

Wireframe of future services in the SMEnergy project for a better SME support in RES-transition

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**Interreg
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SMEnergy

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I. Executive summary

The SMEnergy project is designed to support energy-intensive SMEs in overcoming challenges related to renewable energy transition, including limited guidance, financial constraints, and access to reliable resources. The project establishes Green Energy Knowledge, Operation, and Service Hubs (GEKOS), offering tailored energy transition roadmaps and a comprehensive range of services.

Through transnational collaboration and an adaptable service framework, SMEnergy empowers SMEs to reduce barriers, achieve decarbonization goals, and enhance economic resilience. This document provides a strategic roadmap, outlining the project's approach and preparing the foundation for scalable, impactful solutions tailored to regional needs.

II. Facing the shift to renewable energy

The purpose and background of this document

The SMEnergy project, funded by the Interreg Danube Transnational Programme, aims to support small and medium-sized enterprises (SMEs) across eight partner countries in the Danube region in adopting renewable energy and enhancing energy efficiency. The partnership involves 10 partners from 8 countries (7 EU and 1 non-EU country): Slovenia, Hungary, Germany (Bavaria), Austria (Burgenland), Slovakia, Czech Republic, Bulgaria, and Bosnia and Herzegovina.

Energy-intensive SMEs often face significant barriers when transitioning to renewable energy, such as high upfront costs, limited technical expertise, and inconsistent supplier qualifications. These challenges are amplified by the pressures of an energy crisis and the need to decarbonize. Despite these obstacles, SMEs lack adequate guidance to navigate the transition effectively.

The SMEnergy project addresses this gap by establishing a pilot network of regional service centers tailored to SMEs' renewable energy needs. These centers will offer customized energy transition roadmaps, addressing diverse maturity levels among SMEs. Through transnational collaboration, the project will create Green Energy Knowledge, Operation, and Service Hubs – a comprehensive, one-stop-shop model integrating expert consultancy, a cross-border database, and an integrated marketplace.

This innovative approach combines energy expertise with streamlined service delivery, fostering collaboration between energy agencies and business support organizations. By developing national and transnational strategies and toolkits,

SMEnergy aims to empower SMEs to transition effectively to renewable energy, aligning local actions with broader sustainability goals.

This document serves as the foundation for the SMeEnergy project, translating its objectives into actionable services tailored to the unique needs of SMEs across the Danube region and beyond.

Our approach: Selection and design of solutions

The list of suggested services below is the result of, among other things, the following process. Based on the **desktop research analysis conducted in eight countries, which included in-depth interviews** with service providers, experts, business communities, and nearly 40 high-energy intensity SMEs, initial insights emerged regarding the types of services needed and the overall direction. We collected an **Inventory Table that was** also created to outline the existing services. Further analysis was carried out, such as **Comparative Analysis** which is cross-country analysis of regulatory, market, and behavioral patterns, completed by the partners' experts, **SME Needs Assessment** which is an overview of SME-specific challenges and opportunities in RES transition. These findings were discussed and refined during joint **workshops**, including the most important ones:

- June 4, 2024: Countrywide practices Partners' workshop
- September 25-26, 2024: Podersdorf conference and workshops
- November 4-5, 2024: Partners' workshop

The European Union Strategy for the Danube Region (EUSDR) has been pivotal in advancing the SMeEnergy project by fostering collaboration and driving development. A representative from EUSDR, based in the Czech Republic's Ministry of Industry and Trade, actively participated in the Podersdorf workshop, which served as a vital platform for refining the service framework through cross-national cooperation. Additionally, a representative from FEDARENE (European Federation of Agencies and Regions for Energy and Environment) enriched the discussions with valuable insights into renewable energy transition practices across Europe. Beyond workshop participation, EUSDR played a key role in aligning the project with broader regional objectives, while FEDARENE contributed a pan-European perspective, sharing best thoughts and practices for integrating local initiatives with EU-level strategies. Together, these contributions ensure that the SMeEnergy project remains focused on the needs of SMEs while aligning with regional and European sustainability goals. This collaboration highlights the importance of linking project-level initiatives with macro-regional strategies to enhance their impact and scalability.

Outcomes of Workshops and Design

Process

The outcomes of these sessions shaped the list of services to be offered within the SMEnergy model. The results provided a comprehensive list of good practices and opportunities, serving as the foundation for selecting solutions aligned with the project's goals. The most significant findings from the regulatory, service, and demand environment, as well as behavioral and business patterns, were used by the consortium to collaboratively design the wireframe for the future services of SMEnergy.

