, sector professionals
 - Follow up interviews with VET and QA agencies and RE engineers.

Not a research undertaking, rather the collection of information



Qualitative and quantitative mapping of the current situation and plans regarding the RE

I Education provision

Focus on **qualifications and qualification standards** in **MECHANICAL AND ELECTRO** sector

AND those related to RE

Obstacles:

Difficult to compare based on information we got.

II Development and modernisation of qualifications

Obstacles: an impulse can/often does come outside of the edu sector

III Demand for short-term and long-term interventions

Focus on qualifications and education material.



Mapping of qualifications in all six economies within **mechanic** and **electric** sectors

	Total QS reported	QS targeting RE	%	Conclusion for all economies
AL	29	14	48%	<ul style="list-style-type: none"> • Quite high number of qualifications in two sectors <ul style="list-style-type: none"> • One could argue that high % targets RE • Both mechanic and electric sectors • Covering all levels of NQFs (2-5) • Covering three types of RE (solar, wind, water) • HOWEVER <ul style="list-style-type: none"> • Numbers are not directly comparable!
BA	53	18	34%	
XK*	10	4	40%	
ME	56/18	11/4	20%/22%	
MK	33	6	18%	
RS	32	6	19%	

II Development and modernisation of qualifications



Updating of qualifications in all six economies within **mechanic** and **electric** sectors

	Last three years	Next three years	Conclusions
AL	5	7	<ul style="list-style-type: none">• All economies have national regulations related to updating qualifications• AL & RS: the least common multiple for the next 3 years category<ul style="list-style-type: none">• Electro-technician<ul style="list-style-type: none">• Incl. photovoltaic systems
BA	7	constant	
XK*	0	constant	
ME	15*	none, all new	
MK	0	5-year updating	
RS	4	4	

III Demand for short-term and long-term interventions



The need for QUALIFICATIONS

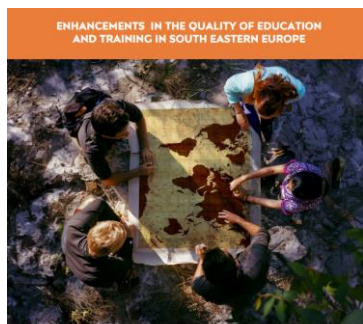
- Existing qualifications are in high demand and regularly updated, quite a bit of them are RE
 - HOWEVER just transition in mind: social dimension of education, gender equity - i.e. digitalisation, socially-sustainable qualifications and gender balancing measures.
- Developing QS through regional cooperation 🏐
- Developing **NEW qualifications***
 - Quite a diversity of existing QS at all NQF levels - regional cooperation could focus on developing high-demand innovative qualifications
 - LM: „in 2030 - 25600 jobs in renewable electricity sector out of which 73% new jobs“
- The multidisciplinary approach **could/should** be a sound basis for new QS
- Additional value for adult education - upskilling and reskilling

Demand for short-term and long-term interventions

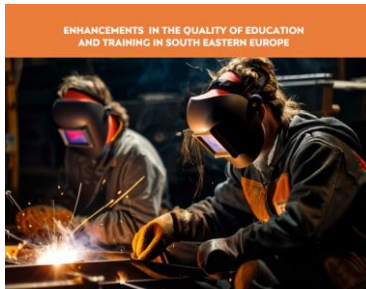


The need for EDUCATIONAL material

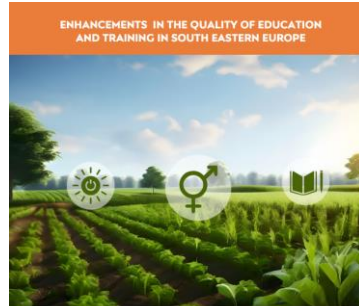
- The EQET SEE project experience:
 - High interest in **regionally** developed educational **material**
 - Difference between economies: **textbooks** VS **manuals** not an obstacle to the material development at regional level
 - The high need for developing **social sustainability, gender equity and environmental protection materials** and **materials supporting digitalisation of the sector** alongside core material towards supporting the just transition



RAZUMEVANJE DRUŠTVENIH NEJEDNAKOSTI U PROCESU OBRAZOVANJA



RODNA I SOCIO-EKONOMSKA DIMENZIJA OBRAZOVANJA BRAVARA



RODNA I SOCIO-EKONOMSKA DIMENZIJA OBRAZOVANJA POLJOPRIVREDNOG TEHNIČARA



EDUCATION FOR SUSTAINABLE DEVELOPMENT – HOW TO IMPROVE ENVIRONMENTAL PERFORMANCE IN SCHOOLS



BRAVAR – ZAŠTITA ŽIVOTNE SREDINE, BEZBEDNOST I ZAŠTITA NA RADU



ENVIRONMENTAL ASPECTS OF AGRICULTURAL TECHNICIAN

Demand for short-term and long-term interventions



The need for EDUCATIONAL material supporting QS within **mechanic** and **electric** sectors

	Type	Content	Crosscutting
AL	TLM	Directly from information:	
BA	TLM WBL	<ul style="list-style-type: none"> Supporting the installation of the solar panels 	<ul style="list-style-type: none"> Digitalisation/AI ^{*data}
XK*	TLM		
ME	Guidelines/ manuals	Indirectly from information:	<ul style="list-style-type: none"> Social sustainability gender equity*
MK	TLM WBL	<ul style="list-style-type: none"> Installers of heating devices using RES 	RESET/EQET
RS	TLM WBL	<ul style="list-style-type: none"> Wind farm supporting technicians 	



The need for EDUCATIONAL material

- RESET data supporting the previous experience: high interest in **regionally** developed educational **material** and **training**
 - RESET project short-term: manuals and guidelines
 - Icl cross-cutting topics SSG, EP and GoDigit
 - Future developments: TLM WBL



The need for EDUCATIONAL material could be analysed from two perspectives:

- **Narrow scope:**
 - indebt focus on supporting material for one qualification
 - In which case photoV systems possibly covering the large part of/entire qualification/up-reskilling programme
- **Boarder scope:**
 - RE general guidelines crosscutting for multiple qualifications
 - Digital crosscutting material supporting multiple qualifications
 - Supporting material for one qualification of a lower volume, focusing on one part of qualification
 - In which case photoV systems, eol systems, heating/aircon systems



Support is very much needed

- Low scale intervention
- High scale support



Overall conclusions



Low scale intervention

- Developing education material - manuals guidelines
 - Qualification specific
 - Crosscutting material supporting social dimension of education and environmental sustainability
 - Material supporting digitalisation

Overall conclusions



High scale support

- Long-term support and development through **NEW innovative qualifications** and **qualification standards**
 - Formal education & upskilling/reskilling
- Long term **regional** development **TLM WBL material development**
 - Shortage of contemporary material of all types
 - Cost-efficient
- Supporting **just transition** by investing into the **social dimension of education**
- Supporting **digitalisation**
 - “Creating apps and programme for energy saving and smart use of energy resources”
 - “Online learning platforms, 3D learning models, virtual labs, school based/small solar panels”



Thank you!

Renewable Energy Services in Education and Training



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