

Interreg Programme

Danube Region



Co-funded by
the European Union

DRP0200271

StoreMore

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Version 3.0

Form language: EN

Input language: EN

Currency: EUR

A - Project identification

A.1 Project identification

Project id (automatically created)	DRP0200271
Name of the lead partner organisation	Békéscsaba Megyei Jogú Város
Name of the lead partner organisation in English	Békéscsaba, City of County Rank
Project title	Analysing and promoting energy storage solutions, developing tools to mitigate the intermittency of RES, contributing to an accelerated transition to renewable energy and more balanced electrical grids
Project acronym	StoreMore
Programme priority	A greener, low-carbon Danube Region
Specific objective	2.1: Support greening the energy and transport sectors in the Danube Region by enhancing the integration of renewable energy sources
Project duration in months	30

A.2 Project summary

Please give a short overview of the project. (in case of PAC/DSP CALL): highlight the main characteristics, strategic direction(s) and envisaged main achievements. / (in case of 1ST CALL FOR PROPOSALS): describe the followings:

- the common challenge of the programme area you are jointly tackling in your project;
- the overall objective of the project and the expected change your project will make to the current situation;
- the main outputs you will produce and those who will benefit from them;
- the approach you plan to take and why a transnational approach is needed;
- what is new/original about the project.

Energy storage is key to unlocking renewable power's full potential.

Our groundbreaking project targets the critical challenge of energy storage within the Danube Region, specifically focusing on the environmental impacts of current storage methods and the need for more sustainable alternatives. Under the framework of the EUSDR Action Plan 2.1, our project is dedicated to assisting each country in the region in meeting its national targets by 2030, contributing to the European Union's ambitious goal of achieving 30% renewable energy usage by the same year, while adhering to the National Emission Ceilings.

Strategic Direction & Envisaged Achievements:

Our project's strategic direction is to expedite the transition towards a renewable energy-based economy in the Danube Region by enhancing energy storage capacities to alleviate the intermittency of Renewable Energy Sources (RES) and push towards a more balanced electricity grid. This is a pressing need as increasing the share of RES in electricity production requires a more balanced supply of these energy sources. This balance is only achievable through a diversified portfolio of electricity storage options.

Today, lithium-ion batteries are the most commonly used method for storing electricity, with pumped hydro storage being another option in certain cases. However, lithium-ion batteries carry substantial environmental burdens. Their production process involves mining raw materials such as lithium, cobalt, and nickel, which leads to habitat destruction, water pollution, and increased carbon emissions. Moreover, these batteries, when improperly disposed of, can lead to soil and water contamination. According to IEA World Energy Outlook 2022 Lithium-ion batteries are the fastest growing storage

technology in the world. Relative to current levels, demand for lithium for battery storage systems rises most sharply, by over 20-fold by 2030 and almost 50-fold by 2050 in the NZE (Net Zero Emissions by 2050) Scenario.

However, while almost 85% of the battery manufacturing capacity needed in the NZE Scenario in 2030 is already in place or in the pipeline, the lithium supply chain faces a much bigger stretch. Announced capacity expansions and potential new projects would increase current production capacity three-and-a-half-times, but another tripling of current capacity would be required to meet the level seen in the NZE Scenario in 2030.

In line with expert predictions mentioned above and in Section C.2, we expect that the supply of raw materials for these conventional batteries will struggle to meet the ever-increasing demand, which will lead to lithium scarcity and sharp price increases. These circumstances underline the urgent need for more environmentally sustainable alternatives.

Our project is focused on developing and promoting these alternatives. We are committed to researching, developing, and implementing novel, sustainable technologies that promise a much smaller environmental impact than traditional batteries.

Proposed Outputs and Beneficiaries:

Our project will yield two significant outputs. First, we'll provide a ready-made selection of scalable and modular options for alternative electricity storage that are not only effective but also environmentally responsible. Alongside this, we'll deliver a modelling tool for planning energy storage systems equipped with these innovative, eco-friendly solutions, tailored to meet the needs and parameters of RES operators.

Secondly, we will offer a Renewable Energy Sources (RES) optimisation tool that leverages the yet underutilised potential of Artificial Intelligence applications in renewable energy combined with energy storage.

These initiatives will primarily benefit RES operators, enabling them to manage energy more efficiently and sustainably, contributing to a more eco-friendly, renewable energy-based economy.

Transnational Approach and Novelty of the Project:

Given the global nature of climate change and energy challenges, a cooperative, transnational approach is paramount. Our project stands out in its integration of AI applications within the RES domain - a pioneering approach that is not commonly seen in the current scenario.

By transcending conventional energy storage methods and weaving AI into the RES sector, we aim to create a new standard for renewable energy management. We are committed to pushing the envelope of what's possible in renewable energy, offering an innovative, environmentally-friendly solution for the future of energy in the Danube Region.

A.3 Project budget overview

Programme funding			Contribution					Total project budget
Funding source	Funding amount	Co-financing rate (%)	State contribution	Public contribution	Total public contribution	Private contribution	Total contribution	
Interreg Funds	1.742.864,00	80,00 %	138.051,60	272.714,00	410.765,60	24.950,40	435.716,00	2.178.580,00
Total EU funds	1.742.864,00	80,00 %	138.051,60	272.714,00	410.765,60	24.950,40	435.716,00	2.178.580,00
Total project budget	1.742.864,00	80,00 %	138.051,60	272.714,00	410.765,60	24.950,40	435.716,00	2.178.580,00

A.4 Project outputs and result overview

Programme Output Indicator	Aggregated value per Programme output indicator	Measurement Unit	Output Title	Output target value	Programme result indicator	Baseline	Result indicator or target value	Measurement unit
Jointly developed solutions	2,00	solutions	O 3.1 Developed, tested, fine tuned modelling tool	1,00				
			O 3.2 Developed, tested, fine tuned RES optimisation tool	1,00				
Organisations cooperating	16,00	organisations	O 3.1 Cooperation of partners resulting a State of play analysis , Stakeholders	16,00				

Programme Output Indicator	Aggregated value per Programme output indicator	Measurement Unit	Output	Output Title	Output value	Programme result indicator	Baseline	Result indicator target value	Measurement unit
across borders		ations	1 . 1	map, Energy storage outlook and Comprehensive Catalogue of Sustainable Energy Storage Solutions (CSESS)					
Pilot actions developed jointly and implemented in projects	2,00	pilot actions	0 2 . 1	Pilot action to test the online modelling tool involving PiPs and voluntary testers	1,00				
			0 2	Pilot action to test the RES optimisation tool involving PiPs and voluntary testers	1,00				

Programme Output Indicator	Aggregated value per Programme output indicator	Measurement Unit	Output Title	Output target value	Programme result indicator	Baseline	Result indicator or target value	Measurement unit
				· 2				
					Organisations with increased institutional capacity due to their participation in cooperation activities across the borders	0 , 0 0	27,00	No. of organisations
					Solutions taken up or up-scaled by organisations	0 , 0 0	2,00	solutions

B - Project partners

Partners overview

Number	Status	Name of the organisation in english	Country	Organisation abbreviation	Partner role	Associated Strategic Partner	Partner total eligible budget
1	Active	Békéscsaba, City of County Rank	Magyarország (HU)	Békéscsaba	LP	Külgazdasági és Külügyminisztérium	383.900,00
2	Active	University of Pannonia	Magyarország (HU)	UP	PP		287.420,00
3	Active	BSC, Business support Centre L.t.d., Kranj	Slovenija (SI)	BSC KRANJ	PP	Razvojni svet gorenjske regije	162.500,00
4	Active	Elektro Gorenjska, electrical distribution company, JSCo.	Slovenija (SI)	EG	PP		135.200,00
5	Active	Association for responsible urban development and communication	Österreich (AT)	VERA	PP		0,00
6	Active	Center for Energy, Energy Efficiency and Environment	Bosnia and Herzegovina (BA)	CEEEO	PP	Ministrica za prostorno uređenje i zaštitu okoline	104.000,00
7	Active	Innovation Centre of the Usti Region	Česko (CZ)	ICUK	PP		270.100,00
8	Active	Oradea Metropolitan Area Intercommunity Development	România (RO)	ZMO	PP		207.520,00

Number	Status	Name of the organisation in english	Country	Organisation abbreviation	Partner role	Associated Strategic Partner	Partner total eligible budget
		Association				Комунальна установа Хмельницької міської ради «Агенція розвитку Хмельницького»	
9	Active	Municipality of Fuchstal	Deutschland (DE)	AUF	PP		244.440,00
10	Active	N.A. Partner has withdrawn from the consortium on 12.06.2023	Česko (CZ)	N.A.	PP		0,00
11	Active	University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture	Hrvatska (HR)	UNIZAG FSB	PP		182.000,00
12	Active	University of Novi Sad Faculty of Technical Sciences	Serbia (RS)	UNS-FTN	PP		97.500,00
13	Active	SCIENCE AND TECHNOLOGY PARK MONTENEGRO	Crna Gora (ME)	STP MNE	PP	Univerzitet Crne Gore	104.000,00

B.1 Lead partner	
Partner number	1
Partner role	LP
Name of the organisation in original language	Békéscsaba Megyei Jogú Város
Name of the organisation in english	Békéscsaba, City of County Rank
Organisation abbreviation	Békéscsaba
Department / unit / division	N.A.
Partner main address	
Country	Magyarország (HU)
NUTS 2	Dél-Alföld (HU33)
NUTS 3	Békés (HU332)
Street, House number, Postal code, City	Szent István tér 7 5600 Békéscsaba
Homepage	https://bekescsaba.hu/en
Address of department / unit / division (if applicable)	
Country	Magyarország (HU)
NUTS 2	Dél-Alföld (HU33)
NUTS 3	Békés (HU332)
Street, House number, Postal code, City	Szent István tér 7 5600 Békéscsaba
Legal and financial information	
Type of partner	Local public authority
Legal status	Public
VAT number (if applicable)	HU15345008
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Contact	
Legal representative	Mr. Péter Szarvas

Contact	
Contact person	Mr Jenő Szécsi
Email	szecsi.jeno@bcsenergia.hu
Telephone no.	+36208084990
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>The City of Békéscsaba, as the lead partner of the project consortium, has extensive experience and competencies in the area of strategic development projects. The municipality has a skilled and experienced staff that has been involved in successful implementation of various regional and international projects in the past.</p> <p>In the last 10 years Békéscsaba and its subsidiary companies successfully implemented more than 80 EU or nationally funded projects with more than 100.000.000 EUR total budget. Relevant international projects the city has participated/participating directly or indirectly: HURO/0802/146_AF HuRoBike30, ConCom TEN-T ROHU444, Horizon ENPOWER.</p> <p>Békéscsaba is a CraFt city - CraFt: the EU-funded project for cities to become climate-neutral, beautiful and inclusive. (https://craft-cities.eu/project-partners-meet-the-crafters/). As such, committed to the New European Bauhaus initiative and integrating its core values into the project.</p> <p>Békéscsaba approved its SECAP in 2017 and set -than- ambitious targets about energy efficiency of the city' buildings. According to the action plan, the municipality intends to decrease CO2 emission of public buildings by 57% compared to 2010 levels by 2030.</p> <p>The city finalised it's first smart grid investment in 2021 which is Hungary's first city-owned smart grid project to feature 1.2MW / 2.4MWh of battery storage (https://www.energy-storage.news/hungarys-first-city-owned-smart-grid-project-to-feature-1-2mw-2-4mwh-of-battery-storage/ ; https://www.aegps.com/en/technology/references/bess-2020-003/).</p> <p>The next running RES project is an already drilled geothermal well which will provide energy for district heating of municipality buildings and potentially produce electricity with coupled ORC modules as a cascade system.</p> <p>There are other RES projects in the pipeline, like Smart Grid 2, a mirror solar PV park to Smart Grid 1, forming local energy community to integrate municipality buildings and RES capacities as interconnected prosumers of electricity and exploring value chains based on green Hydrogen technology.</p> <p>In terms of the main business of the organisation, the City of Békéscsaba operates as a local government authority, responsible for providing a wide range of services to its citizens, including public infrastructure, education, culture, and social welfare.</p> <p>The city has two dedicated departments within the administration of the municipality and three subsidiary companies for strategic development and project management. These administrative units and companies are operating on specific fields of expertise and cooperating with each other during strategic and project planning and implementation.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	
The role and involvement of the city of Békéscsaba in the project are crucial. As the lead partner,	

Motivation

Békéscsaba is responsible for organizing and coordinating the project implementation as a whole. The city is also a participating pilot implementer, which means that they will be involved in every activity and lead the pilot implementing team of municipalities.

LP1 is SO3 coordinator, prepares output factsheets and quality reports signed by an independent expert.

In addition to the coordination and leadership responsibilities, Békéscsaba will also directly uptake the results of the project. This means that they will be one of the primary beneficiaries of the project outcomes, and they will have a direct impact on the project's success. Furthermore, the city will ensure the uptake of other stakeholders within and outside the project, which is critical for the project's long-term sustainability and scalability.

The city is also dedicated to ensure durability of the project results. This will be achieved by a dedicated team within the municipality or at a subsidiary company. The team will maintain support for deploying and operating the modelling and RES optimisation tool by external stakeholders after project closure.

LP1 participates in every activity and will play a crucial role in ensuring transferability of the results by:

- coordinating transnational knowledge exchange (A3.3)
- as Pilot implementer, LP1 will be available for sharing experience and provide information about the modelling tool, the feasibility study based on it and the RES optimisation tool utilised at the City's solar power plant.
- providing access to the developed tools and support for their deployment after project closure: LP1 will maintain accessibility to project outputs and results after project closure for at least 5 years to ensure the largest possible uptake of solutions the project produces.

LP1 will:

- organise the project opening conference in and a workshop in Hungary (including external services).
- facilitate the delivery of external communication services (project short videos, film for streaming services)
- deliver stakeholder map perform state of play analysis in Hungary (external services envisaged)
- coordinate the delivery of the Energy Storage Outlook (long list of solutions)
- participate and facilitate best practice site visits (travel flat rate and external services for hosting visit in Békéscsaba)
- coordinate the delivery of the CSESS utilising internal capacities and contracting external services
- participate in the development the modelling and RES optimisation tool by dedicating staff for the process.
- pilot testing the developed tools
- prepares feasibility study for storage investments (external services)
- participate in policy recommendation and project output dissemination activities.

We envisage approximately 20% of total budget allocated to project management activities (external expertise and flat rates).

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

The City of Békéscsaba, as the lead partner of the project consortium, possesses a remarkable capacity and extensive experience in managing and coordinating EU co-financed projects as well as other international projects. LP1's track record demonstrates a strong commitment to strategic development initiatives and a successful implementation of numerous regional and international projects over the past decade.

With a skilled and experienced staff, the municipality has been actively engaged in the execution of over 80 EU or nationally funded projects (Relevant international projects the city has participated

Motivation

/participating directly or indirectly: HURO/0802/146_AF HuRoBike30, ConCom TEN-T ROHU444, Horizon ENPOWER.) in the last 10 years, with an impressive total budget exceeding 100,000,000 EUR. This extensive portfolio highlights the City's proficiency in securing funding, managing resources, and delivering results in a diverse range of projects. Since the conclusion of the above-mentioned project, LP1 funded a subsidiary company for energy project management with experts in international projects. The delegated team from this subsidiary company is readily available for LP1. They are three specialists with experience on the field of national, cross-border, transnational cooperation programs with 50+ years of aggregated experience.

Furthermore, LP1 will contract professional project management service with significant Interreg project management experience. The external project manager will provide overall project management services, deal with reporting, communication with MA, JS and partners regarding the administrative aspects of implementation. The city has allocated the necessary budget for external project management services.

Regarding coordination of professional activities, LP1 will utilise its human resources at its Strategic development department (expenditures covered by staff flat rate) and can lean on subsidiary companies which are specialised in RES and energy efficiency projects.