The list of services was validated during the November 25, 2024, partner meeting, where a **Wireframe Design Spreadsheet** document was also attached to detail the plans of individual partners, incorporating **Best Practices** identified in a prior deliverable to ensure an evidence-based approach.

This process assures the simulation of the model to preliminarily test its compliance and viability. Feedback from these simulations was channeled into refining the model through consortium workshops, ensuring modifications were made where necessary. This iterative process culminated in the elaboration of this document, which incorporated the results of the simulations.

Ongoing Evaluation and Refinement

Throughout the development, the services and the platform were continuously evaluated through national-level workshops, company visits, and professional discussions. **We consider these steps to constitute a comprehensive feasibility assessment.** Further evaluations of the services will be conducted during the introduction of specific pilot services, ensuring ongoing refinement and alignment with the SMEnergy objectives.

III. The Needs of the SME Sector

Based on the aforementioned assessments (tools, analysis, workshops, etc.), the identified needs and challenges of SMEs across partner countries were systematically categorized to inform the design of targeted services and solutions that address the specific barriers faced by SMEs in their renewable energy transition journey.

Needs Across Partner Countries:

2. Administrative Simplification and Regulatory Predictability

SMEs consistently highlight challenges with complex legislation and

administrative burdens. Simplified processes and clearer regulations are critical for fostering confidence and ensuring compliance.

3. Awareness Raising and Independent Information

Many SMEs require unbiased, transparent information and awareness campaigns about renewable energy benefits, best practices, and financial opportunities. Trustworthy sources free from vested interests are crucial.

4. Access to Qualified Suppliers and Experts

The creation of a robust database of trusted suppliers and energy experts is essential. SMEs seek reliable recommendations and proven quality to avoid missteps in implementing RES solutions.

5. Financial Support

There is a universal demand for better financial support structures, including grants, subsidies, and preferential loans. SMEs struggle to secure adequate funding for RES investments, hindering their transition.

6. Good Practices and Benchmark Roadmaps

SMEs value actionable, sector-specific examples of successful transitions to RES. Benchmarking tools and roadmaps can serve as practical guides for their own journeys.

7. Single-Channel Service Points

SMEs seek streamlined access to services and information via single-point platforms to navigate the overwhelming variety of options available.

Key Patterns and Challenges:

1. **Limited Financial Literacy:** SMEs often lack the expertise to navigate complex financial schemes or evaluate cost-effectiveness of RES technologies.

2. Low Awareness Levels: Many SMEs do not recognize the long-term benefits of energy transition, viewing it as an expense rather than an investment.
3. Market Noise: Overwhelming and fragmented information deters SMEs from decisive action.
4. Resource Constraints: Both financial and human resources are limited, impacting the pace and scope of transitions.

8. The ideal service environment - Service Framework for SME Renewable Energy Transition

The SMeEnergy project aims to drive the sustainable energy transition of Small and Medium Enterprises by combining practical tools, expert insights, and capacity-building initiatives tailored to meet their specific needs in participating countries. The current service framework document outlines an ideal and comprehensive range of services offered by the GEKOS, which function as one-stop shops providing expert support, data, and training for SMEs. **However, the specific services offered may vary, as each partner selects those most relevant to their country's unique needs during the pilot phase.**

A. Energy Consultancy and Audits

We help SMEs to improve energy efficiency, reduce waste and lower operational costs through expert guidance and tailored solutions.

- A.1. Energy efficiency pre-assessment:** providing self-administered tools to get a rough picture of the SME's situation.
- A.2. Energy Consultancy:** Conduct assessments to identify energy waste and propose efficiency improvements, supported by actionable data.
- A.3. Tailored Efficiency Solutions:** Offer strategies such as smart technology integration and energy-efficient systems to optimize energy use.
- A.4. Energy Monitoring:** Provide tools for real-time tracking of energy consumption to enhance management and accountability, on company-, site- and machine/process-level.

A.5. Financial Simulation Tools: Develop customized financial models to forecast costs, savings, and ROI from energy efficiency measures.

A.6. Energy Purchase Consultancy: advising SMEs on most efficient power purchase options

As a full energy assessment / audit has high costs, great emphasis should be put on using tools that require no human interaction and advisory with remote presence.

For the pilot projects, a larger number of SMEs need to be involved in the initial consultancy phases (A.1. and A.2.) and the enterprises with the most determined managements need to be carried on till the end.

B. Renewable Energy Technology Integration

To complement the energy efficiency measures, advisory services are provided to facilitate the adoption of renewable energy technologies, ensuring compatibility with regional and operational requirements.

