



RES4CITY

renewable energies system for cities

Deliverable D4.1

Self-assessment tool



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List of Acronyms

Acronym	Meaning
RES4CITY	Renewable Energies Systems for Cities
EV	Electric Vehicle
MC	Micro-credentials

1. RES4CITY Self-assessment tool | introduction

The combination of rapid urbanization, escalating energy demands, and the urgent necessity to reduce carbon footprints has amplified the priority for cities to implement renewable energy solutions.

To build a sustainable and successful urban economy, it is crucial to develop learning and upskilling programmes for recently graduates and experienced professionals in order to provide the necessary skills to participate effectively in the renewable energy transition. By doing so, cities can rely on professionals prepared to address the challenges and opportunities presented by renewable energy adoption.

As the educational landscape evolves, learners increasingly seek knowledge that is personalized, flexible, and directly applicable to their needs. In response, micro-programmes based on micro-credentials have emerged as a powerful educational tool, capable of delivering specific knowledge efficiently. These bite-sized learning modules offer a unique and tailored approach to education, catering to the demands of modern learners and the dynamic requirements of diverse industries.

The rise of micro-based learning represents a transformative shift in the educational and training sphere. Its ability to accommodate various learning styles and preferences, coupled with its alignment with rapidly changing industries and the ever-evolving job market, marks it as a game-changer in the field of education. Embracing micro-programmes and micro-credentials empowers learners to remain relevant and competitive in an ever-changing world.

Considering this, the RES4CITY project introduces eight micro-programmes targeting master students, recent graduates, and experienced professionals with STEM (Science, Technology, Engineering, and Mathematics) or SSH (Social Science and Humanity) backgrounds. The MPs encompass a wide range of knowledge areas and disciplines supporting the integration of RES in the urban environment.

In order to empower students, and in parallel with the development of the micro-credentials and micro-programmes, RES4CITY has also developed an innovative tool that allows those seeking to enrol in the RES4CITY micro-programmes and micro-credentials, the ability to ascertain the green-skills/renewables-related jobs that are advertised in the market, across a number of countries, and in turn match the needs of their chosen advertised job, with the optimal micro-credentials to enrol in. Advertised jobs may be filtered based on country, industry, and job type. The tool also offers users the opportunity to quickly ascertain the skills required to do a given job, based on the job descriptions of the advertised roles, allowing candidates the ability to match their individual skills with the given job. This allows users to tailor their learning pathways and in turn maximize their career potential. By delving into these unique facets, the tool guides students towards a personalized selection of micro-credential modules, ensuring that their educational journey aligns seamlessly with their future career goals.

This personalized approach revolutionizes the traditional one-size-fits-all educational model, fostering a dynamic learning environment that caters to the diverse needs and aspirations of each student. By embracing this individualized approach, the RES4CITY self-assessment tool empowers students to acquire the most relevant and applicable knowledge, propelling them towards success in the ever-evolving renewable energy sector.

The URL to the self-assessment tool is: <https://www.res4city.eu/self-assessment/>, with the following screenshots providing an overview of the functionality of the tool.