Communication will be coordinated by PP5 VERA so LP1 can focus its effort on overall coordination of the joint work of the consortium, SO3 coordination and Knowledge transfer and dissemination.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	307.120,00	80,00 %
Partner contribution	76.780,00	20,00 %
Partner total eligible budget	383.900,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
Békéscsaba	Public	19.195,00	5,00 %
Hungarian state contribution	State	57.585,00	15,00 %

Total

Sub-total public contribution	19.195,00	5,00 %
Sub-total state contribution	57.585,00	15,00 %
Sub-total private contribution	0,00	0,00 %
Total	76.780,00	20,00 %

State Aid

State aid relevant activities

B.1 Project Partner 2	
Partner number	2
Partner role	PP
Name of the organisation in original language	Pannon Egyetem
Name of the organisation in english	University of Pannonia
Organisation abbreviation	UP
Department / unit / division	N.A.
Partner main address	
Country	Magyarország (HU)
NUTS 2	Közép-Dunántúl (HU21)
NUTS 3	Veszprém (HU213)
Street, House number, Postal code, City	Egyetem 10 H-8200 Veszprém
Homepage	https://international.uni-pannon.hu/hu/
Address of department / unit / division (if applicable)	
Country	Magyarország (HU)
NUTS 2	Dél-Alföld (HU33)
NUTS 3	Békés (HU332)
Street, House number, Postal code, City	Szent István tér 7 5600 Békéscsaba
Legal and financial information	
Type of partner	Higher education and research organisations
Legal status	Public
VAT number (if applicable)	19310321-2-19
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Contact	
Legal representative	Dr., Mr. András, Zsolt Gelencsér, Csillag

Contact	
Contact person	Dr. Viola Somogyi
Email	somogyi.viola@mk.uni-pannon.hu
Telephone no.	+36 88 624 - 000 / 6025
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>The University of Pannonia (UP) is one of the most dynamically developing higher educational institutions in Hungary. Based in Veszprém, UP operates across five picturesque cities in the former Roman province of Pannonia. With five faculties, three research and development centres and a Circular Economy Sustainability Competence Centre, the university offers high quality education supported by cutting-edge research activities, with a particular emphasis on sustainability, in a student-friendly environment. Our endeavours are carried out in close cooperation with regional industrial partners and local governments. Two research laboratories will participate in this project: The Electrical Energy Systems Research Laboratory (EESRL) and the Sustainability Solutions Research Laboratory (SSRL). EESRL is part of the Department of Electrical Engineering and Information Systems (VIRT) in the Faculty of Information Technology at UP. VIRT serves as a principal center for teaching and research in electrical engineering and information system science. The primary objective of EESRL is to apply the principles of systems and control theory to various areas of energy systems. Their research encompasses topics such as the optimal integration of renewable energy sources into power networks, the efficient operation of electrical generators and electric vehicle batteries using systems and control theory tools, and the energy-optimal scheduling of household appliances utilizing model predictive control (MPC) algorithms. Additionally, their research focuses on areas such as the optimal operation and state of health (SoH) estimation of EV batteries considering temperature dependency, the energy-optimized operation of solar panels, and the investigation of portfolio optimization-related problems. The Sustainability Solutions Research Laboratory, located in the Faculty of Engineering at UP, specializes in the monitoring, measurement, and assessment of complex systems, with a particular emphasis on sustainability, the circular economy, and climate change. Their research contributes to a better understanding of complex problems, the development of technical solutions, and the provision of support for decision makers. Utilizing their extensive expertise, which is substantiated by over fifty life cycle assessment studies conducted for industrial partners, they employ a life cycle approach to ensure the environmental integrity of their research projects. They have experience with traditional life cycle analysis, life cycle impact assessment (ReCiPe model) and life cycle cost assessment. They operate within the SPHERA® environment benefiting from its comprehensive professional databases.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	
<p>Activity 1.3. The SSRL at UP conducts a literature review of energy storage solutions that goes beyond the state of the art, considering local context, in consultation with EESRL and other partners. Data for Life Cycle Impact Analysis (LCIA) are collected in this stage, to incorporate environmental and sustainability aspects of the storage solutions in the decision-making process that is designed later. A comprehensive analysis of knowledge gaps in the environmental impacts of said technologies considering the full life cycle will be conducted, with the aim of bridging those gaps.</p> <p>Activity 1.5. The methodology for multi-criteria decision making (MCDM) is developed, involving the identification and weighting of various aspects (technical, economic, environmental, social, reuse</p>	

Motivation

/repurposing options, etc.), considering stakeholder perspectives and local circumstances. LCIA is carried out to investigate the environmental load caused by the shortlisted energy storage systems integrated with different renewable energy production. The effect of the environmental load on the local and regional ecosystem, biodiversity and settlement resilience is modelled which facilitates choosing the best solution. LCIA is carried out by SSRL and the methodology of the MCDM is developed involving all project partners.

Activity 2.1. Flexibility can provide the ability to change the prosumers actual electricity consumption and/or generation profile. EESRL develops a prosumer flexibility model for residential buildings or an aggregated flexibility model for block of building, street, local transformer area, etc. The model is based on the first principles of engineering, standard building and appliance parameters. The model determines upward and downward flexibility for the next 15 minutes, considering electrical power inputs. One backend layer will be implemented parallel with the theoretical research process. The model is enhanced with spatial information technology solutions. The climatic and meteorological conditions of the area are estimated for the medium and long term, as they exert a substantial influence on the temporal energy consumption patterns of the region. Furthermore, utilizing the method devised by SSRL, the shaded areas within the study area are identified across different time intervals, which affects the solar energy production and air conditioning demand.

Activity 2.2. EESRL will develop a fine-tuned LSTM neural network based electricity price prediction model, focusing on the predictive control of storage-based renewable power plants with a new model for optimization. The error function (CO2 emission, price, state of charge and lifetime of the storage, and the parameters of LCIA) minimization enables the prediction of effective trading strategies that match the projected electricity prices.

A3.1. Further development of the platform and models is carried out based on the feedback.

7.46% of total budget is allocated for project management activities.

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	229.936,00	80,00 %
Partner contribution	57.484,00	20,00 %
Partner total eligible budget	287.420,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
UP	Public	14.371,00	5,00 %
Hungarian state contribution	State	43.113,00	15,00 %

Total

Sub-total public contribution	14.371,00	5,00 %
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Total		
Sub-total state contribution	43.113,00	15,00 %
Sub-total private contribution	0,00	0,00 %
Total	57.484,00	20,00 %
State Aid		
State aid relevant activities		

B.1 Project Partner 3	
Partner number	3
Partner role	PP
Name of the organisation in original language	BSC, Poslovno podporni center d.o.o. Kranj
Name of the organisation in english	BSC, Business support Centre L.t.d., Kranj
Organisation abbreviation	BSC KRANJ
Department / unit / division	Department of International projects
Partner main address	
Country	Slovenija (SI)
NUTS 2	Zahodna Slovenija (SI04)
NUTS 3	Gorenjska (SI042)
Street, House number, Postal code, City	Cesta Staneta Žagarja 37 4000 Kranj
Homepage	www.bsc-kranj.si
Address of department / unit / division (if applicable)	
Country	Slovenija (SI)
NUTS 2	Zahodna Slovenija (SI04)
NUTS 3	Gorenjska (SI042)
Street, House number, Postal code, City	Cesta Staneta Žagarja 37 4000 Kranj
Legal and financial information	
Type of partner	Sectoral agency
Legal status	Public
VAT number (if applicable)	SI32865597
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Contact	
Legal representative	Mr. Rok Šimenc

Contact	
Contact person	Mrs. Helena Cvenkel
Email	Helena.cvenkel@bsc-kranj.si
Telephone no.	0038642817239
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>BSC Kranj is a regional development agency with over 20 years of experience in preparing and implementing EU-funded projects. BSC has currently 27 employees. We hold a central role in the strategic planning of 18 municipalities of Gorenjska region. We work as a support organisation and a link among entrepreneurs, chambers, municipalities, ministries and other institutions relevant for the priority fields of environment (including energy efficiency, renewables,...), human resource development, tourism, spatial planning, and rural development.</p> <p>BSC is responsible for the preparation and direct implementation of key measures from the region's development program and for the preparation of strategic documents and strategic political decisions in the region (main decision body in the region is a council of mayors and regional development board). BSC coordinates regional stakeholder group for the environment, where challenges of energy efficiency, management of energy efficiency, renewables addressed and proposals/strategic inputs for further work in the region towards energy efficiency, usage of renewables are proposed to regional board of mayors (policy makers). BSC prepared regional SECAP in 2019, that enable 18 local communities in the region to join Covenant of mayors. The regional development program 2021-2027 highlights the energy efficiency, renewables of Gorenjska as one of the key strategic objective and the development of appropriate guidelines.</p> <p>According to that the region will focus on sustainable development focusing on minimising of energy usage and usage of renewables.</p> <p>BSC's expertise extends to various programs of cohesion funds, transnational and cross-border programs, and other financial mechanisms, making them a seasoned project partner. BSC Kranj's involvement in projects dates back to the implementation of the PHARE program over 15 years ago, and they have over two decades of experience in securing national funds.</p> <p>In the context of StoreMore, BSC Kranj's extensive experience in project management, sustainable development, and their familiarity with various funding mechanisms will be invaluable. Their expertise in technology and innovation aligns well with the project's focus on cutting-edge energy storage solutions. Furthermore, their strong regional network and their commitment to sustainable development make them an ideal partner for implementing and promoting the project's objectives. BSC also has a strong track record in shaping policy recommendations, a competence that is crucial for the StoreMore project. Their extensive experience in regional development initiatives has given them a deep understanding of policy landscapes and the ability to identify areas for improvement. They have been instrumental in influencing policy changes at the regional level, particularly in the areas of entrepreneurship, technology, and sustainable development.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	

Motivation

BSC Kranj brings a wealth of expertise to the StoreMore project, spanning multiple fields that are crucial for the project's success. In collaboration with EG (PP4), BSC Kranj leverages its extensive network, experience, and professional capacity to deliver a comprehensive stakeholder map of the target groups (A1.1) and a state of play map (A1.2). Their contribution extends to every activity in SO1, including participation in the preparation of the long list of energy storage solutions (A1.3), involvement in best practice site visits (A1.4), and providing valuable professional input to the Catalogue of Sustainable Energy Storage Solutions (A1.5 CSESS).

During the implementation of SO2, no specific knowledge and contribution is requested from BSC Kranj.

When it comes to the implementation of SO3, BSC Kranj assumes a leadership role in A3.2, where they will be instrumental in formulating policy recommendations at the regional, national, and Danube Region levels. Their experience in policy shaping and their understanding of the regional development landscape will be invaluable in this process.

Moreover, in cooperation with PP4, BSC Kranj will organise a national workshop in Slovenia, leveraging its extensive network of long-term partners. This will make BSC Kranj an ideal partner in knowledge transfer and dissemination activities (A3.3). Their commitment to the StoreMore project and their capacity to drive change will undoubtedly contribute to the project's success.

Expected proportion of management budget will be 12%.

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	130.000,00	80,00 %
Partner contribution	32.500,00	20,00 %
Partner total eligible budget	162.500,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
BSC KRANJ	Public	32.500,00	20,00 %

Total

Sub-total public contribution	32.500,00	20,00 %
Sub-total state contribution	0,00	0,00 %
Sub-total private contribution	0,00	0,00 %
Total	32.500,00	20,00 %

State Aid

State aid relevant activities

B.1 Project Partner 4	
Partner number	4
Partner role	PP
Name of the organisation in original language	Elektro Gorenjska, podjetje za distribucijo električne energije, d.d.
Name of the organisation in english	Elektro Gorenjska, electrical distribution company, JSCo.
Organisation abbreviation	EG
Department / unit / division	Research and development
Partner main address	
Country	Slovenija (SI)
NUTS 2	Zahodna Slovenija (SI04)
NUTS 3	Gorenjska (SI042)
Street, House number, Postal code, City	Ulica Mirka Vadnova 3A 4000 Kranj
Homepage	https://www.elektro-gorenjska.si/
Address of department / unit / division (if applicable)	
Country	Slovenija (SI)
NUTS 2	Zahodna Slovenija (SI04)
NUTS 3	Gorenjska (SI042)
Street, House number, Postal code, City	Ulica Mirka Vadnova 3A 4000 Kranj
Legal and financial information	
Type of partner	Infrastructure and (public) service provider
Legal status	Public
VAT number (if applicable)	SI20389264
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes

Contact	
Legal representative	Dr. Ivan Šmon
Contact person	Mr. Nejc Petrovič
Email	nejc.petrovic@elektro-gorenjska.si
Telephone no.	+38641461606
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>Elektro Gorenjska's (EG) main scope of activities as Slovenian Distribution System Operator (DSO) is providing electricity to approximately 10% of Slovenia's territory. Moreover, Elektro Gorenjska has additional experience in successfully implementing projects in fields such as Renewable Energy Sources (RES), e-mobility infrastructure, energy contracting, engineering services such as construction, design and electrical assembly works, energy storage, energy communities, heat generation and distribution and multi-utility.</p> <p>The motivation behind EG's collaboration in StoreMore is to a) gain new knowledge and understanding of energy transition challenges in order to develop new services and products for our customers, b) strengthen our holistic understanding of energy transition process, what that means for our business in the future and how to best transform our company, c) increase our international network of partners interested in development and business disruption potential of energy transition.</p> <p>Successful implementation of the project will make EG one of first actors in Slovenia to promote Energy transition as a development opportunity while possessing a combination of technical and socio-economic knowledge and capacity to be able to plan and implement the necessary actions.</p> <p>Key competences for the project are in the field of electricity distribution and other energy services listed above, as EG is continuously ranking as Slovenia's top energy distributor. EG is also making increasing efforts in Gorenjska region to establish a SPOC point (Single Point of Contact, as provisioned by EU Directive EU2018/2021/EU, therefore EG's contribution to the project is also bringing high level of trust from local environments with credible history of regional energy related projects implemented.</p> <p>EG is a member of CIGRE-CIRED organization as well as a member of the International Electrotechnical Committee (IEC). EG is also a member of the Slovenian Chamber of Engineers.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	
<p>EG will be present in all work packages, meaning we will actively participate in identifying the state of play in the energy storage sector, especially regarding novel technologies in the entire country of Slovenia. We will also support the development of specialized tools for designing storage capacities and improving existing RES performance. We will also help provide solutions for modelling storage systems and optimising RES operation. Finally, we will participate also in capacity-building, dissemination and project management activities.</p> <p>Although EG covers only 10% of Slovenia's territory, we will identify the state of play in the energy storage sector for entire Slovenia, through our contractual relationship with the national system</p>	

Motivation

operator of the distribution network. Through our collaboration in previous and ongoing EU and national projects we will also map out the state of play of energy storage also on the transmission system level. As EG is involved in energy community projects dealing with heat storage as well, we have experience and will determine the potential of other types of energy storage in Slovenia also through our existing collaborations with Local Regional Energy Agencies in Slovenia. We will first of all map stakeholders on the national level, analyze the current state of implementation of various storage technologies in Slovenia, provide an energy storage outlook and help with the preparation of a feasibility analysis of different storage solutions ranging from electrical batteries to gravitational, heat, hydrogen and other types of energy storage solutions.

We will participate in the development of modelling tools and information platforms for the analysed storage solutions and optimization tools for RES operators through providing anonymized electrical consumption and generation data of our customers and with the demonstration of the developed solution in our area, while providing testing and validation efforts.

As a distribution system operator, it is in EG's best interest to further enable the proliferation of storage and RES solutions, while helping accommodate the green energy transition in Slovenia in accordance with the National Energy and Climate Plan. Therefore, we will support the fine tuning of the modelling and RES optimisation tools with the help of energy, weather and GIS data as well as with our own already developed algorithms for optimal RES and battery sizing and placement in territory that we cover.

We will help to spread the deliverables and solutions of the StoreMore project through our dedicated PR and corporate communication department through social media, press, our website as well as with dedicated events which we will organize or participate in. We will participate in project meetings and in demo site visits while managing risks, project activities, budget, resources and timelines to effectively deliver the proposed project goals.

13% of total budget is allocated to management activities.

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	108.160,00	80,00 %
Partner contribution	27.040,00	20,00 %
Partner total eligible budget	135.200,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
EG	Public	27.040,00	20,00 %

Total

Sub-total public contribution	27.040,00	20,00 %
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Total		
Sub-total state contribution	0,00	0,00 %
Sub-total private contribution	0,00	0,00 %
Total	27.040,00	20,00 %
State Aid		
State aid relevant activities		

B.1 Project Partner 5	
Partner number	5
Partner role	PP
Name of the organisation in original language	Verein für Verantwortungsvolle Stadtentwicklung und Kommunikation
Name of the organisation in english	Association for responsible urban development and communication
Organisation abbreviation	VERA
Department / unit / division	
Partner main address	
Country	Österreich (AT)
NUTS 2	Steiermark (AT22)
NUTS 3	West- und Südsteiermark (AT225)
Street, House number, Postal code, City	Schlossstrasse 23 8522 Groß Sankt Florian
Homepage	https://veraverain.at
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Interest groups including NGOs
Legal status	Private
VAT number (if applicable)	ZVR-number 1867409646
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Contact	
Legal representative	Ms Nikoletta NÁDAS

Contact	
Contact person	Mrs Beáta KLAMPFER
Email	veraverain.info@gmail.com
Telephone no.	0043 660 3972903
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>VERA (Association for responsible urban development and communication) attempts to enhance international dialogue about investigation, preparation, implementation and support of measures that lead to innovative, liveable, environmentally conscious, sustainable cities, and well-prepared and digitally conscious business environments.</p> <p>VERA members developed, implemented and also participated in dozens of domestic and international projects. Most of them have been co-financed by the European Union and focused on urban development, responsible innovation and communication. During the implementation of these projects, our team has built up an extensive international network covering mostly Europe but also overseas countries. Our members have great experiences on how to work in and implement effectively EU funded projects.</p> <p>Regarding innovative energy storage solutions, the concept of responsible innovation (RRI) is important. Our team has a great experience and knowledge in the field of responsible innovation. This concept can be an umbrella, a horizontal aspect over the entire project, which would ensure that the framework to be developed is desirable for the society. It can have a special added value of the project that gives its uniqueness. In this project we need to think on a broader scale and need to take into consideration the possible future effects of our actions. Responsible innovation can help with it. Responsible innovation can offer a special uniqueness and added value to this project, that potentially our competitors will not have and which few people have knowledge of. Since Responsible Research and Innovation (RRI) has become a cross-cutting expectation of the EU innovation policy, the potential social, environmental and ethical implications (the fields of RRI) should be taken into account to manage a successful innovation project. Our RRI activity helps to predict and consider the non-immediate effects of the innovation activities on the society and the environment to promote sustainability by adjusting the project to meet these requirements.</p> <p>We are also experts in the field of communication; we were WP-Communication leaders in many projects (like Interreg ArcheoDanube or Interreg TalentMagnet), thus we can also contribute significantly to this field.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	
<p>VERA as scientific partner and knowledge provider will contribute mainly to the communication activities as communication leaders. Our organisation uses the most innovative communication tools to involve the possible widest range of actors, who can affect the success of the project. Our aim is to develop a dynamic, efficient communication strategy to raise awareness and increase the engagement of the stakeholders in the identification of the innovative energy storage solutions.</p> <p>Our aim is to foster responsible innovation, and to help partners how to think about the innovative storage solutions in a broader scale, in order to ensure sustainability of the results and the project.</p>	

Motivation

VERA will also contribute to the preparation of the feasibility analysis of different solutions paying special attention to the societal and environmental impacts based on the concept of responsible innovation. VERA will provide background information for partners in this activity.

We will also actively participate in the development of online modelling tool and information platform. VERA will actively participating in preparing a policy recommendation on innovative energy storing methods. VERA will help to collect on local, national and EU level the existing policies, and will recommend future solutions for policy making.