B.1. Technology Feasibility Assessment: Evaluate the relevant renewable energy options (solar, wind, biomass, geothermal etc.) to identify the most suitable solution(s).

B.2. Implementation Support: Guide through technology adoption, from planning & permitting to installation and maintenance, with ongoing technical support.

B.3. Smart Technology and Energy Storage Solutions: Enable SMEs to adopt advanced energy management technologies such as demand side management and energy storage.

B.4. Energy Transition Roadmap: A customized plan outlining steps, timelines, and resources for each SME's energy transition.

C. Financial and Grant Access Support

Provide tailored financial solutions to help SMEs access funding for renewable energy projects and improve financial viability during the transition.

C.1. Grant and Subsidy Application

Assistance: Support SMEs in applying for EU and national funding schemes, including renewable energy grants and tax incentives.

C.2. Credit facilitation: support for obtaining loans for energy saving investments from commercial banks.

C.3. Energy saving certificates consultancy: the sale of white certificates obtained for implementing energy efficiency measures provide a major revenue stream

D. Skill Development and Capacity Building

Equip SMEs with the skills and knowledge needed for energy transition through training programs and knowledge-sharing initiatives. Share best practices, case studies, and benchmarking insights from high-performing SMEs in energy transition.

D.1. Online Training Programs and Tools: Provide workshops and e-learning platforms focused on renewable energy technologies, financial planning, and energy efficiency.

D.2. Workshops: Conduct hands-on and virtual sessions to enhance SME understanding of green energy solutions.

D.3. Case Studies and Success Stories: Highlight effective energy solutions implemented by SMEs.

D.4. Benchmarking Tools: Compare SME performance with industry standards to identify gaps and opportunities for improvement.

D.5 Raising awareness on RES: Educates stakeholders about the benefits of renewable energy adoption by providing SMEs with up-to-date information on events, initiatives, technological solutions, and innovations, as well as other relevant renewable energy topics to support their green transition.

E. Green Energy Database and Marketplace (via Platform)

The Green Energy Database - as specified in the project proposal - is a tool that helps SMEs to find the right suppliers for green energy technologies, consultancy, funding and funding.

E.1. Supplier Database,

E.2. Expert Database,

E.3. Technology Database

Local project partners need to ensure that only reputable providers are listed in the database. Reputation can be assessed thru external partners or by setting different criteria (eg. published financial statements showing a profit, certain number of employees, qualifications present to provide the services, providing references with contact details and photographs, etc.).

In countries where similar databases already exist, a partnership should avoid duplication of efforts.

Limitations and Comments

Within the outlined categories of the service framework, there will be variability in how partners engage with and implement these services. Some partners may choose to adopt and further develop a greater number of categories, tailoring them to their specific contexts, while others may opt for fewer. Additionally, certain categories may have multiple interpretations or applications, which will be clarified in a subsequent section. There may also be categories selected by only one partner or those that could potentially be discarded in later stages of the project.

9. Conclusions

This document outlines the strategic framework and service modules that underpin the SMEnergy project, emphasizing its mission to empower SMEs in their renewable energy transition. It reflects an evidence-based approach informed by comparative analyses, SME needs assessments, and collaborative workshops, ensuring that services address real-world challenges.

Key outcomes include:

- A **comprehensive, tailored service framework** designed to reduce barriers to renewable energy adoption.
- The establishment of **Green Energy Knowledge Hubs (GEKOS)** as centralized resources for SMEs, promoting streamlined access to expertise, tools, and solutions.
- A focus on **adaptability and feedback** to refine services based on SME and stakeholder inputs, ensuring relevance and effectiveness.

Looking forward, the document provides a clear roadmap for implementing and testing pilot services. It emphasizes the need for continuous collaboration with SMEs, local stakeholders, and project partners to align solutions with specific regional needs. By fostering adaptability and iterative refinement, SMEnergy not only aims to achieve its immediate goals but also contributes to long-term economic resilience, regional sustainability, and alignment with EU renewable energy targets.

The project's success will depend on active participation from SMEs and partners during the pilot phase. This engagement is crucial to co-create effective, scalable solutions that enable SMEs to overcome the complexities of energy transition, transforming challenges into opportunities for growth and innovation.

10. Annexes

1. [SME Needs](#) and [Presentation](#): Overview of SME-specific challenges and opportunities in RES transition.
2. [Comparative analysis](#): Cross-country analysis of regulatory, market, and behavioral patterns.
3. [Inventory](#): A detailed collection of existing services, and opportunities identified across partner countries.
4. [Wireframe design](#): Spreadsheet detailing partner-specific plans and the foundational structure of GEKOS (pilot) services.