2. RES4CITY Self-assessment tool | screenshots

2.1 Filtering advertised jobs

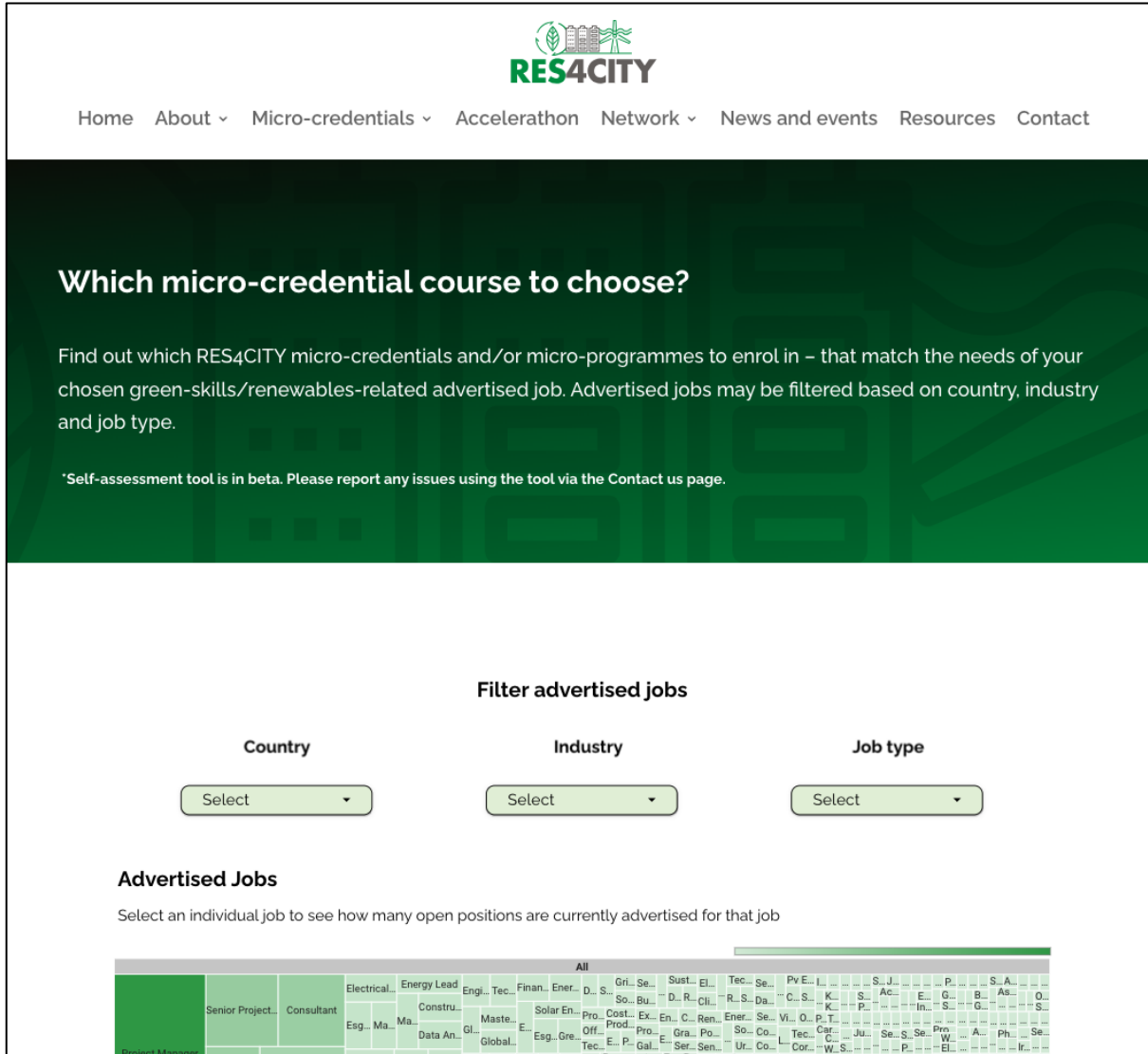


Figure 1. “Which micro-credential course to choose” screenshot



Figure 2. “Filter advertised jobs” screenshot

The first element of the tool allows the user to filter a wide variety of green-skills/renewables-related jobs – details of which are sourced from various job portals, such as LinkedIn and Indeed, as well as from various company website career pages. Users may filter based on their preference of country, industry they are aiming to work in (e.g., engineering, research, green policy making, etc.) as well as job type (e.g., project manager, intern, etc). Once applied, the filter narrows down the list of advertised jobs. The advertised jobs dashboard is highly interactive and if the user clicks on a specific job from the advertised jobs, it filters the dashboard below to display only the requisite skills for that specific job.

2.2 Skills required to do a selected job



Figure 3. “Skills required to do this (selected) job” screenshot

The dashboard above provides a comprehensive overview of the skills required to be proficient at the job the candidate wishes to target or pursue. However, it is recognized that the candidate may wish to upskill in a number of areas they are lacking. Hence the user can further click on any of the skills they wish to source micro-credentials for, and the requisite micro-credentials will be displayed as shown in the screenshot below.

2.3 Recommended micro-credentials

RES4CITY Micro-credentials

Based on your choices above, the following micro-credentials are recommended for you

Recommended Micro-credential 1

Name of the Micro-credential ▾	About the programme
Sustainable Energy Technologies and Strategies in Urban Environment	<p>The program includes a set of foundational micro-credential courses designed to impart essential knowledge and skills across various aspects of energy and sustainability. Participants will begin with "Fundamentals of Energy Systems," which lays the groundwork for understanding the complex energy networks that power our cities. Building on this, "Introduction to Renewable Energies" explores the array of clean energy sources that are becoming increasingly vital to our sustainable future. Financial considerations are addressed in "Introduction to Sustainable Finance," equipping learners with the knowledge to navigate the economics of green initiatives.</p> <p>Analytical skills are honed through "Data Analytics for the Energy Sector," a course that delves into the data-driven decision-making processes necessary for modern energy management. Practical applications in sustainability are covered in "Efficient Building Techniques," focusing on the construction and maintenance of energy-efficient structures. The curriculum also includes "Tools for Cities Decarbonisation,"</p>

Enrolling Soon

Recommended Micro-credential 2

Name of the Micro-credential ▾	About the programme
Decarbonization Strategies and Social Innovation for Cities and Communities	<p>The program offers a comprehensive suite of micro-credential courses tailored for professionals looking to deepen their understanding and expertise in energy systems and sustainable development. It begins with "Fundamentals of Energy Systems," providing a solid foundation in the basic principles and components that make up our energy infrastructure. This is followed by "Introduction to Renewable Energies," which dives into alternative energy sources that are key to a cleaner future. With "Introduction to Sustainable Finance," participants learn about the financial aspects of sustainability and how to fund green projects effectively.</p> <p>The curriculum further includes "Sustainable Business Models," which explores how businesses can thrive while prioritizing sustainability. "Energy Strategy and Energy Transition" offers insights into the strategic planning necessary for transitioning to sustainable energy systems. Another critical course is "Social Acceptance of Technologies," which addresses the societal implications and public perceptions that can</p>

Figure 4. Recommended Micro-credentials screenshot

The final dashboard (figure 4) in the tool shows up to 3 micro credentials that should help the user gain the necessary requisite skills displayed in figure 3. This tool should thus help the user gain the skills they need to adequately upskill for the career oath of their choosing.

With the RES4CITY self-assessment tool, students are not merely passive recipients of knowledge; they become active participants in shaping their future careers. This personalized approach empowers them to navigate the complexities of the renewable energy sector with confidence, equipping them with the skills and expertise to make meaningful contributions to a more sustainable world.