VERA can help the partnership how to organise successful workshops. VERA can help partnership in learning the background on how to organize successful workshops, and will prepare a guide for workshop organization.

20% of total budget is expected to cover management costs including FLC in Austria.

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	0,00	80,00 %
Partner contribution	0,00	20,00 %
Partner total eligible budget	0,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
VERA	Private	0,00	0,00 %

Total

Sub-total public contribution	0,00	0,00 %
Sub-total state contribution	0,00	0,00 %
Sub-total private contribution	0,00	0,00 %
Total	0,00	0,00 %

State Aid

State aid relevant activities

B.1 Project Partner 6	
Partner number	6
Partner role	PP
Name of the organisation in original language	Centar za energiju, energijsku efikasnost i okolinu
Name of the organisation in english	Center for Energy, Energy Efficiency and Environment
Organisation abbreviation	CEEEO
Department / unit / division	
Partner main address	
Country	Bosnia and Herzegovina (BA)
NUTS 2	Brčko distrikt (BA01)
NUTS 3	Brčko distrikt (BA010)
Street, House number, Postal code, City	Đoke Mazalića 2 71000 Sarajevo
Homepage	https://ceeo.ba/
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Interest groups including NGOs
Legal status	Private
VAT number (if applicable)	4210285090007
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Contact	
Legal representative	Ms. Asja Herenda
Contact person	Mr. Aldin Hodžić

Contact	
Email	aldin.hodzic@ceeo.ba
Telephone no.	+38761963467
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>The CEEO association acts as an expert hub, bringing together a team of people committed to sustainable development and environmental protection, who are designers, professors at various faculties, consultants and experts from the SEE region. We work out of the desire to professionally and collectively contribute to the improvement of working and living conditions, increase savings on energy costs, contribute to the safe and secure coverage of energy needs, all within the framework of the energy transition as a global milestone.</p> <p>Our consultants and experts specialize in innovative financial and business models for improving energy efficiency and the use of renewable energy in industry, buildings, transport and services, as well as in incentive mechanisms for electricity generation, green certificates, emissions trading schemes and the like, but also in raising public awareness.</p> <p>Our projects carried out so far also dealt with renewable energy training and capacity building in local authorities. The CEEO and our experts have gained experience in the preparation and implementation of numerous projects that are crucial for the development of the country, through the implementation of numerous activities, of which the experience in the implementation of projects to promote and develop the principles of renewable energy is particularly significant. Through the implemented Interreg Med project, SISMA PLUS, we gained experience in this type of projects and international cooperation, but also strengthened our position in the process of capacity building for local authorities.</p> <p>CEEO works closely with various stakeholders such as local authorities, industry partners, universities and government agencies. Our existing network of experts can facilitate knowledge sharing, resource sharing, and collaborative problem solving within consortia. In addition, our experts can leverage their policy development and implementation expertise to assist the consortium in shaping favorable regulatory frameworks and policies for the energy sector, with a particular focus on energy storage. I can actively engage with policymakers and advocate for supportive policies and regulations that encourage the adoption of innovative practices.</p> <p>Our experts are interested in new technologies and therefore participated in the first Green Hydrogen Conference in Bosnia and Herzegovina. Their personal interest is in sustainable solutions in the energy sector, which includes the use of renewable energy, but also energy storage.</p> <p>As the area around Tuzla is the most polluted due to the thermal power plant there, this is exactly the region we are focusing on. With the support of local authorities, a strategic approach to planning the development of this region is of great importance.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	
<p>SO1: The CEEO Association will provide Mapping stakeholders at national level, and State of play analysis based on deep knowledge of local and national market and policy, as well as good stakeholders' connections. Our Energy Storage Outlook specialists will prepare baseline and recommendations, and feasibility analysis of different solutions, that will be part of future regulations in the field. As energy storage is still under developed in the country, our experts will participate in best practice site visits.</p>	

Motivation

SO2: During the implementation of SO2, CEEO will contribute by engaging potential stakeholders to involve them in the pilot actions.

SO3: Based on all implemented activities and recommendations, and in close cooperation with other project partners, CEEO will prepare Policy recommendations and presentations to stakeholders. During the project implementation period, all communication activities will be conducted locally on web page and social media. CEEO will organize a national workshop in Bosnia-Herzegovina involving relevant stakeholders, including policy actors.

Association CEEO can play a multifaceted role in the implementation of the project, encompassing research, innovation, collaboration, modelling, testing, and policy support. By leveraging its resources and expertise, we can contribute significantly to accelerating the transition to renewable energy and achieving national targets of renewable energy use.

The proportion of the total partner budget that can be allocated for project management activities is 12%

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	83.200,00	80,00 %
Partner contribution	20.800,00	20,00 %
Partner total eligible budget	104.000,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
CEEEO	Private	20.800,00	20,00 %

Total

Sub-total public contribution	0,00	0,00 %
Sub-total state contribution	0,00	0,00 %
Sub-total private contribution	20.800,00	20,00 %
Total	20.800,00	20,00 %

State Aid

State aid relevant activities

B.1 Project Partner 7	
Partner number	7
Partner role	PP
Name of the organisation in original language	Inovační centrum Ústeckého kraje, z. s
Name of the organisation in english	Innovation Centre of the Usti Region
Organisation abbreviation	ICUK
Department / unit / division	
Partner main address	
Country	Česko (CZ)
NUTS 2	Severozápad (CZ04)
NUTS 3	Ústecký kraj (CZ042)
Street, House number, Postal code, City	Velka Hradebni 2800/54 400 01 Usti nad Labem
Homepage	https://www.icuk.cz
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Business support organisation
Legal status	Public
VAT number (if applicable)	CZ04542088
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Contact	
Legal representative	Mr. Martin Mata
Contact person	Mr. Marek Hart

Contact	
Email	hart@icuk.cz
Telephone no.	+420 721 802 750
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>Innovation Centre of the Usti Region (ICUK), Czech Republic acts as a business support organisation, which was founded by the Usti Region Authority, J. E. Purkyne University in Usti nad Labem (UJEP) and Chamber of Commerce of the Usti Region, for the purpose of building innovation ecosystem, supporting innovations and their implementation within the Usti region, Czechia.</p> <p>ICUK, as an executive body of regional RIS3 strategy, works towards developing the region through projects generating new economic opportunities, better conditions, and new tools and services. ICUK helps local companies kickstart their enterprise and grow beyond the borders of the region, and connect partners from the worlds of business, research, and education and make the region more attractive to investors with high added value. Vertical priorities of RIS3 strategy of Usti region are, among others energy; resources, supply and downstream industries; reclamation and cleantech (in relation to traditional chemistry).</p> <p>In the light of current geopolitical consequences and given the fact that the Usti Region has traditionally heavily relied on surface brown-coal mining, the region's key objective is to find new solutions for the supply and storage of renewable energy, so as to gain the energy security, self-sufficiency, decarbonisation of energy-intensive industries and to create new economic opportunities.</p> <p>A significant topic with respect of these objectives became hydrogen. Hydrogen has been widely produced in the region and utilized predominantly as a feedstock in the petro/chemical industry. There are vast brownfield areas, i.e. former mines which might be used for the installation of renewable sources and adjacent technologies for hydrogen production and storage. The indicated conviction about hydrogen's potential in the region led to the development of the Hydrogen Strategy of the Usti Region. The strategy reflects not only the historic experience and know-how associated with hydrogen, but also the objectives of the Czech Republic's Hydrogen Strategy. Finally, it creates a specific action plan for the regional hydrogen economy development goals.</p> <p>ICUK, as the business support organization cooperating with businesses and other important stakeholders for the energy industry and hydrogen can capitalize on the existing knowledge and contact network and bring invaluable inputs for the purposes of the project StoreMore's portfolio of energy storage solutions.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	
<p>ICUK offers a number of supporting services in the region, and, consequently, it has developed a wide network of connections with subjects from private, public, academic, R&D sectors, but also among civil society representatives. All of the groups and relevant representatives from them will offer significant inputs and points of view towards the needs and wants for the energy storage solutions development, design and eventual utilization in the geographical, legal and regulatory conditions of the Usti Region.</p>	

Motivation

ICUK was a member of the team along with the Economic and Social Council of the Usti Region and Chamber of Commerce of the Usti Region, which developed the Hydrogen Strategy of the Usti Region. ICUK team members and project developers have also directly cooperated with stakeholders active in hydrogen, geothermal energy and other energy storage technologies projects. Consequently, as was already indicated above, ICUK has well established connection to representatives of educational institutions, academia, NGOs, SMEs, large enterprises and other entities. For instance, ICUK is able to directly communicate and cooperate not only with local universities – UJEP and Czech Technical University in Prague – detached workplace Decin - but also universities in other regions which are involved in research and development in the area of energy storage solutions. Consequently, ICUK's main added value for the project StoreMore is facilitation of cooperation and know-how from the field of the regional hydrogen economy development as well as hydrogen technologies used for the purposes of energy storage, whilst drawing on its up-to-date experience and connections.

This facilitation will be proved useful with respect to the StoreMore activities focused on mapping the regional preparedness for the deployment of different energy storage technologies and solutions as well as to the energy storage outlook and feasibility study development. ICUK represents a coordinator with respect to the aforementioned activities, especially the ones grouped under the specific objective 1 focused on the identification of state of play in the energy storage sector, especially regarding novel technologies. Furthermore, based on the analyses, mapping and monitoring actions, ICUK will also contribute to the provision of data and inputs for the online monitoring and modelling tool with a particular focus placed on the Usti region's potential. Last but not least, ICUK will be able to draw policy recommendations for the relevant regional stakeholders on the basis of aforementioned analyses. ICUK will take the coordinator role in SO1, oversees other partners delivery of activities, prepares output factsheet and quality report signed by an independent expert.

The proportion of the total ICUK budget based on preliminary calculations, which is going to be allocated for project management activities, equals 19 %.

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	216.080,00	80,00 %
Partner contribution	54.020,00	20,00 %
Partner total eligible budget	270.100,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
ICUK	Public	54.020,00	20,00 %

Total		
Sub-total public contribution	54.020,00	20,00 %
Sub-total state contribution	0,00	0,00 %
Sub-total private contribution	0,00	0,00 %
Total	54.020,00	20,00 %
State Aid		
State aid relevant activities		

B.1 Project Partner 8	
Partner number	8
Partner role	PP
Name of the organisation in original language	Asociatia de Dezvoltare Intercomunitara Zona Metropolitana Oradea
Name of the organisation in english	Oradea Metropolitan Area Intercommunity Development Association
Organisation abbreviation	ZMO
Department / unit / division	
Partner main address	
Country	România (RO)
NUTS 2	Nord-Vest (RO11)
NUTS 3	Bihor (RO111)
Street, House number, Postal code, City	Piata Unirii 1-3 410100 Oradea
Homepage	https://zmo.ro/ , https://www.facebook.com/ZonaMetropolitanaOradea/?locale=ro_RO
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Interest groups including NGOs
Legal status	Private
VAT number (if applicable)	17662975
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Contact	
Legal representative	Mrs. Letitia Motoc
Contact person	Mrs. Letitia Motoc
Email	motoc.letitia@oradea.ro
Telephone no.	+40726124653
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>The Asociatia de Dezvoltare Intercomunitara Zona Metropolitana Oradea (ZMO) is a non-profit organization based in Oradea, Romania. It was established in 2007 with the aim of promoting and implementing sustainable development strategies in the Oradea Metropolitan Area. The organization is composed of the city of Oradea and 13 surrounding localities, and it works to strengthen the economic, social, and environmental aspects of the region.</p> <p>One of the city's notable initiatives is the construction of a PV car park, which is expected to power a nearby geothermal plant. This project involves the installation of app. 1,500 solar modules in a parking lot, doubling as canopies for parked cars. The solar car park is projected to produce close to 0.9 MW of electricity, significantly reducing the operational costs of the geothermal plant. This initiative is part of the "Energy Program in Romania", aiming to increase the renewable energy expansion in the country and stimulate bilateral partnerships and development projects.</p> <p>In another ambitious project, the city's district heating operator, Termoficare Oradea, plans to build an 80 MW solar park to power an electrolyzer system for the production of green hydrogen. The green hydrogen produced would be mixed with fossil gas in the plant, reducing the city's dependence on fossil fuels. The solar park is planned to be set up at a former coal-fired thermal power plant's slag and ash dump, which has been closed for six years. The green hydrogen plant would be powered by the solar farm, and the hydrogen produced would be mixed with natural gas in the boilers that provide district heating.</p> <p>ZMO is committed to fostering cooperation and partnership among its member localities to achieve common goals.</p> <p>ZMO has extensive experience in participating in Interreg programmes, which are European Union-funded initiatives designed to stimulate cooperation between regions in different countries. These programmes aim to promote a harmonious economic, social, and territorial development of the Union as a whole. Interreg projects are typically part of a larger strategy for a specific region, involving numerous local and regional partners.</p> <p>Over the years, ZMO has been involved in several Interreg projects. They participated in the "Green Infrastructure: Enhancing Biodiversity and Ecosystem Services for territorial development" (GreenInfraNet) project, which aimed to promote the integration of green infrastructure into regional development policies. Another notable project is the "Sustainable Transport Infrastructure of Danube Regions" (Transdanube), which focused on developing sustainable mobility options and tourism in the Danube region. ZMO also participated in Interreg Romania-Hungary 2013-2020 projects: AQUARES (ROHU29) as lead partner, ROHU425 HRArea, ROHU388 CDDL as PP, ROHU421 CBC-EMPLOYMENT Municipality of Oradea as LP.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate	

Motivation**the proportion (%) of the total partner budget to be allocated for project management activities!**

As detailed in the previous section, ZMO has the requisite professional expertise and experience to successfully execute the Target Group map (A1.1) and State of play Analysis (A1.2) for Romania. Given their ambitious plan for an 80MW solar PV park, ZMO is well-positioned to participate in best practice site visits (A1.4).

ZMO is a key player in the implementation of the StoreMore project. Two of the thirteen local communities (Bors and Osorhei) under ZMO already have substantial solar PV capacities, and at least one of them will pilot the solutions developed by StoreMore during activities A2.3 and A2.4.

ZMO will leverage the modelling tool and the information gathered during the pilot phase to prepare feasibility studies (A2.5). These studies will aim to generate investment in sustainable energy storage solutions, contributing to the broader goals of the StoreMore project.

Furthermore, ZMO is committed to actively participating in knowledge transfer and dissemination activities (A3.3), an area in which they have significant competencies and experience. They will organise a national workshop for stakeholders of the target groups in Romania. The dissemination will focus primarily on Oradea and the 13 member communities of ZMO, but it will also reach a broader network of partners and will certainly aim for the entire country. This commitment underscores ZMO's dedication to promoting sustainable energy storage solutions and contributing to the success of the StoreMore project.

The proportion of the total budget allocated to project management is expected to be 15%

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	166.016,00	80,00 %
Partner contribution	41.504,00	20,00 %
Partner total eligible budget	207.520,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
ZMO	Private	4.150,40	2,00 %
state contribution	State	37.353,60	18,00 %

Total

Sub-total public contribution	0,00	0,00 %
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Total		
Sub-total state contribution	37.353,60	18,00 %
Sub-total private contribution	4.150,40	2,00 %
Total	41.504,00	20,00 %
State Aid		
State aid relevant activities		

B.1 Project Partner 9	
Partner number	9
Partner role	PP
Name of the organisation in original language	Gemeinde Fuchstal
Name of the organisation in english	Municipality of Fuchstal
Organisation abbreviation	AUF
Department / unit / division	
Partner main address	
Country	Deutschland (DE)
NUTS 2	Oberbayern (DE21)
NUTS 3	Landsberg am Lech (DE21E)
Street, House number, Postal code, City	Bahnhofstraße 1 86925 Fuchstal-Leeder
Homepage	https://fuchstal.de/
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Local public authority
Legal status	Public
VAT number (if applicable)	DE128679883
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Contact	
Legal representative	Mr. Erwin Karg
Contact person	Mr. Gerhard Schmid

Contact	
Email	schmid@vgem-fuchstal.de
Telephone no.	+498243969935
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>Apfeldorf, Unterdießen and Fuchstal are three small communities in the Upper Bavarian district of Landsberg am Lech. We thus represent communities with the same tasks and challenges. Our tasks include the sustainable and long-term provision and safeguarding of municipal infrastructure, which encompasses multiple municipal buildings.</p> <p>Fuchstal, is a pioneer in renewable energy, particularly in Bavaria. The town, under the leadership of Mayor Erwin Karg, has heavily invested in the energy transition, producing sustainable electricity from solar, wind, and biogas. The town aims to become an energy self-sufficient entity in both electricity and heat sectors by 2024.</p> <p>The town currently generates approximately 40 million kilowatt-hours (kWh) of sustainable electricity per year, covering the electricity consumption of all its inhabitants. With further expansion of rooftop solar and wind energy, the town plans to significantly increase its production capacities in the coming years. The town's broad energy portfolio includes a municipal photovoltaic open-space system, a biogas plant, and a wind park, which together generate a significant portion of the town's sustainable electricity.</p> <p>Fuchstal is also planning to construct another wind park, which is expected to start in the fall. The town is heavily involved in the construction and financing of the wind park, and the profits generated will be used for the benefit of the community. Once the park is operational in late 2023, the town will produce a total of 65 million kWh of sustainable electricity annually.</p> <p>In addition to its renewable energy production, Fuchstal is working on a project called "Energiezukunft Fuchstal" (Energy Future Fuchstal), which aims to strengthen municipal energy resources through sector coupling and storage of otherwise unused electricity. This project, funded by the federal government, is a central component for the town's energy independence in terms of heat and electricity. The project is currently in the testing phase, with full integration of the hot water heat storage into the municipal heating network planned for the next winter.</p> <p>Fuchstal's experience with battery storage and managing the intermittency of renewable energy sources could be valuable for the StoreMore project. The town's practical experience with these technologies could provide useful insights and lessons learned. Furthermore, Fuchstal's battery storage system could potentially serve as a model for other parts of the StoreMore project, demonstrating how large-scale energy storage can be integrated into a renewable energy system.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	
<p>Given Fuchstal's extensive experience and commitment to renewable energy, the town could play a significant role in the StoreMore project. Fuchstal's innovative approaches to energy production and storage, as well as its ambitious goals for energy self-sufficiency, align well with StoreMore's</p>	

Motivation

objectives. The town could share its experiences and lessons learned, providing valuable insights for the StoreMore project. Furthermore, Fuchstal's commitment to community involvement and public awareness could help guide StoreMore's communication and engagement strategies.

