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A.T.3.3:

Development of a technological solution for RECs involved in the project for a more resource and cost-effective operation

DESIGN OF A SW TOOL OF AN EXPERT SYSTEM FOR THE MANAGEMENT AND MANAGEMENT OF ENERGY COMMUNITIES

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OBJECTIVES AND EXPECTATIONS OF SO3 AND ACTIVITIES A.T.3.3

THE SPECIFIC OBJECTIVE OF SO3 IS TO STIMULATE THE PRODUCTION AND USE OF RES BY SUPPORTING THE CREATION AND OPERATION OF ENERGY COMMUNITIES IN THE DANUBE REGION

AS PART OF THE IMPLEMENTATION OF THE PROJECT IN THIS SECTION PROJECT PARTNERS WILL JOINTLY DEVELOP A MENTORING SCHEME AND TEST IT IN A PILOT EVENT. SUBSEQUENTLY, A SOFTWARE SUPPORT EXPERT TOOL AND SOLUTION WILL BE DEVELOPED TO OPTIMIZE RES OPERATION AND IMPROVE RESOURCE AND COST EFFICIENCY.

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ASSIGNMENT AND CONTENT OF THE ACTIVITY A.T.3.3

- In stage SO3, PP-12 NEK is in charge of the guarantee of activity A.T.3.3, namely the development of a technological solution for RECs involved in the NRGCOM project for more efficient and cost-effective operation

- The activity follows on the joint results of the project from activities A.T.1.2 and A.T.1.4, where solutions were sought for sustainable energy savings and effective energy management in energy communities based on RES

- The goal will be mapping, data processing and monitoring of selected alternative and critical inputs to improve the functioning of energy management of communities based on guidance in management and decision-making in energy communities

- NEK will develop a software tool model for the project, the control expert SW module itself for tracking and correcting measured inputs and data from individual partner ship countries involved in this activity, including instructions for installing the REC and verifying the functioning of this SW tool in the conditions of the partners: STRIA, JAIP, KSSENA, FORSCHUNG and NEK

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THE SOFTWARE WILL CONTAIN THE FOLLOWING FILES:

1.	**A set of identification of simultaneously available technical, energy, environmental, social and economic data and their processing by analytical methods into the input database for the given environment**
2.	Creation of a comparative set of statistical and operational data of production, consumption and redistribution of energy resources based on the participation of energy records from the environment of large national and international administrators and distributors of energy networks and systems
3.	Establishing a set of criteria for the internal operation of the software and comparative levels for evaluation, taking into account statistical significance and at the same time the probability of energy changes and fluctuations caused by the external environment
4.	Manual of the sequence of software steps and actions for assessing and selecting alternatives through a special copyright protected browser and technical frontend
5.	Presenter of output data and proposed solutions for the energy community to intervene and manage its energy economy

THE WORKING METHODOLOGY FOR PROCESSING ACTIVITY A.T.3.3 CONTAINS THESE STEPS:

1. NEK will develop a model of input needs and expectations of energy communities and related main parameters, criteria and risks

2. NEK will present this proposal and the expected outputs at the 5th Slovak national workshop within the period of the beginning of the implementation of the activity and incorporate the proposals and comments of Slovak experts, ambassadors, stakeholders and organizations and enterprises from the energy sector into the SW solution

3. NEK will submit a detailed questionnaire to other partners of the activity (but also to other partners - interested parties) with precisely defined questions to specify the problems and the situation in the given country for comments on the solution of the SW tool. A brief but accurate statement of each question will be required in the form of measurable data and findings.

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4. NEK prepares an evaluation and subsequent analysis of the inputs and presents to the partners for a joint discussion a proposed set of solutions and potential objectified results after averaging the individual main data obtained from the partners

5. NEK will organize an international workshop with the participation of all partners of the NRGCOM project with a program of demonstration and joint comments and evaluation of the content of the expert system - SW tool

6. The work output will be a demonstration test SW tool - an expert system for RES (the working name will be decided only in the finalization of this product as: : „D3.3.1 Software solution with installation instructions for RECs“

7. After successful joint testing in the network of selected partners and their energy communities, this SW expert tool will be structured into a final product and its subsequent implementation and distribution under the management of STRIA will be agreed upon as the final product of the NRGCOM project for the public and users

With gratitude

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