Fuchstal's interest in sustainable energy storage technologies aligns well with the goals of the StoreMore project. The town is always looking for opportunities to invest in new and innovative energy storage solutions. By participating in the StoreMore project, Fuchstal could gain access to cutting-edge energy storage technologies and strategies, helping to further strengthen its renewable energy systems and move closer to its goal of becoming an energy self-sufficient entity.

Fuchstal, with its extensive experience in renewable energy and energy storage, is an ideal location for piloting StoreMore's developed tools, namely the Modelling tool and the RES optimisation tool. The tools' 'virtual storage' feature would allow Fuchstal to simulate the operation of suggested systems using historical data, aiding in decision-making for future investments. The RES optimisation tool, designed for RES operators, would provide Fuchstal with valuable insights into potential energy outputs and future electricity prices. The tool's machine learning models could assist in the effective management and planning of RES operations.

Fuchstal will utilise external expertise for preparing a stakeholder/target group map of Bayern and perform a comprehensive state of play analysis (A1.1, A1.2). Experts from the town will take part in best practice site visits to gather further insights about functioning alternative energy storage methods. Fuchstal will also host a baseline visit for consortium partners to exchange knowledge about a large municipal RES generation system coupled with energy storage. The town will be a pilot implementer partner (PiP) testing the modelling and RES optimisation tools (A2.3, A2.4) and based on the gathered information will prepare feasibility study/studies to generate investment in sustainable energy storage solutions (A2.5). The town will lean on external expertise to organise a workshop for the target group in Bayern promoting the project results, presenting the developed tools and inform the general public (A3.3). Fuchstal also planned costs for FLC during the project.

The town envisages a proportion of 15% of the total budget to be allocated for management activities including FLC costs.

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	195.552,00	80,00 %
Partner contribution	48.888,00	20,00 %
Partner total eligible budget	244.440,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
AUF	Public	48.888,00	20,00 %

Total		
Sub-total public contribution	48.888,00	20,00 %
Sub-total state contribution	0,00	0,00 %
Sub-total private contribution	0,00	0,00 %
Total	48.888,00	20,00 %
State Aid		
State aid relevant activities		

B.1 Project Partner 10	
Partner number	10
Partner role	PP
Name of the organisation in original language	N.A. Partner has withdrawn from the consortium on 12.06.2023
Name of the organisation in english	N.A. Partner has withdrawn from the consortium on 12.06.2023
Organisation abbreviation	N.A.
Department / unit / division	
Partner main address	
Country	Česko (CZ)
NUTS 2	Praha (CZ01)
NUTS 3	Hlavní město Praha (CZ010)
Street, House number, Postal code, City	N.A. N.A. N.A. N.A.
Homepage	N.A.
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Local public authority
Legal status	Public
VAT number (if applicable)	CZ00063517
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Contact	
Legal representative	N.A. N.A. N.A.

Contact			
Contact person		N.A. N.A. N.A.	
Email		cahoj.viktor@praha3.cz	
Telephone no.		+420000000000	
Motivation			
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?			
<p>The Partner has withdrawn from the consortium on 12.06.2023. Partner numbering at this stage could not be modified in the AF and Partnership Agreement (due to PP11-13 already signed numbered documents and Universities's bureaucratic procedures do now allow another signatures in time) but will be corrected in case the project gets funding.</p>			
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!			
<p>The Partner has withdrawn from the consortium on 12.06.2023. Partner numbering at this stage could not be modified in the AF and Partnership Agreement (due to PP11-13 already signed numbered documents and Universities's bureaucratic procedures do now allow another signatures in time) but will be corrected in case the project gets funding.</p>			
Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.			
Co-financing			
Co-financing source		Amount	Percentage
Interreg Funds		0,00	80,00 %
Partner contribution		0,00	20,00 %
Partner total eligible budget		0,00	100,00 %
Origin of partner contribution			
Name of the contributor institution	Type of contribution	Amount	% of total partner budget
N.A.	Public	0,00	0,00 %
Total			
Sub-total public contribution		0,00	0,00 %
Sub-total state contribution		0,00	0,00 %
Sub-total private contribution		0,00	0,00 %

Total		
Total	0,00	0,00 %
State Aid		
State aid relevant activities		

B.1 Project Partner 11	
Partner number	11
Partner role	PP
Name of the organisation in original language	Sveučilište u Zagrebu, Fakultet strojarstva i brodogradnje
Name of the organisation in english	University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture
Organisation abbreviation	UNIZAG FSB
Department / unit / division	Department of Energy, Power Engineering and Environment
Partner main address	
Country	Hrvatska (HR)
NUTS 2	Grad Zagreb (HR05)
NUTS 3	Grad Zagreb (HR050)
Street, House number, Postal code, City	Ivana Lucica 5 10002 Zagreb
Homepage	https://www.fsb.unizg.hr/index.php?fsbonline
Address of department / unit / division (if applicable)	
Country	Hrvatska (HR)
NUTS 2	Grad Zagreb (HR05)
NUTS 3	Grad Zagreb (HR050)
Street, House number, Postal code, City	Ivana Lucica 5 10002 Zagreb
Legal and financial information	
Type of partner	Higher education and research organisations
Legal status	Public
VAT number (if applicable)	HR22910368449
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Contact	
Legal representative	Prof Zdenko Tonković
Contact person	Prof Neven Duić
Email	Neven.duic@fsb.hr
Telephone no.	+38516168494
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture (UNIZAG FSB) is experienced in the modelling work related to the energy planning, optimization of energy systems and modelling smart energy systems. The H2RES energy planning and optimization model that will be further upgraded and adapted during the course of this project was initially developed by UNIZAG FSB during the INTERENERGY project funded by the Croatian Science Foundation.</p> <p>Some of the related projects that the FSB has undertaken include: DecarbBiH, BLUE DEAL - Blue Energy Deployment Alliance, PRISMI PLUS - Transferring a toolkit for RES integration in Smart Mediterranean Islands and rural areas, PLANHEAT - Integrated tool for empowering public authorities in the development of sustainable plans for low carbon heating and cooling.</p> <p>These projects mostly focus on modelling of energy systems. For example, DecarbBiH used LEAP model to model the decarbonization of the Bosnia and Herzegovina. In the BLUE DEAL, the implementation of the technologies such as offshore wind are considered. The projects such as PRISMI PLUS and PLANHEAT focus more on the integration of the mentioned technologies into local communities and to enable the transfer of knowledge required to make necessary investments.</p> <p>Other than the experience in the projects, the researchers included in the project are highly involved in the research work related to the fields of energy planning, smart energy systems, energy storage, implementation of demand-response technologies, power to X technologies and energy system optimization. The scientific work is reflected throughout the high number of research work published, where the part of the work is related to the H2RES model.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	
<p>UNIZAG FSB plays a crucial role in the project, primarily focused on the development of a modelling and optimization tool. This tool is built upon the existing H2RES model, which is an open-source linear optimization model for long-term energy investment planning. H2RES provides an hourly distribution of energy supply technologies across various sectors, aiming to minimize yearly operation and system costs while considering factors such as operation, investment, fuel, generator ramping, energy import, and CO2 emissions costs. All future costs are converted to net present value, as the model focuses on the development of future energy systems.</p> <p>H2RES is implemented using the Python programming language and solved using mathematical software called GURUBI. The model incorporates constraints that determine the energy consumption needs of different sectors, including transport, industry, heating, and electricity demand. It aims to effectively integrate various Power-to-X and consumption response technologies into the energy system and market of a specific area.</p> <p>The optimization targets are defined through the goal function. Initially, the goal function focused solely</p>	

Motivation

on minimizing total system costs. However, as part of the StoreMore project, the goal function will be modified to encompass additional aspects. Previously, factors like emissions levels or the share of renewable energy were implemented as constraints that needed to be satisfied within the model. Additionally, the FSB's tasks involve integrating a machine learning based electricity price prediction algorithm into the dispatch optimization section of the model. This modification will remove the "perfect foresight" feature, making the model's results more realistic. The UNIZAG FSB will also collaborate on integrating a Geographic Information System (GIS) module. Beyond model development and adaptation, the UNIZAG FSB's work includes making necessary adjustments to ensure the model is user-friendly for local communities. This involves collaborating on the creation of an online interface and setting up a backend portion of the model on a server dedicated to the project's objectives. As the model is resource-intensive, a portion of the responsibilities will focus on improving the model's structure to enhance its performance. Estimated proportion of management activities is 6%.

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	145.600,00	80,00 %
Partner contribution	36.400,00	20,00 %
Partner total eligible budget	182.000,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
UNIZAG FSB	Public	36.400,00	20,00 %

Total

Sub-total public contribution	36.400,00	20,00 %
Sub-total state contribution	0,00	0,00 %
Sub-total private contribution	0,00	0,00 %
Total	36.400,00	20,00 %

State Aid

State aid relevant activities

B.1 Project Partner 12	
Partner number	12
Partner role	PP
Name of the organisation in original language	Univerzitet u Novom Sadu Fakultet tehničkih nauka
Name of the organisation in english	University of Novi Sad Faculty of Technical Sciences
Organisation abbreviation	UNS-FTN
Department / unit / division	Department of Computing and Control Engineering
Partner main address	
Country	Serbia (RS)
NUTS 2	Autonomous Province of Vojvodina (RS12)
NUTS 3	Južnobačka oblast (RS123)
Street, House number, Postal code, City	Trg Dositeja Obradovica 6 21000 Novi Sad
Homepage	http://www.ftn.uns.ac.rs
Address of department / unit / division (if applicable)	
Country	Serbia (RS)
NUTS 2	Autonomous Province of Vojvodina (RS12)
NUTS 3	Južnobačka oblast (RS123)
Street, House number, Postal code, City	Trg Dositeja Obradovica 6 21000 Novi Sad
Legal and financial information	
Type of partner	Higher education and research organisations
Legal status	Public
VAT number (if applicable)	100724720
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Contact	
Legal representative	Mr. Srdjan Kolaković

Contact	
Contact person	Mr Filip Kulić
Email	kulic@uns.ac.rs
Telephone no.	+381 63 540 431
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>The Faculty of Technical Sciences (UNS-FTN) consists of 13 departments, ten administrative services, and 31 research centres.</p> <p>As a result of continuous successful performance in all activities, the Faculty of Technical Sciences has been issued the certificates EN ISO 9001:2008, ISO 14001:2009 and OHSAS 18001:2007 and is accredited as a research and scientific institution, which confirms the high quality of its work.</p> <p>Very supportive entrepreneurial environment at the Faculty, highly skilled employees and transfer and commercialization of knowledge at the Faculty resulted in creation of more than 130 SMEs and there are more than 300 cooperation agreements between the Faculty and industry from Serbia and neighbourhood, signed to solve actual problems in industry in all engineering fields.</p> <p>UNS-FTN has meaningful experience in renewable energy projects realization. It has wholly equipped laboratories for biomass, biogas, wind, and solar. UNS-FTN was a partner and coordinator at many international RES projects (mostly IPA CBC), where more than 2 MW of solar, cogeneration and wind power plants were built. One of them is 60 kW PV on the roof of the main building of the UNS-FTN. Also, FTS established a renewable energy accredited vocational and master level study program.</p> <p>Department of Computing and Control Engineering Departments currently has 195 employees, 60 professors, 133 assistants and 2 administrative staff. At the Department, over 100 doctoral theses and over 400 master's theses have been defended or are in the process of being prepared. In total, over 5,000 electrical engineering and computer science students graduated. There are currently over 2000 students studying at this Department. Academic studies at the Department of Computing and Automation, Faculty of Technical Sciences in Novi Sad, are organized through study programs "Computing and Automation" and are divided into three degrees (basic academic – four years, Master academic – one year and PhD – three years).</p> <p>In addition to education in the higher education system, the Department also provides education through several specialist centers: Cisco Networking Academy – Cisco training and certifications; Automation Training center – training in cooperation with Schneider, Siemens, Danfoss and Nivelco; IBM Cell summer school – training in the field of computers with multiple processors and parallel programming in real time; Android summer school – training for the development and implementation of applications based on the Android operating system in multimedia devices; TI, Xilinx, Altera, Intel, Cadence, Synopsis academic program members - additional schools and training programs in the field of FPGA, DSP and parallel programming and EPLAN - authorized training center for training software users of the company EPLAN Software & Services.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	
<p>The role of UNS-FTN in project is to provide a robust scientific knowledge and technical base to planned activities. Precisely, UNS-FTN will be required to take a part and support the developing of tool for planning energy storage systems with novel solutions tailored to the needs and parameters of RES operators and a RES optimisation tool to tap to the yet unutilised potential of Artificial Intelligence</p>	

Motivation

applications in renewable energy coupled with energy storage.

Namely, the activities where the UNS-FTN will be involved are: mapping stakeholders at national level; state of play analysis at national level; feasibility analysis of different solutions; development of online modeling tool and information platform from the analysed storage solutions; development of the optimisation tool for RES operators;

12 % of the total partner budget will be allocated for project management activities.

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	78.000,00	80,00 %
Partner contribution	19.500,00	20,00 %
Partner total eligible budget	97.500,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
UNS-FTN	Public	19.500,00	20,00 %

Total

Sub-total public contribution	19.500,00	20,00 %
Sub-total state contribution	0,00	0,00 %
Sub-total private contribution	0,00	0,00 %
Total	19.500,00	20,00 %

State Aid

State aid relevant activities

B.1 Project Partner 13	
Partner number	13
Partner role	PP
Name of the organisation in original language	NAUČNO – TEHNOLOŠKI PARK CRNE GORE
Name of the organisation in english	SCIENCE AND TECHNOLOGY PARK MONTENEGRO
Organisation abbreviation	STP MNE
Department / unit / division	
Partner main address	
Country	Crna Gora (ME)
NUTS 2	Crna Gora (ME00)
NUTS 3	Crna Gora (ME000)
Street, House number, Postal code, City	Bulevar Mihaila Lalića bb 81000 Podgorica
Homepage	www.ntpark.me
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Business support organisation
Legal status	Public
VAT number (if applicable)	30/31-21159-9
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No
Contact	
Legal representative	Mr. Velibor Bošković
Contact person	Mr. Radivoje Drobnjak

Contact	
Email	radioje.drobnjak@ntpark.me
Telephone no.	+382 69 052 355
Motivation	
Which of the organisation's thematic and territorial competences and experiences are relevant for the project?	
<p>Science and Technology Park of Montenegro is the leading institution of innovation infrastructure in Montenegro.</p> <p>STP Montenegro is a key stakeholder in the development of the innovative eco-system in Montenegro and actively participates in its shaping, the processes of defining goals and development policies. As such, STP MNE is one of the main bearers of activities related to the implementation of the S3 strategy, which, includes the development of innovations and the application of innovative solutions in the field of energy, energy efficiency and energy storage, as one of the defined smart specialization strategic priorities. STP MNE directs special attention to models of balanced regional development in Montenegro, as one of the key development segments that is also recognized in strategic development documents of the European Union.</p> <p>STP MNE has a strong collaboration with various stakeholders such as universities, research institutes, industry partners, and government agencies. Its existing network can facilitate knowledge exchange, resource sharing, and joint problem-solving within the consortium. Additionally, STP MNE can leverage its expertise in policy development and implementation to support the consortium in shaping favourable regulatory frameworks and guidelines for the energy sector with specific focus on energy storage. It can actively engage with policymakers, advocating for supportive policies and regulations that encourage the adoption of innovative practices.</p> <p>STP MNE supported development of innovative renewable energy storage solutions based on R&D activities through implementation of various business support programmes, such as BoostMeUp pre-acceleration programme and various international projects in order to support further sustainable development of economies in the WB region and in Montenegro in accordance with relevant strategic framework and defined priorities.</p> <p>Having in mind its relations to the national key stakeholders and final beneficiaries, STP MNE can contribute to raising public awareness about the importance of the renewable energy and energy storage through communication campaigns, workshops, and public events. By engaging with the local community, it can foster a culture of sustainability and encourage behavioural changes that align with renewable energy storage principles.</p> <p>STP MNE is focused on establishing cooperation at the international level, primarily through close cooperation with the institutions and organizations of the Western Balkan countries, which have similar strategic goals and priorities.</p> <p>STP MNE has gained experience in the preparation and implementation of numerous projects of vital importance for the development of Montenegro, through the implementation of numerous national and international activities, of which the experience in the implementation of projects aimed at the promotion and development of the principles of renewable energy is particularly significant.</p>	
What is the role (contribution and main activities) of your organisation in the project? Please indicate the proportion (%) of the total partner budget to be allocated for project management activities!	
<p>The STP in partnership with private and academic sector, can serve as a hub for innovation and collaboration, bringing together researchers, entrepreneurs, industry experts, and policymakers. Additionally, STP can be also a provider for a model development for planning "pilot actions" of energy</p>	

Motivation

storage systems in the context of renewable energy. The tool can help optimize the selection and deployment of energy storage technologies, taking into account factors such as cost, efficiency, and environmental impact.

The STP can provide a testing and demonstration facility where renewable energy and energy storage technologies can be validated and showcased. This can involve setting up pilot projects to test the performance and reliability of different energy storage options in real-world conditions. By providing a platform for testing and demonstration, the park can help bridge the gap between research and commercialization, accelerating the adoption of renewable energy and energy storage solutions.

During the implementation of SO2, STP MNE will also contribute by engaging potential stakeholders to involve them in the pilot actions.

Science and Technology Park Montenegro can play a multifaceted role in the implementation of the project, encompassing research, innovation, collaboration, modelling, testing, and policy support. By leveraging its resources and expertise, the park can contribute significantly to accelerating the transition to renewable energy and achieving the target of 30% renewable energy use by 2030.

The proportion of the total partner budget that can be allocated for project management activities is 12%

Only for the LP, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Co-financing

Co-financing source	Amount	Percentage
Interreg Funds	83.200,00	80,00 %
Partner contribution	20.800,00	20,00 %
Partner total eligible budget	104.000,00	100,00 %

Origin of partner contribution

Name of the contributor institution	Type of contribution	Amount	% of total partner budget
STP MNE	Public	20.800,00	20,00 %

Total

Sub-total public contribution	20.800,00	20,00 %
Sub-total state contribution	0,00	0,00 %
Sub-total private contribution	0,00	0,00 %
Total	20.800,00	20,00 %

State Aid

State aid relevant activities	
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Associated Strategic Partner

Number	Status	Name of the organisation in original language	Name of the responsible project partner
1	Active	Комунальна установа Хмельницької міської ради «Агенція розвитку Хмельницького»	ZMO
2	Active	Külgazdasági és Külügyminisztérium	Békéscsaba
3	Active	Univerzitet Crne Gore	STP MNE
4	Active	Ministrice za prostorno uređenje i zaštitu okolice	CEE0
5	Active	Razvojni svet gorenjske regije	BSC KRANJ

Комунальна установа Хмельницької міської ради «Агенція розвитку Хмельницького» АО1

Partner number	PP8
Name of the organisation in original language	Комунальна установа Хмельницької міської ради «Агенція розвитку Хмельницького»
Name of the organisation in english	Municipal Institution of Khmelnytskyi City Council "Khmelnytskyi Development Agency"
Country	Ukraine (UA)
NUTS 2	Khmelnytskyi Oblast (UA0L)
NUTS 3	Khmelnytskyi Oblast (UA0L0)
Street, House number, Postal code, City	Heroiv Mariupolia 3 29000 Khmelnytskyi
Legal representative	Mr. Yurii Reshetnikov
Contact person	Mr. Dmytro Leskiv
Email	khmelcityagency@gmail.com
Telephone no.	+380676739220
Partner role	Khmelnytskyi Development Agency was created in 2017 to facilitate implementation of Khmelnytskyi City Territorial Community Development Strategy, establish partnership relations with international organizations in order to attract external experience,

Комунальна установа Хмельницької міської ради «Агенція розвитку Хмельницького» А01	
	<p>knowledge and funds for the implementation and financing of city development projects, as well as establish partnership relations with sister cities and donor organizations. Khmelnytskyi City Territorial Community Development Strategic Plan for 2021-2025 defines energy efficiency and energy saving as its Strategic Goal C.1 Operational Goal C.1.3. Usage of renewable and alternative energy sources. As an associated partner of the current Project the Agency will attract specialists from the Energy Management Department of the Khmelnytskyi City Council to fulfil its commitments under the Project. Municipality of Khmelnytskyi is a signatory of the Global Covenant of Mayors for Climate and Energy. It has developed Sustainable Energy Action Plan (SEAP) in 2016 for the period up to 2025. Now, the city of Khmelnytskyi is preparing basis for development of Sustainable Energy and Climate Action Plan (SECAP) up to 2035-2040. Within the current Project, the Khmelnytskyi Development Agency will play the role of a knowledge and experience taker on the demand side. The project results will be disseminated among other Ukrainian municipalities, as the role of renewables is growing significantly in Ukraine because of the destruction of energy infrastructure caused by the Russian military assault.</p>

Külgazdasági és Külügyminisztérium A02	
Partner number	LP1
Name of the organisation in original language	Külgazdasági és Külügyminisztérium
Name of the organisation in english	Ministry of Foreign Affairs and Trade of Hungary
Country	Magyarország (HU)
NUTS 2	Budapest (HU11)
NUTS 3	Budapest (HU110)
Street, House number, Postal code, City	Bem rakpart 47 1027 Budapest
Legal representative	Ms. Katalin Bihari
Contact person	Ms. Annamária Nádor
Email	annamaria.nador@mfa.gov.hu
Telephone no.	+36309246823
Partner role	<p>Active participation in the project in order to ensure its effective implementation and maximise its impact by: - using its wide international and regional networks and experience in formulating policy recommendations, - organisation of workshops, conferences and other promotional events, - sharing project news on PA2 website and providing opportunities to present results at the bi-annual Steering Group meetings, - enhancing the dissemination and capitalisation of the project results and outputs in the EUSDR. Ministry of Foreign Affairs and Trade of Hungary declares: The aims of the StoreMore project of analysing and promoting energy storage solutions, developing tools to mitigate the intermittency of RES, contributing to an accelerated transition to renewable energy and more balanced electrical grids are consistent with the ambitions of PA2, therefore highly relevant to our Ministry. We believe that, by implementing the planned activities, the project bring significant changes in the energy transition and energy security in the Danube Region.</p>

Univerzitet Crne Gore A03	
Partner number	PP13
Name of the organisation in original language	Univerzitet Crne Gore
Name of the organisation in english	University of Montenegro
Country	Crna Gora (ME)
NUTS 2	Crna Gora (ME00)
NUTS 3	Crna Gora (ME000)
Street, House number, Postal code, City	Cetinjska 2 81000 Podgorica
Legal representative	Prof Vladimir Božović
Contact person	Prof. Sanja Peković
Email	psanja@ucg.ac.me
Telephone no.	+38220414252
Partner role	<p>University of Montenegro will contribute to the innovative solutions in the field of energy storage. The University of Montenegro, located in the capital city of Podgorica, is a national public university with a rich history dating back to 1974. It comprises 19 faculties across four cities, including Podgorica, Nikšić, Cetinje, and Kotor. The university's faculties cover a wide range of disciplines, from Architecture and Biotechnology to Law, Medicine, and Political Sciences. This diverse academic offering positions the University of Montenegro as a potential powerhouse of knowledge and expertise that can significantly contribute to the StoreMore project. The university's extensive international and regional networks, coupled with its experience in research and policy formulation, can be instrumental in driving the project's success. The university can leverage its networks to disseminate project findings, engage stakeholders, and formulate policy recommendations. Furthermore, the university's faculties, particularly those related to engineering, biotechnology, and natural sciences, can provide valuable technical insights and research support to the project. The University of Montenegro's commitment to teaching and learning, as evidenced by its recent reform of the study system and the</p>

Univerzitet Crne Gore A03	
	<p>accreditation of numerous study programmes, underscores its capacity to foster innovation and knowledge transfer. This commitment can be harnessed to promote the StoreMore project among students and faculty, fostering a culture of innovation and sustainability. The University will benefit from the wealth of data generated by StoreMore, providing a rich resource for academic research. This data, encompassing a range of energy storage options and their performance in different settings, will enable comprehensive studies into the effectiveness of various storage technologies, their economic implications, and their environmental impacts. This will not only enrich the University's research portfolio but also provide students and researchers with a unique opportunity to delve into granular analyses, fostering a deeper understanding of energy storage systems and their role in a sustainable energy future. Furthermore, the StoreMore project's focus on fostering collaboration between different stakeholders in the energy sector will provide the University of Montenegro with opportunities for interdisciplinary and cross-sector collaborations. This can lead to innovative partnerships and joint initiatives, promoting a more integrated approach to energy research. In return, StoreMore will greatly benefit from the University's expertise and research capabilities. The University's contributions will help to ensure the project's success in developing innovative, scalable, and modular alternative electricity storage solutions, and in leveraging AI to manage RES more efficiently.</p>

Ministrica za prostorno uređenje i zaštitu okolice AO4	
Partner number	PP6
Name of the organisation in original language	Ministrica za prostorno uređenje i zaštitu okolice
Name of the organisation in english	Ministry of Environmental Protection and Spatial Planning of Tuzla Canton
Country	Bosnia and Herzegovina (BA)
NUTS 2	Federacija Bosne i Hercegovine (BA02)
NUTS 3	Federacija Bosne i Hercegovine (BA020)
Street, House number, Postal code, City	Rudarska 65 75000 Tuzla
Legal representative	Ms Anela Ajšić
Contact person	Ms Anela Ajšić
Email	minpuzo@tk.kim.ba
Telephone no.	+38735369428
Partner role	<p>As an associated partner in the StoreMore project, the Tuzla Canton, specifically the Ministry of Environmental Protection and Spatial Planning, plays a crucial role in facilitating the project's implementation and ensuring its success within our jurisdiction. Tuzla Canton can provide the necessary regulatory and policy support, ensuring that the project's activities align with regional environmental and spatial planning policies. Tuzla Canton's involvement also ensures that the project's outputs are effectively integrated into the regional energy infrastructure and policy framework. Furthermore, Tuzla Canton is a contributor for disseminating the project's results within its region, raising awareness among regional stakeholders about the benefits of renewable energy and energy storage solutions. Tuzla Canton's active participation in the project helps to ensure that the benefits of the StoreMore project reach a wide audience and contribute to the broader energy transition goals of the region. Ministry of Environmental Protection and Spatial Planning of Tuzla Canton, a regional public authority in Bosnia and Herzegovina, is a key stakeholder that can greatly benefit from the StoreMore project. With its rich cultural and historical background, coupled</p>

Ministrica za prostorno uređenje i zaštitu okolice AO4	
	<p>with its diverse population, the canton can provide unique perspectives and insights into the project. Moreover, its experience in managing its resources and infrastructure can contribute to the project's goal of developing innovative, scalable, and modular alternative electricity storage solutions. As a regional public authority, Ministry of Environmental Protection and Spatial Planning of Tuzla Canton will plan renewable energy generation (RES) capacity. The StoreMore project's outputs, including a comprehensive platform designed to encourage and facilitate RES investments, can significantly enhance the canton's ability to harness intermittent energy sources. The StoreMore project also offers a RES optimisation tool, which can be pilot tested and made available to Tuzla Canton. This tool is designed to enhance the performance of RES operators, making their generation capacities more efficient and beneficial. By leveraging this tool, Tuzla Canton can improve its energy security and independence, fostering a more sustainable and resilient energy economy in the region. Looking towards the future, the StoreMore project aims to equip Tuzla Canton with the skills and tools to manage energy communities effectively. This includes the ability to plan energy flows and storage for communities with more flexible prosumers, balancing regional energy production and consumption in a sustainable way. By converting direct information from involved partners into a user-friendly and problem-oriented modelling tool, the StoreMore project is helping to empower Tuzla Canton in its pursuit of more sustainable and efficient energy practices.</p>

Razvojni svet gorenjske regije A05	
Partner number	PP3
Name of the organisation in original language	Razvojni svet gorenjske regije
Name of the organisation in english	Regional Development Council of Gorenjska region
Country	Slovenija (SI)
NUTS 2	Zahodna Slovenija (SI04)
NUTS 3	Gorenjska (SI042)
Street, House number, Postal code, City	Cesta Staneta Zagarja 37 4000 Kranj
Legal representative	Mr. Ivan Smon
Contact person	Mr. Ivan Smon
Email	ivan.smon@elektro-gorensjka.si
Telephone no.	0038642817230
Partner role	Regional Development Council of Gorenjska region will support PP3 BSC in working with local communities members of Regional development board and will foster change of policies in the mentioned local communities and also support BSC in transferring the knowledge, expertise regarding to fostering the usage of renewables, storage of energy and energy transitions. Regional Development Council of Gorenjska region is interested in being part of the project for the following reasons: Region Gorenjska has many development challenges connected to better embedding of renewables in energy systems and in looking for potentials to fight against climate change with changes in the usage renewables. Project StoreMore will enable local region Gorenjska to gain new knowledge, expertise, share experiences. The project will contribute to strategic planning and implementation of measures and actions in region Gorenjska that will contribute to the strategic utilisation of renewables in energy systems and contribute in fight against climate change.

C - Project description

C.1 Project overall objective

Below, you can see the Programme priority specific objective your project will contribute to (chosen in section A.1.).

2.1: Support greening the energy and transport sectors in the Danube Region by enhancing the integration of renewable energy sources

Project main objective

Now think about your main objective – what do you aim to achieve by the end of your project? Remember your project needs to contribute to the programme's objective.

Your objective should:

- be realistic and achievable by the end of the project, or shortly after;
- specify who needs project results and in which territory;
- be measurable – indicate the change you are aiming for.

The projects main objective is to increase the share of RES in the Danube region by tackling a major obstacle to further growth of RES: the problem of energy storage.

As the result of the project RES operators will be encouraged to invest in storage capacities, the intermittency of RES will be partially mitigated, contributing to more balanced and stable national electricity grids. The project will provide solutions for modelling storage systems and optimising RES operation.

C.2 Project relevance and context

C.2.1 (in case of 1ST CALL FOR PROPOSALS): What are the common territorial needs and challenge(s) that will be tackled by the project? / (in case of PAC CALL): What are the needs and challenge(s) of the PA - both regarding policies in the field concerned as well as governance of the PA that will be tackled by the project? / (in case of DSP CALL): To what extent are the challenges with regard to supporting the governance of the EUSDR identified and described?

Please describe common needs and challenges of the addressed territory in relation to the project topic.

The Danube Region, a diverse and interconnected area, faces unique challenges in the energy sector that require immediate attention. The region's energy infrastructure is aging and often incompatible with the integration of Renewable Energy Sources (RES). This incompatibility poses a significant hurdle in achieving the European Union's ambitious climate goals.

To contribute to the Program SO's main goal, namely increasing the share of renewable energy in the Danube region, further installation of renewable energy power plants is no longer feasible without addressing the energy storage problem.

The intermittency of RES poses a significant challenge in the Danube Region, where energy security is already a concern due to geopolitical factors. The recent conflicts have exacerbated the need for a stable, independent energy supply. However, the rapid integration of RES is hindered by inadequate energy storage solutions, making the grid less resilient and more susceptible to fluctuations. One (of many) example of these fluctuations was the all-time low price on Sunday 2nd July 2023. (Power prices hit extraordinary lows on Sunday 2nd July 2023 across almost all of Europe, with negative price records set across much of the continent, because high levels of wind and solar generation coincided with lower demand. (source: <https://www.synertics.io/blog/56/understanding-the-recent-surge-of-zero-and-negative-prices-in-europe>). Negative prices are emerging as a trend in the DR and present a significant barrier to further investment in RES. This is unless new capacity installations are paired with energy storage solutions. Energy storage enables RES operators to store electricity generated during peak times and release it to the grid during demand peaks, which often coincide with valleys in RES production (as seen with Solar PV).

As of 2021, pumped hydropower storage (PHS) dominated the global storage industry with a capacity of 160GW, while grid-scale batteries represented only 16GW (IEA, 2021). According to the Hydropower and Pumped Hydropower Storage in the European Union Report (https://setis.ec.europa.eu/hydropower-and-pumped-hydropower-storage-european-union_en) DR countries According to this report 13,365 GW PHS is located in 6 DR countries with Austria and Germany are dominating the list with having 88% of the total PHS due to geographical limitations.

These geographical limitations further complicate the issue. Pumped hydropower, a conventional form of energy storage, is not feasible in many parts of the Danube Region due to the lack of suitable locations.

The reliance on lithium-based batteries for grid-scale storage presents another challenge. The raw material for these batteries, Lithium Carbonate, has been particularly volatile in price in the last two years and even after a large drop after the peak price of November 2022, still five times higher than in 2020. Moreover, Lithium is sourced from a limited number of countries. This dependency raises concerns about the long-term sustainability and security of lithium-based energy storage solutions. Environmental considerations are also paramount. The extraction and processing of lithium and other critical minerals like cobalt and nickel have significant environmental impacts, including water and land pollution. These processes are also associated with human rights violations and challenging working conditions.

Moreover, the Danube Region faces challenges in predicting RES production accurately. Current prediction models are not sufficiently reliable – and they inherently cannot be as they depend on weather forecasts -, leading to imbalances in the energy grid and increased reliance on fossil fuel-based Peaker Plants.

The Danube Region is grappling with a complex set of challenges in the energy storage sector, ranging from infrastructural limitations and geographical constraints to environmental and ethical concerns. These challenges underscore the urgent need for innovative solutions and collaborative efforts to secure the region's energy future.

C.2.2 (in case of 1ST CALL FOR PROPOSALS): How does the project tackle the identified common challenges and/or opportunities and what is new and innovative about the approach the project takes? / (in case of PAC call): How does the project tackle identified needs and challenges of the PA? / (in case of DSP call not applicable - add "N/A")

Please describe new solutions that will be developed during the project and/or existing solutions that will be adopted and implemented during the project lifetime. Describe also in what way the approach goes beyond existing practice in the sector/DRP area/participating countries.

summary of challenges and how we address them:

- Intermittency of Renewable Energy Sources (RES): RES are integral to reducing carbon emissions and fostering a sustainable energy economy. However, their intermittent nature poses challenges, especially as their usage across Europe escalates.

Response: Our project aims to mitigate the fluctuation in RES and move towards a more balanced, secure, and independent energy grid. We are exploring and developing innovative, scalable, and modular alternative electricity storage solutions. These options are designed to help smooth out the intermittency of RES and enable more effective use of green energy.

- Energy Security: The current geopolitical climate has intensified the need for energy independence in Europe, necessitating a more reliable energy storage solution.

Response: Our project aims to enhance energy security in the Danube region by providing dependable energy storage solutions. These solutions will support the effective integration and use of local RES, thus contributing to the broader energy independence objectives of the region.

- Conventional Storage Limitations: The conventional energy storage options, like pumped hydro-power and lithium-ion batteries, dominate the market. Still, they come with geographical and environmental limitations.

Response: We seek to overcome these limitations by offering an innovative menu of alternative electricity storage solutions. These alternatives are designed to be more adaptable and less environmentally detrimental than the conventional options, helping to reshape the energy storage landscape.

- Li-Ni-Co based Battery Issues: Lithium, cobalt and nickel are essential for current popular battery technologies have their issues. The price and demand are growing, the supply is geographically limited and the extraction process has significant environmental impacts. Over-reliance on Li could hinder the deployment of clean energy due to potential shortages.

The production process of lithium, cobalt, and nickel batteries results in substantial environmental damage. The supply chain for these minerals also adds considerable CO2 emissions.

Response: To mitigate these issues, our project is developing and offering alternative electricity storage options that reduce reliance on Li. By moving away from lithium-based batteries, we are working to ensure the sustainability and feasibility of energy storage solutions in the long term.

- Production Forecasting Challenges, Fossil fuel based Peaker Plants (power plants that generally run only when there is a high demand, known as peak demand, for electricity): Accurate prediction of energy production and effective management of storage capacities are significant challenges faced by RES operators. The inherently variable nature of RES such as wind and solar power makes it difficult to forecast their output accurately, which can lead to imbalances in the power grid.

Additionally, the grid's capacity to take on additional RES becomes limited due to this intermittency. Grid operators must upkeep Peaker Plants to mitigate imbalances on the grid which usually operate on natural gas.

Response: To address these challenges, our project is implementing a multi-pronged approach. Firstly, we're developing a cutting-edge machine learning application. This application leverages historical and real-time data to accurately predict periods of high and low renewable energy production. As a result, it can optimise the periods for charging and discharging storage capacities, contributing to a more balanced and green electricity generation.

Secondly, by developing and providing alternative storage solutions, we are enabling a better integration of RES into the power grid. Energy storage acts as a buffer, absorbing electricity when production exceeds demand (typically during peak production hours for wind or solar power), and then releasing it when demand exceeds production (like at night or during periods of low wind). This functionality not only mitigates the impact of prediction inaccuracies but also smooths out the intermittency of renewable energy sources thus contributing to less reliance on Peaker Plants which burn fossil fuels.

- Transmission and distribution loss of electricity range between 8-15% depending on number of transformations, distance from source.

Response: producing, STORING and using energy locally decrease/eliminate transmission losses. Storage is the key in this concept which serves as a bridge between the time of producing and consuming RES. Supporting tools for storage investments contribute to more of the energy produced by RES used locally thus decrease energy waste.

In essence, our project aims to provide a solution that is economically viable, environmentally friendly, and technologically advanced. We are exploring and developing innovative, scalable, and modular alternative electricity storage solutions, as well as leveraging AI to manage RES more efficiently.

C.2.3 (in case of 1ST CALL FOR PROPOSALS): Why is transnational cooperation needed to address the identified needs and challenges? / (in case of PAC/DSP CALL not applicable)

(in case of 1ST CALL FOR PROPOSALS): Please explain why the project objectives cannot be efficiently reached acting only on a national/regional/local level and describe what benefits the project partners /target groups/ project area/DRP area gain in taking a transnational approach. / (in case of PAC/DSP CALL please enter the text "N/A" in the field!)

According to the Climate Change Performance Index (CCPI) 2023 on 14.11.2022 countries of the DR don't perform well overall (The best performing country, Germany has a rating of 16/63, while the worst, Hungary 53/63). The average rating of countries on the list is 37/63. These disappointing figures show there is a clear need to accelerate the transition to renewable energy not only on national level but in the whole DR.

StoreMore's main goal is jointly delivering tools for improved utilisation of RES with the facilitation of knowledge exchange between regions of the lowest and the highest share of RES in the energy mix. Transnational cooperation is essential in order to achieve the objectives of knowledge transfer between partners and their respective regions and countries.

According to the CESCO DTP Analysis (https://budapest.cesci-net.eu/wp-content/uploads/_publications/CESCI_2019_Analysis-DTP-2021-2027_EN.pdf): Energy dependency, still low utilisation level of renewables, lack of high energy safety and still missing interconnections characterise the macro-region. Most economies still heavily rely on uncertain fossil fuels from Russia. The CESCO analysis identifies Policy and networking support for an increased use of RES encouraging the development of sustainable energy production and transfer systems as an area which requires transnational cooperation. The cooperation within our consortium directly aims at mitigating a major risk and hurdle in the transition to RE economy, namely the lack of sufficient energy storage capacities in the Danube Region. Every partner in the project consortium represents unique expertise and special needs which cannot be addressed on national/local level.

Moreover, the target group of the project - current and future RES operators, investors and their supporting organisations (regional development agencies) – is located everywhere in the Danube Region and not limited to one specific country.

These common challenges cannot be addressed on national/local level alone but require cooperation of international stakeholders in the DR.

1. Energy storage catalogue and Modelling tool

These outputs offer benefits for the target group in the DRP area through RES investment leverage effect:

The European Parliament report on wide-ranging European approach to energy storage highlights the needs for energy storage, calls on Member States to fully explore their potentials in this matter which indicates that the priority of energy storage is a transnational issue and requires joint action of EU member countries.

The same document refers to BP Energy Outlook 2019 which forecasts that "renewables and natural gas will play major roles in the decarbonisation process. These two energy sources will account for almost 85% of the total growth by 2040". This assumption regarding the role of natural gas in Europe is falsified almost overnight with Russia's aggression against Ukraine which underlines even more the importance of renewables coupled with energy storage.

The project directly addresses the low utilisation of RES and the dependency of fossil fuels by aiming to add further incentives to investments in RES capacities and reducing the negative effect of intermittency of RES. It is important to realise, that the main tool for transmission operators to handle large peaks and valley in electricity supply due to RES intermittency, is fast reaction time Gas Turbine Power Plants which consume natural gas.

2. Another benefit in the DRP area for RES operators is the RES optimisation tool, freely accessible to stakeholders.

The EU electricity market is designed to be competitive, efficient, and integrated, aiming to ensure security of supply, affordable prices for consumers, and a transition towards a decarbonised energy system. This includes the use of short-term (day-ahead and intraday) markets and the pricing mechanism based on marginal pricing.

One of the key elements of the EU's electricity market design is the ability to trade electricity across borders, which helps to balance supply and demand on a continental scale. This cross-border trade can help to offset times of high demand or low production in one country with surplus production in another, contributing to overall grid stability.

In the planned activity A2.2 a multiobjective optimisation of RES system operation and planning will be developed based on the analysis of energy storage systems, which are necessary for the energy transition.

With significant stakeholder uptake, the tool improves intraday balance on national electricity grids. More balanced grids require less cross-border trade, less transition and transformation losses and contribute to overall cross-border grid stability in the DR. The more countries involved from the DR in the project, the larger the beneficial effect is. Thus, transnational cooperation not just required but greatly boosts the positive effect of StoreMore.

C.2.4 Who will benefit from your project outputs?

In the first column of each row, please select one of the pre-defined target groups from the drop-down list. In the second column explain in more detail exactly who will benefit from your project. For example, if you choose the category education, you need to explain which specific schools or groups of schools and in which territory.

Target Group	Specification
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Target Group	Specification
Local public authority	<p>Local authorities are represented by LP1, PP8, PP9 in our consortium. Local Public Authorities: Municipalities and local communities operating or planning renewable energy generation (RES) capacity stand to greatly benefit from our project's outputs. RES capacities, when paired with efficient energy storage, enable these authorities to better harness intermittent energy sources, either for covering their own energy demand more effectively or improving their financial situation through increased RES generation income. To support these entities, our project offers a comprehensive platform designed to encourage and facilitate RES investments. This platform includes a catalogue of energy storage options, as well as a freely accessible modelling tool for investments, providing the necessary tools for informed decision-making on energy projects. Stakeholders will be engaged from the project's outset during activities such as stakeholder mapping (A1.1), state of play assessment (A1.2), piloting our tools (A2.3, 2.4) and knowledge transfer and result promotion (A3.3).</p> <p>Additionally, we're developing a RES optimisation tool, which will be pilot tested and made available to these authorities. This tool is designed to enhance the performance of RES operators, making their generation capacities more efficient and beneficial.</p> <p>Our project also looks towards the future, aiming to equip local public authorities with the skills and tools to manage energy communities effectively. This includes the ability to plan energy flows and storage for communities with more flexible prosumers, balancing local energy production and consumption in a sustainable way.</p> <p>By converting direct information from involved partners and gathered during A1.1 into a user-friendly and problem-oriented modelling tool, we're helping to empower local public authorities in their pursuit of more sustainable and efficient energy practices, and broadly disseminating these tools during the project implementation.</p>

Target Group	Specification
Enterprise, except SME	<p>The integration of energy storage with renewable energy sources allows for the full potential of these intermittent energy sources to be harnessed. This integration not only eases the scheduling of production but also increases income during peak demand periods in the daily electricity market. The reduced risk in scheduling and the potential for shorter return on investment periods make investing in RES capacities an attractive proposition for enterprises.</p> <p>The StoreMore project also includes the development and pilot testing of a RES optimisation tool. This tool is designed to assist RES operators and energy service companies in enhancing the performance of their generation capacities, thereby increasing efficiency and profitability.</p> <p>For companies developing innovative solutions for energy storage, the StoreMore project offers valuable support in entering the market. The project provides an objective overview and free-of-charge promotion/marketing of storage systems that are still in the startup phase. This connection between demand and supply can stimulate investments and assist producers of alternative storage systems in reducing prices through economies of scale.</p> <p>The StoreMore project also fosters cooperation between local public authorities and enterprises in the formation of long-term energy communities. These communities can achieve a balance of energy flows, resulting in a more ecological economy operating at lower energy costs.</p> <p>As a target group they will be engaged from the project's outset, participating in activities such as stakeholder mapping (A1.1) and state of play assessment (A1.2), piloting our tools (A2.3, 2.4) and knowledge transfer and result promotion (A3.3).</p> <p>They will use the project outputs through the information platform to optimise their RES operation and get valuable insights for investment decisions by using the modelling tool as a guidance.</p>

Target Group	Specification
Infrastructure and (public) service provider	<p>Infrastructure and Public Service Providers, represented by PP4 within the consortium: National and regional grid operators across the Danube Region will directly benefit from our project. These entities are increasingly investing in large-scale storage systems, primarily based on lithium-ion batteries. While these solutions can address immediate storage needs, they come with notable environmental impacts and finite lifetimes. Budget constraints also pose a challenge to these operators, and the project's focus on promoting alternative, more environmentally friendly storage solutions offers potential avenues for cost savings and sustainability.</p> <p>Furthermore, the project's efforts to address the intermittency of renewable energy sources (RES) will support these grid operators in their mandate to ensure a reliable and balanced electricity supply. Presently, grid balancing is achieved through import/export mechanisms and fast-response power plants (Peaker Plants), predominantly hydro and natural gas-based. However, these methods can be costly, environmentally damaging, and especially in light of Russia's war and the resulting energy crisis, reliant on geopolitically sensitive sources. By improving RES scheduling accuracy and encouraging investment in alternative energy storage solutions, the project can reduce the demand for fossil fuels in grid balancing, thereby promoting energy security and environmental sustainability. Moreover, locally produced RES stored and used locally (especially the case with local public authorities with RES capacities, like Municipal RES plants) can prevent not only transmission losses but peak loads on the grids.</p> <p>As a target group they will be engaged from the project's outset, participating in activities such as stakeholder mapping (A1.1) and state of play assessment (A1.2), contributing to the development of tools with insights, (A2.1, 2.3), will be invited for piloting our tools (A2.3, 2.4) and knowledge transfer and result promotion.</p>

Target Group	Specification
General public	<p>Our project aligns with the public's rising interest and demand for local energy solutions amidst the ongoing energy crisis.</p> <p>The project's focus on developing environmentally sustainable storage solutions also has far-reaching implications for the public. Traditional lithium-ion batteries have serious environmental drawbacks due to their production and disposal processes. By exploring and promoting less environmentally damaging alternatives, this project indirectly benefits the public by reducing the overall carbon footprint associated with energy storage, contributing to a healthier, cleaner environment for all.</p> <p>Another significant advantage for the public lies in the potential for decreased reliance on fossil fuels, particularly natural gas. Our project works to mitigate the intermittency of RES through improved energy storage, thereby reducing the need for fossil fuel-based grid balancing energy sources. This shift can influence the market dynamics, potentially leading to lower electricity prices, which directly benefits consumers through reduced energy bills.</p> <p>As the national grid evolves towards improved balance and flexibility, the general energy security of the region is also set to improve. This means a more reliable energy supply for consumers, which brings peace of mind and assures the uninterrupted provision of essential services that rely on electricity.</p> <p>While the project's immediate beneficiaries might seem to be operators within the energy sector, the broader implications of this initiative have positive impacts on the general public. Be it through reduced energy costs, increased energy security, or the promotion of environmentally friendly solutions, the benefits of this project extend to every individual in the region, affirming the public as a key target group of the project. They can access the knowledge accumulated during the project through the information platform and project films on streaming service platforms.</p>

Target Group	Specification
Higher education and research organisations	<p>Representatives of the academic domain in our consortium are PP2, PP11, PP12, ASP3</p> <p>Higher education and research organisations are integral stakeholders in our project, standing to derive significant value from the project's outcomes. As part of our project's target group, these institutions will play a vital role in the energy transition, thus our project outputs are specifically designed to enhance their capabilities and resources.</p> <p>One of the key benefits for higher education and research organisations lies in the wealth of data the project will generate. We will be gathering extensive data on a range of energy storage options and the performance of these systems in different settings. This data presents a rich resource for academic research, providing raw material for comprehensive studies into the effectiveness of various storage technologies, their economic implications, and their environmental impacts. With this data, researchers can delve into granular analyses, enabling a deeper understanding of energy storage systems and their role in a sustainable energy future.</p> <p>Beyond the data itself, our project's focus on real-world testing and implementation of energy storage solutions provides a platform for applied research and experiential learning. Students and early-career researchers will have the opportunity to work on real-world challenges, contributing to the development and optimisation of energy storage systems. They will learn first-hand about the challenges and solutions in the transition to a renewable-energy-dominated grid, gaining insights that are not easily accessible through classroom learning.</p> <p>Our project also seeks to foster collaboration between different stakeholders in the energy sector, providing higher education and research organisations with opportunities for interdisciplinary and cross-sector collaborations. This can lead to innovative partnerships and joint initiatives, promoting a more integrated approach to energy research.</p>

Target Group	Specification
Interest groups including NGOs	<p>PP5, PP6 represents Interest groups (IG) and NGOs within the consortium. IGs will be a vital channel through which our project's outcomes can reach broader audiences and instigate meaningful change. As such, their involvement brings mutual benefits, enriching our project's impact while simultaneously equipping them with valuable resources to further their own missions.</p> <p>Our project's tools can serve as educational resources for IGs. By leveraging our platform, these groups can enhance their members' understanding of sustainable energy storage options and their benefits. This knowledge transfer can foster more informed and engaged communities, empowering individuals to make environmentally conscious decisions and to advocate for them in their own spheres of influence.</p> <p>From a project perspective, IGs offer significant value as well. Their extensive networks and influence can facilitate wider dissemination of our project's outcomes, ensuring that our solutions reach a larger audience. Additionally, their expertise in bridging gaps between different stakeholders can enhance collaboration within the project. They can act as intermediaries, engaging with the private sector, governments, and the public to facilitate dialogues and collaborations that advance the cause of sustainable energy storage.</p> <p>The involvement of NGOs can enhance the credibility and trustworthiness of our project. Given their mission-driven nature and dedication to societal betterment, NGOs can lend a sense of integrity to our project, increasing public trust and acceptance of our findings and solutions.</p> <p>In summary, the synergistic relationship between our project and IGs, as well as NGOs, enables a more impactful and widespread adoption of sustainable energy storage solutions. While these organisations can utilise our project's outputs to further their advocacy and educational efforts, their involvement enriches our project's reach and effectiveness, contributing to a more sustainable energy future.</p>

Target Group	Specification
Business support organisation	<p>Business support organizations (BSOs) - represented by PP7, PP13 within the partnership - form a key target group of the StoreMore project, given their pivotal role in promoting and accelerating the adoption of renewable energy storage solutions. By equipping these organizations with our AI-driven tools - the Modelling tool and the RES Optimisation tool - we enable them to provide their member businesses with data-driven insights and effective strategies and recommendations on utilising alternative energy storage solutions. Thus, the StoreMore project provides these BSOs with the means to offer improved services and more substantial support to businesses looking to transition to renewable energy or to optimize their existing renewable energy operations.</p> <p>Secondly, through our project, BSOs will gain access to an enriched and constantly updated pool of information from our information platform. As a result, BSOs will be better positioned to advise businesses on the deployment of storage technologies, addressing challenges, and identifying opportunities in specific contexts. This is particularly beneficial for BSOs catering to small and medium-sized enterprises (SMEs) that may lack the resources to gather and analyze this data independently.</p> <p>The StoreMore project aims to foster a vibrant community around renewable energy storage solutions, with BSOs playing a key role. By engaging with other stakeholders in this community, such as universities, RES operators, and policy makers, BSOs can participate in and influence discussions on the future direction of renewable energy storage technologies. This will enable them to stay at the forefront of the sector, thereby providing up-to-date advice to businesses and contributing to the wider adoption of renewable energy storage solutions.</p> <p>As a target group they will be engaged during activities such as stakeholder mapping (A1.1) and state of play assessment (A1.2) and during Knowledge transfer and dissemination (A3.3).</p>

Target Group	Specification
National public authority	<p>Represented by ASP2 in the Consortium, national public authorities are at the highest level of forming national policies, therefore an important target group of the project. National (and regional) public authorities are targeted by StoreMore because we aim to influence policies on every possible level in order to promote sustainable energy storage solutions. These authorities have the power to drive the adoption of renewable energy sources (RES) and energy storage solutions within their jurisdictions. We expect them to facilitate the implementation of the project's outputs by aligning them with national policies, providing regulatory support, and integrating them into the existing energy infrastructure. ASP2, Ministry of Foreign Affairs and Trade of Hungary already expressed their support in this goal in their declaration attached to this AF. National public authorities can play a crucial role in promoting the project's results and raising awareness about the benefits of sustainable energy storage solutions among national stakeholders.</p> <p>In return, the StoreMore project offers these authorities a comprehensive platform to encourage and support RES investments. By participating in the StoreMore project, regional and national public authorities can participate in developing innovative solutions and tools, validate their usefulness and also utilise our outputs which can help them achieve their energy transition goals more effectively and efficiently.</p> <p>As a target group they will be engaged during activities such as stakeholder mapping (A1.1) and state of play assessment (A1.2) and during dissemination activities (A3.3). Moreover, ASP2 actively participates in A1.3 and A1.5 and contributes to knowledge transfer and result promotion (A3.3).</p>
Regional public authority	<p>Represented by ASP4 in the consortium regional public authorities are an important target group of our project. They hold a unique position in the governance structure, often having more direct influence over local energy policies and infrastructure development than national bodies. This is especially true in countries like Germany, Austria, and Slovenia, where regions play a significant role in governance.</p> <p>These authorities can facilitate transnational cooperation between regions, fostering a collective effort towards green energy transition. By aligning the project's outputs with regional policies and integrating them into the existing energy infrastructure, they can accelerate the adoption of (RES) and energy storage solutions.</p> <p>By uptaking the results of the StoreMore project, regional public authorities can contribute significantly to the transition into a renewable energy economy, not only within their own regions but across the entire Danube Region through transnational cooperation projects. Regional public authorities can act as catalysts for change, leveraging their influence to promote the benefits of sustainable energy storage among regional stakeholders. They can drive the promotion of the StoreMore project's outputs, including the modelling and the RES optimisation tools.</p> <p>As a target group they will be engaged during activities such as stakeholder mapping (A1.1), state of play assessment (A1.2) and during Knowledge transfer and dissemination (A3.3).</p>

C.2.5 How does the project contribute to wider strategies and policies?

Please indicate to which strategies and policies your project will contribute. Then describe in what way you will contribute.

Strategy	Contribution
EU Strategy for the Danube Region	<p>The project aligns closely with PA2 of the EUSDR in several ways. T7 concerning innovative energy storage solutions. This is the core of our project, directly aligning with these aims. Our work will lead to useful tools incentivising and supporting investment in energy storage potentials, mobilise and inform stakeholders. We also intend to contribute to policies promoting more sustainable energy storage options than the conventional Li batteries.</p> <p>Target 1 aim at exploring and promoting the use of renewable energy sources to increase energy independence. Our project directly contributes to this goal by tackling the intermittent nature of RES.</p> <p>T3 address decarbonization of transport. Our project indirectly contributes to this action through the development of cleaner energy storage options that may, in the future, be employed in electric transport systems.</p> <p>T4 emphasise the need for innovative low-carbon technologies. Our project, aiming to innovate in the area of energy storage, can potentially lead to the development and promotion of new technology-focused projects, in alignment with Target 4.</p> <p>T5 seek to enhance regional cooperation and connectivity of energy markets. Our stakeholder mapping and state-of-play analysis contribute to regional collaboration and can provide useful insights for the CESEC initiative, facilitating its implementation.</p> <p>...</p>
EU Strategy for the Danube Region	<p>...</p> <p>T6 aim to decrease energy poverty, protect vulnerable consumers, and empower consumers to engage in the energy market. Our project indirectly supports these goals by developing storage solutions to tackle the intermittency of RES, which contributes to a more balanced and stable national grid. By doing so, we support policies that allow more citizens to connect their own RES installations to the grid, particularly in countries where there are limitations to this, such as Hungary. Our project's focus on environmentally sustainable and economically feasible storage solutions also promotes consumer protection, as it targets a reduction in reliance on high-cost, fossil fuel-based energy production.</p> <p>T8 involve exchange of information, best practices, and joint projects. We will be holding joint international workshops, producing a comprehensive study on alternative energy storage options, thus fostering cooperation with stakeholders at various levels, aligning perfectly with these objectives.</p>

Strategy	Contribution
European Green Deal	<p>Our project contributes significantly to the European Green Deal (EGD) in several ways:</p> <p>Increasing the Use of RES: The project directly supports the EGDs goal to increase the EU's reliance on renewable energy. It does this by tackling the central challenge of energy storage - a necessary component for the more significant and efficient use of renewable energy sources (RES).</p> <p>Advancing Energy Efficiency: By integrating Artificial Intelligence (AI) to optimise periods of charging and discharging storage capacities, the project promotes energy efficiency, a crucial aspect of the Green Deal. Efficient energy use will not only save resources but also reduce the need for additional production capacities.</p> <p>Promoting Clean Technologies: The project innovates by exploring and developing cleaner, alternative electricity storage solutions. This move aligns with the Green Deal's push for the advancement and adoption of clean technologies and the circular economy.</p> <p>Reducing Emissions: By facilitating the transition to RES and reducing reliance on fossil fuels, the project aids in the decrease of greenhouse gas emissions, directly contributing to the EGD's target of a 55% reduction in emissions by 2030 and a net-zero emissions target by 2050.</p> <p>Advocating for 'Just Transition': The project acknowledges the societal implications of transitioning to a green economy. It aims to create solutions that are not just environmentally friendly but also economically feasible, ensuring that the move to renewable energy is sustainable for all stakeholders.</p> <p>In conclusion, our project's aims and objectives align well with the EGD's vision. By addressing the crucial challenge of energy storage, promoting cleaner technologies, and supporting the broader use of RES, the project is actively contributing to the EU's path towards a sustainable, resilient, and inclusive future.</p>

Strategy	Contribution
Territorial Agenda 2030	<p>Our ambition closely aligns with the priorities outlined in the Territorial Agenda 2030, which aims to foster a more sustainable and inclusive future for all regions in the European Union.</p> <p>TA2030 focuses multiple fields one of those is Sustainable development and climate change. Actions are needed in: (37) Air, soil and water quality (38) Secure, affordable and sustainable energy - are most relevant in connection to our project.</p> <p>We intend to address the issue of soil and water quality by replacing environmentally harmful storage solutions by more environmentally friendly ones. We ensure special focus on environmental sustainability aspects when preparing the menu of alternative energy storage solutions and design our modelling tool to draw attention to more sustainable storage options.</p> <p>(38):</p> <ul style="list-style-type: none"> - Energy Security: By enhancing energy storage capabilities, We can help ensure a more stable and reliable energy supply. This is particularly important given the intermittency of RES like wind and solar. Better energy storage can help smooth out these fluctuations, improving energy security. - Energy efficiency: producing, STORING and using energy locally decrease /eliminate transmission losses. Storage is the key in this concept which serves as a bridge between the time of producing and consuming RES. Supporting tools for storage investments contribute to more of the energy produced by RES used locally thus decrease energy waste. - Sustainable Energy: StoreMore is focused on energy storage, a crucial component of a sustainable energy system. By improving energy storage technologies, the project can help increase the share of renewable energy in the energy mix, reducing reliance on fossil fuels and contributing to sustainability. - Affordability: Improved energy storage can also contribute to affordability. By allowing excess energy to be stored and then used when needed, energy storage can help reduce costs associated with energy production and consumption.

C.2.6 (in case of 1ST CALL FOR PROPOSALS): Which synergies with past or current EU and other projects or initiatives will the project make use of? / (in case of PAC / DSP CALL not applicable)

(in case of 1ST CALL FOR PROPOSALS):
Project or Initiative / (in case of PAC/DSP
CALL add "N/A")

(in case of 1ST CALL FOR PROPOSALS): Synergy / (in
case of PAC/DSP CALL add "N/A")

(in case of 1ST CALL FOR PROPOSALS): Project or Initiative / (in case of PAC/DSP CALL add "N/A")	(in case of 1ST CALL FOR PROPOSALS): Synergy / (in case of PAC/DSP CALL add "N/A")
REPowerEU	<p>REPowerEU is about rapidly reducing our dependence on Russian fossil fuels by fast forwarding the clean transition and joining forces to achieve a more resilient energy system and a true Energy Union. REPowerEU plan puts forward a set of actions to 1) save energy; 2) diversify supplies; 3) quickly substitute fossil fuels by accelerating Europe's clean energy transition;</p> <p>Our project resonates with the facility's priorities and is well-positioned to complement its efforts towards enhancing energy storage capabilities and transitioning to renewable energy sources.</p> <p>One of the key priorities of the REPowerEU facility is to ensure energy security and independence through diversification of energy sources and increased self-reliance. This priority is inherently woven into the StoreMore project's aim of incentivizing investments in energy storage solutions. By promoting effective energy storage solutions, StoreMore facilitates increased utilisation of renewable energy sources and reduces dependence on fossil fuels and external energy providers.</p> <p>Moreover, REPowerEU emphasises the importance of sustainability and the reduction of carbon emissions. Our project contributes to this goal by advocating the use of storage solutions that avoid the use of lithium, cobalt, and nickel – materials that are associated with significant environmental impacts during their extraction and supply chain processes. This approach aligns with REPowerEU's emphasis on environmentally friendly energy practices.</p> <p>In the spirit of REPowerEU's push for innovation, StoreMore is pioneering a catalogue of energy storage options and a modelling tool for investments. These innovative tools not only contribute to the digitisation of energy management but also empower stakeholders to make informed investment decisions.</p>

(in case of 1ST CALL FOR PROPOSALS): Project or Initiative / (in case of PAC/DSP CALL add "N/A")	(in case of 1ST CALL FOR PROPOSALS): Synergy / (in case of PAC/DSP CALL add "N/A")
EU Recovery and Resilience Facility	<p>EU Recovery and Resilience Facility</p> <p>However timing of the project and RFF funded investments can be tight, the StoreMore project still aligns well with the priorities of the EU RRF, particularly its focus on promoting the green and digital transitions.</p> <p>The green transition, a key priority of the RRF, is a fundamental component of our project. The StoreMore project contributes significantly to the green transition by advocating for the increased use of renewable energy sources (RES) and efficient energy storage. This alignment with RRF objectives makes our project not only compatible with the RRF's aims but also a potential beneficiary of its funds, which can further enhance the scope and reach of our initiatives. The RRF's primary focus is on supporting and stimulating investments to drive the recovery of EU economies post-COVID-19. The StoreMore project specifically encourages investments in innovative energy storage solutions that could increase the efficiency and stability of RES. The RRF funds can act as a catalyst, providing a boost to these investments. By increasing energy storage capacities, we can significantly improve grid resilience and energy independence. This, in turn, aligns with the RRF's objective of fostering economic cohesion and reducing economic disparities across EU member states.</p> <p>By aligning with the RRF's green transitions and leveraging the potential financial support, our project can significantly enhance investments in energy storage capacities, further supporting the EU's recovery and resilience objectives.</p>
<p>A not exhaustive list of national programmes in the 2021-27 period:</p> <p>Czech Republic</p> <p>"Operační Program Životní Prostředí" (OPŽP) (Operational Programme Environment (OPE)):</p> <p>This programme focuses on improving the environment and developing capacities for research and development. It includes provisions for introducing modern and highly efficient methods of production, distribution, and storage of energy, increasing energy efficiency and energy savings, and effective</p>	<p>StoreMore and national/regional programmes across the Danube Region can create a powerful synergy to accelerate the green energy transition. These national programmes provide substantial financing options for the energy storage solutions that StoreMore is set to introduce. By aligning our efforts, we can significantly enhance the impact and reach of our initiatives. Energy communities are a key area of focus in this regard. They represent a new paradigm in energy production and consumption, where energy is generated and used locally. This model is highly efficient and sustainable, but it also presents unique</p>

(in case of 1ST CALL FOR PROPOSALS): Project or Initiative / (in case of PAC/DSP CALL add "N/A")	(in case of 1ST CALL FOR PROPOSALS): Synergy / (in case of PAC/DSP CALL add "N/A")
<p>and economical use of renewable energy sources.</p> <p>SO1.2 – RENEWABLE ENERGY SOURCES (7B CZK)</p> <p>Austria: Climate and Energy Fund (Klima- und Energiefonds) This fund supports projects that contribute to the energy transition, including energy storage solutions. The specific objective relevant for StoreMore under this program would be the promotion of innovative energy technologies and the development of energy infrastructure. This includes the financing of projects that contribute to the expansion and optimization of energy storage systems.</p> <p>Germany, Bayern: Europäischer Fonds für regionale Entwicklung in Bayern 2. Climate and Environmental Protection (Klima- und Umweltschutz): Energy efficiency in municipal infrastructures -> formation of energy communities. The funding measures make a contribution to sustainable urban development. They are anchored in an integrated urban development concept at community level.</p> <p>Slovenia: Cohesion Policy Programme 2021-2027 (Program kohezijske politike) Slovenia will invest 806 million euros in a more environmentally friendly, low-carbon transition to a carbon-neutral and resilient economy. The funds will contribute to the decarbonisation of the country and the development of renewable energy sources.</p> <p>Croatia: Green and Low-Carbon Transition (Zeleni i niskouglični prijelaz) SO of the Operational Programme for Competitiveness and Cohesion 2021-2027 which aims to improve energy efficiency, increase the share of renewables in energy production up to 60% of electricity in 2030</p>	<p>challenges - particularly in terms of managing the intermittent nature of renewable energy sources (RES). This is where StoreMore comes in. Our project is developing innovative energy storage solutions that can smooth out the peaks and valleys in RES production and consumption. By storing excess energy during periods of high production and releasing it during periods of high demand, we can ensure a steady, reliable supply of green energy. These storage solutions are a crucial component of the energy community model. And with the financial support provided by national programmes, they can be implemented on a much larger scale. This synergy between StoreMore and national programmes can thus facilitate the widespread adoption of energy communities across the Danube Region. Moreover, the national programmes can also support the broader objectives of StoreMore. By financing investments in RES and energy storage, they can help to promote the use of these technologies and drive the transition towards a more sustainable energy system. This aligns perfectly with the goals of StoreMore, creating a mutually beneficial partnership that can accelerate the green energy transition in the Danube Region.</p>

(in case of 1ST CALL FOR PROPOSALS): Project or Initiative / (in case of PAC/DSP CALL add "N/A")	(in case of 1ST CALL FOR PROPOSALS): Synergy / (in case of PAC/DSP CALL add "N/A")
<p>Interreg Danube STRIDE</p> <p>Our project aligns closely with the aims and accomplishments of the Interreg Danube STRIDE initiative, which successfully advanced understanding of smart grid concepts and supported their integration into regional and local policies across the Danube region. Through STRIDE's knowledge transfer and development of planning tools, local policy makers have received crucial assistance in improving energy planning, a foundation upon which we aim to further build. STRIDE's focus on smart grid concepts is highly complementary to our project's focus on energy storage solutions, as the integration of these solutions into a smart grid is an essential aspect of fully realising the potential of renewable energy sources.</p>	<p>By leveraging the regional analyses, strategies, action plans and other tools developed by STRIDE, our project aims to provide a more complete, targeted and effective set of interventions to encourage investment in energy storage solutions. The methodology for regional analysis, guidebook, and platform created by STRIDE will serve as invaluable resources in our effort to map stakeholders, understand the current state of play, and design and implement effective strategies for promoting energy storage. As STRIDE's tools are designed for application across the entire Danube region, our project's results will also have a high replication value, accelerating the integration of energy storage solutions and promoting a more sustainable, resilient energy sector in the region. While the STRIDE project has made significant strides in integrating smart grid concepts into regional and local policies, our project aims to extend this integration by concentrating on the essential component of energy storage solutions. Unlike STRIDE, which was primarily focused on facilitating the deployment of smart grid systems, our project emphasises the vital role of energy storage in improving the efficiency and stability of these systems. Our project introduces innovation by expanding the scope of technologies considered. Whereas STRIDE primarily facilitated smart grid technology, our initiative broadens the view to include a comprehensive range of energy storage options. This catalogue of technologies not only captures the conventional methods but also includes emerging and less recognised solutions that can be tailored to the specific needs of different localities. Our project also diverges from STRIDE in the way it encourages and facilitates practical implementation. We are not just providing knowledge and strategies but also piloting various energy storage solutions in different settings. This hands-on approach will yield real-world data on the efficacy and scalability of these solutions.</p>

(in case of 1ST CALL FOR PROPOSALS):
Project or Initiative / (in case of PAC/DSP
CALL add "N/A")

Interreg Danube CSSC LAB
While the CSSC LAB project has laid a strong foundation for the energy transition in the Danube region, our project seeks to expand upon this groundwork by focusing on broader applications and unique energy storage solutions. Unlike CSSC LAB, which primarily targeted urban environments and medium-sized cities, our project addresses the energy needs of a wider spectrum of environments, including rural and remote areas where energy stability is even more critical.

(in case of 1ST CALL FOR PROPOSALS): Synergy / (in
case of PAC/DSP CALL add "N/A")

Our project distinguishes itself through its innovative approach to energy storage technology. Where CSSC LAB focused on building capacity and demonstrating viable storage solutions within the urban context, we are compiling a comprehensive menu of storage technologies, some of which may be cutting-edge and less explored in the Danube region. This will allow for a broader range of applications and potentially unlock new solutions for energy storage.

Moreover, our project is taking a further step by not only providing the knowledge and tools, but also actively facilitating pilot projects where different energy storage solutions will be tested in real-life settings. This practical, hands-on approach will provide valuable insights into the implementation process and the performance of different energy storage solutions under different circumstances.

Lastly, while CSSC LAB has done an excellent job in establishing demo-centers and creating an online learning platform, our project aims to go a step further. We plan to create an interactive, user-friendly platform where stakeholders can not only learn about different energy storage options, but also model potential investments and view case studies of successful implementations. This will be complemented by a robust communication strategy aimed at educating a broader audience about the benefits of energy storage, thereby further promoting the transition to a more sustainable energy future in the Danube region.

To further improve connection with CSSC LAB and better understanding of its results, our project secured the support of Mr. Aleksandar Janičić who will support implementation of StoreMore as an expert employed by PP13.

(in case of 1ST CALL FOR PROPOSALS): Project or Initiative / (in case of PAC/DSP CALL add "N/A")	(in case of 1ST CALL FOR PROPOSALS): Synergy / (in case of PAC/DSP CALL add "N/A")
<p>Interreg Central Europe STORE4HUC project: Aiming to enhance territorial low-carbon energy planning strategies, they enriched policies that support climate mitigation in historic urban centers by developing policy recommendations for implementation and sharing lessons learned in their four pilot sites. There, they realized storage solutions in historic urban areas and experienced and overcame difficulties firsthand. They also developed energy management tools for various stakeholders to assist them in making decisions about investing in an energy storage solution.</p> <p>Pilots: City of Cuneo implemented battery storage system connected to a photovoltaic array on a means of public transport. City of Lendava installed water buffer storage for heat in connection with a geothermal district heating system. Weiz also implemented thermal storage: central storage, network and decentralised storage at the consumers. During Bračak pilot, the city integrated a newly installed solar PV system with batteries into an energy management system.</p>	<p>We acknowledge the valuable groundwork laid by the STORE4HUC project, particularly in the realm of enhancing territorial low-carbon energy planning strategies and enriching policies that support climate mitigation in historic urban centers. The STORE4HUC project's experience in implementing storage solutions in historic urban areas and developing energy management tools for various stakeholders provides a solid foundation for StoreMore to build upon. The lessons learned from the STORE4HUC project's pilot sites will be instrumental in informing StoreMore's approach to overcoming potential challenges and difficulties.</p> <p>However, StoreMore aims to take a step further by expanding the focus beyond lithium-ion batteries, which were the storage solutions for electricity implemented in the STORE4HUC project. StoreMore recognises the need for a more diverse range of sustainable energy storage solutions to cater to the varying needs and contexts of different regions. Therefore, StoreMore is dedicated to exploring and developing innovative, scalable, and modular alternative electricity storage solutions. These alternatives are designed to be more adaptable and less environmentally detrimental than conventional options, helping to reshape the energy storage landscape.</p> <p>In addition, StoreMore is committed to promoting sustainability in the energy storage sector. While STORE4HUC made significant strides in implementing storage solutions connected to renewable energy sources, -We aim to further this effort by promoting other sustainable solutions beyond lithium-ion batteries. By doing so, StoreMore not only contributes to the reduction of carbon emissions but also addresses potential issues related to the increasing demand and environmental impact of lithium extraction and processing. In essence, StoreMore aims to provide a solution that is economically viable, environmentally friendly, and technologically advanced, thereby taking the achievements of STORE4HUC a step further.</p>

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<p>Interreg Danube DANUP-2-GAS</p> <p>In line with the EU climate targets for 2030 and the EUSDR PA2 goals, DanuP-2-Gas advanced transnational energy planning by promoting generation and storage strategies for renewables in the Danube Region by coupling the electric power and gas sector. DanuP-2-Gas brought together energy agencies, business actors, public authorities, and research institutions via the Danube Energy Platform. Based on the platform developed during the DTP project ENERGY BARGE, it incorporated all pre-existing tools and, among others, an Atlas, mapping previously unexamined available biomass and energy infrastructure.</p>	<p>The DanuP-2-Gas project, funded by the Interreg Danube programme, has made significant strides in driving energy security and diversity in the Danube Region. The project has focused on combining bioenergy with surplus renewable energy, creating an innovative model for energy production and storage. This aligns closely with the objectives of the StoreMore project, which also seeks to enhance energy security and sustainability through innovative storage solutions.</p> <p>One of the key outputs of the DanuP-2-Gas project is the development of the Transnational Renewable Energy Atlas and the Tool for Optimizing Sector Coupling Hubs. These resources provide valuable data and insights into the renewable energy landscape in the Danube Region, which can be leveraged by the StoreMore project. The Atlas, in particular, can serve as a foundational resource for StoreMore, providing a comprehensive input for the Stakeholder Map (A1.1) and State of Play analysis (A1.2).</p> <p>While there are evident synergies between the two projects, StoreMore explores a different direction, with different scope and ambition. Unlike DanuP-2-Gas, which primarily concentrated on bioenergy and surplus renewable energy, StoreMore is investigating a broad spectrum of direct electricity storage solutions. The project is forward-looking, envisioning a future where lithium-ion batteries are not the only viable option. StoreMore is identifying cutting-edge technologies that are constantly emerging for direct electricity storage in one step (e.g. gravity storage, compressed CO2, chemical alternatives to lithium-ion batteries, etc.). The challenges addressed by StoreMore are distinct, as are the solutions, but the foundation and ultimate goal remain the same: facilitating a green energy transition towards a more sustainable Danube Region.</p>

C.2.7 (in case of 1ST CALL FOR PROPOSALS): How does the project build on available knowledge? / (in case of DSP CALL) How does the project build on the results of the previous DSP project? / (in case of PAC CALL not applicable)

(in case of 1ST CALL FOR PROPOSALS): Please describe the experiences/lessons learned that the project draws on, and other available knowledge the project capitalises on; / (in case of DSP CALL) how the project takes into consideration the capitalisation of outputs and results of the previous DSP project(s) (i. e. what outputs and results will be used and how they will be integrated in the day-to-day work); / (in case of PAC CALL not applicable - add "N/A")

Danube STRIDE

Our project aligns closely with the aims and accomplishments of the Interreg Danube STRIDE initiative, which successfully advanced understanding of smart grid concepts and supported their integration into regional and local policies across the Danube region. Through STRIDE's knowledge transfer and development of planning tools, local policy makers have received crucial assistance in improving energy planning, a foundation upon which we aim to further build. STRIDE's focus on smart grid concepts is highly complementary to our project's focus on energy storage solutions, as the integration of these solutions into a smart grid is an essential aspect of fully realising the potential of renewable energy sources.

By leveraging the regional analyses, strategies, action plans and other tools developed by STRIDE, our project aims to provide a more complete, targeted and effective set of interventions to encourage investment in energy storage solutions. The methodology for regional analysis, guidebook, and platform created by STRIDE will serve as invaluable resources in our effort to map stakeholders, understand the current state of play, and design and implement effective strategies for promoting energy storage. Furthermore, as STRIDE's tools are designed for application across the entire Danube region, our project's results will also have a high replication value, accelerating the integration of energy storage solutions and promoting a more sustainable, resilient energy sector in the region.

While the STRIDE project has made significant strides in integrating smart grid concepts into regional and local policies, our project aims to extend this integration by concentrating on the essential component of energy storage solutions. Unlike STRIDE, which was primarily focused on facilitating the deployment of smart grid systems, our project emphasises the vital role of energy storage in improving the efficiency and stability of these systems.

Our project introduces innovation by expanding the scope of technologies considered. Whereas STRIDE primarily facilitated smart grid technology, our initiative broadens the view to include a comprehensive range of energy storage options. This catalogue of technologies not only captures the conventional methods but also includes emerging and less recognised solutions that can be tailored to the specific needs of different localities.

Moreover, our project diverges from STRIDE in the way it encourages and facilitates practical implementation. We are not just providing knowledge and strategies but also piloting various energy storage solutions in different settings. This hands-on approach will yield real-world data on the efficacy and scalability of these solutions.

Danube CSSC LAB

While the CSSC LAB project has laid a strong foundation for the energy transition in the Danube region, our project seeks to expand upon this groundwork by focusing on broader applications and unique energy storage solutions. Unlike CSSC LAB, which primarily targeted urban environments and medium-sized cities, our project addresses the energy needs of a wider spectrum of environments, including rural and remote areas where energy stability is even more critical.

Our project distinguishes itself through its innovative approach to energy storage technology. Where CSSC LAB focused on building capacity and demonstrating viable storage solutions within the urban context, we are compiling a comprehensive menu of storage technologies, some of which may be cutting-edge and less explored in the Danube region. This will allow for a broader range of

applications and potentially unlock new solutions for energy storage.

Moreover, our project is taking a further step by not only providing the knowledge and tools, but also actively facilitating pilot projects where different energy storage solutions will be tested in real-life settings. This practical, hands-on approach will provide valuable insights into the implementation process and the performance of different energy storage solutions under different circumstances.

Lastly, while CSSC LAB has done an excellent job in establishing demo-centers and creating an online learning platform, our project aims to go a step further. We plan to create an interactive, user-friendly platform where stakeholders can not only learn about different energy storage options, but also model potential investments and view case studies of successful implementations. This will be complemented by a robust communication strategy aimed at educating a broader audience about the benefits of energy storage, thereby further promoting the transition to a more sustainable energy future in the Danube region.

To further improve connection with CSSC LAB and better understanding of its results, our project secured the support of Mr. Aleksandar Janičić who will support implementation of StoreMore as an expert employed by PP13.

C.3 Project partnership

(in case of 1ST CALL FOR PROPOSALS): Describe the structure of your partnership and explain why these partners are needed to implement the project and to achieve project objectives. What is the contribution of each partner to the project? / (in case of PAC / DSP CALL not applicable - add "N/A")

We considered four aspects while assembling the consortium:

- territorial coverage of partners within the Danube Region: almost all countries in the region are represented in the partnership. This ensures that different legal and socio-economic environments are observed and considered during project implementation. Furthermore the consortium can more effectively disseminate the results when Partners can contribute in their respective countries to communication and transnational training activities. This ensures, that outputs and results are produced through transnational cooperation, knowledge transfer and experience exchange.
- functional coverage of partners according to the planned activities: Three types of partners are contributing in the implementation of StoreMore providing unique expertise and bringing invaluable experience into the consortium: pilot implementers, energy storage, sustainability, policy, communication experts and AI, Machine Learning, IT experts.
 - o Pilot implementer partners (PiPs): LP1, PP8, PP9 are municipalities having/planning RES capacities. They all face similar challenges by surging energy prices and insecurity of energy supplies due to Russia's aggression against Ukraine. On the other hand, they represent different countries in the region with unique features and issues to be tackled. This offers the opportunity to tailor the project outputs respecting various needs and parameters these different partners have.
 - o Experts on the field of sustainable energy storage, energy policies, electricity market, communication, sustainable innovation: PP3, PP4, PP5, PP6, PP7, PP13. These partners provide special expertise during design, deployment of smart sensory and building control equipment, data collection and summarising results. They are also essential in dissemination of results in their respective countries and formulating policy recommendations.
 - o Academic partners with AI/IT and energy storage expertise are core partners in the consortium to develop the modelling and RES optimisation tools: PP2, PP11, PP12. These renowned institutions have exceptional experience and professional capacity for the envisaged tasks ensuring that high quality, greatly performing outputs will be produced to deliver real change in the Danube Region.
- Representation of the Target group: A very important aspect for us to ensure, that the consortium is covering well the target groups involving all kinds of stakeholders we aim to reach with our solutions. We believe that this way we can observe challenges the target groups are facing, respect their needs and interest and incorporate specific solutions into our activities for producing the off-the-shelf menu of alternative energy storage solutions and the two tools. This way we also expect to maximise uptake of results in the largest possible spectrum of stakeholders.
Target group coverage within the consortium:
 - Local/regional/national public authorities represented by LP1,PP8,PP9,ASP2,ASP4
 - Infrastructure and public service provider: PP4
 - Higher education and research organisations: PP2,PP11,PP12,ASP3
 - Interest groups including NGOs: , PP5,PP6
 - Business support organisations: PP7, PP13
- supply and demand side in the process of knowledge transfer. As SO Factsheet 2.1 declares: "Joint planning of infrastructure for the utilisation of renewable energy sources with the facilitation of knowledge exchange between regions of the lowest and the highest share of RES in the energy mix". Our consortium represents countries with share of RES in their energy portfolio in a wide spectrum. Also, some countries are early implementers of RES technologies (Germany, Austria) and thus accumulated significant knowledge and experience while others are taking their first steps on the

path of green energy transition considering replacing fossil fuels with RES (not counting hydro power). Partners representing these countries will be beneficiaries of the knowledge exchange (ASP1, 3, 4 among others).

We think that all four priorities we set for ourselves for partner selection are respected and thus we expect high level of transferability of the results and meaningful knowledge exchange to be delivered. Our ASPs are Ministry of Foreign Affairs and Trade of Hungary, Priority Area Coordinator for SO2.1, Khmelnytskyi Development Agency, University of Montenegro. Ministry of Environmental Protection and Spatial Planning of Tuzla Canton. ASP2 will ensure the projects effective implementation and maximise its impact. Participation in the project is ensured through active involvement in various activities such as leveraging international and regional networks for policy recommendations, organizing promotional events, sharing project updates on the PA2 website, and enhancing the dissemination of project results within the EUSDR. Participation of other ASPs is also crucial for knowledge transfer and dissemination, lacking space here please refer to their description.

C.4 Project work plan

Number	Specific objective title
1	To identify state of play in the energy storage sector, especially regarding novel technologies
2	developed and pilot tested tools for designing storage capacities and optimising RES performance
3	To provide solutions for modeling storage systems and optimising RES operation.

Specific objective 1

Specific objective title

To identify state of play in the energy storage sector, especially regarding novel technologies

Objectives

Your objectives should be:

- realistic and achievable by the end of the project;
- specific (who needs project outputs delivered in this specific objective, and in which territory);
- measurable – indicate the change you are aiming for.

Define one project specific objective that will be achieved when all related activities are implemented and outputs delivered.

SO coordinator: PP7 coordinates and prepares output factsheet and quality report signed by an independent expert.

We aim to deepen our understanding of the renewable energy storage landscape in the Danube Region. This is achieved by mapping stakeholders, assessing the current market, and exploring advanced, cost-effective energy storage technologies. The goal is to establish a pragmatic approach that encourages smaller-scale applications and benchmarks them through site visits.

As a final step, we intend to collate these findings into a comprehensive, accessible catalogue of storage solutions. This catalogue is designed to serve as a valuable decision-making resource for renewable energy system operators and potential investors. It ultimately enables the deployment of more sustainable and efficient energy storage solutions, fostering a more resilient energy infrastructure in the region.

Think about the communication objective that will contribute to the achievement of the specific objective. Communication objectives aim at changes in a target audience's behaviour, knowledge or belief.

Our objective revolves around engaging the target audience - RES operators, potential investors, policy makers, and the public - to raise awareness, enhance knowledge, and shift perceptions towards innovative, sustainable energy storage solutions.

We will initiate a communication plan that employs various digital platforms. Our first step will be to launch a dedicated Information Platform which will serve as a central hub for sharing updates, insights, and valuable resources like our comprehensive catalogue of storage solutions.

We'll use social media platforms to reach a wider audience, providing bite-sized, digestible content. Based on the stakeholder map, we invite relevant actors to the project opening conference where we introduce the project, present goals and expected outputs and initiate cooperation and offer involvement of stakeholders in the forthcoming activities. We also start our pilot tester recruitment during the conference.

Activities

Activity 1.1	
Title	Mapping stakeholders, addressing the target groups
Start period	Period 1, 1 - 6
End period	Period 1, 1 - 6
Description	<p>€213900, Activity leader: PP7</p> <p>This activity is the main vessel to connect with target groups, assess their needs by the time and find the best ways to address them with StoreMore. Delivered by partners in their respective countries involving external services in cases where partners' capacities are not adequate for the task. An accurate stakeholder map will requires external validation of relevant professionals.</p> <p>In order to achieve comprehensive and reliable results the project partners will employ a variety of data collection methods to map the stakeholders accurately. Surveys, interviews, and public databases can be utilised to gather comprehensive data on the different types of target groups. Different goals motivate local authorities, municipalities who aim to cover their own energy needs, electricity service companies, private operators who either want to optimize their profit or enter the market with their innovative energy storage solutions. We also intend to address business supporting organizations, NGOs, Higher education institutions and transmission operators as they all can directly benefit from the successfully implemented StoreMore.</p> <p>The stakeholder map will target group operators into three key segments: those with installed storage capacities, those who have identified a need for storage solutions, and even those who may not yet be aware of their need for such solutions. This thorough categorisation will allow the project to capture a detailed snapshot of the current landscape, and provide insight into potential growth areas for energy storage solutions.</p> <p>The project will also identify potential investors in RES capacities, with a specific focus on understanding their investment tendencies, preferred investment types, and expected returns. This data will help tailor presentations and project solutions that are most likely to attract investment and support.</p>

Activity 1.1	
	<p>The stakeholder map will serve as a foundation for several other project activities. It will guide the state-of-play analysis (A1.2), providing a comprehensive overview of the current status, trends, and challenges in the field of renewable energy storage. The map will also help in identifying potential sites for best practice visits (Activity 1.4). By learning from successful implementations and innovative practices, the project can ensure the development of effective and efficient energy storage solutions. The map will also play a critical role in the communication strategies for disseminating the project results (Activity 3.3) and for recruiting testers for the modelling tool and RES optimisation tool (Activities 2.1 and 2.2). With a clear understanding of the stakeholder landscape, communication can be tailored to effectively engage with the various stakeholders.</p> <p>The stakeholder mapping activity is a crucial first step that will provide a foundation for subsequent project activities and facilitate effective engagement with target groups for successful project implementation.</p>
Partner(s) involved	Békéscsaba, UP, BSC KRANJ, EG, VERA, CEEO, ICUK, ZMO, AUF, UNIZAG FSB, UNS-FTN, STP MNE

Deliverables 1.1			
Running number	Deliverable title	Description	Delivery period
D.1.1.1	Danube Region Stakeholder Map: actors on the electricity market and assessment of target group needs	A map profiling key stakeholders, target groups in RES and energy storage sectors across the Danube Region. Including RES operators, potential investors, transmission operators, this map will guide strategic project direction, facilitate targeted communication, and inform tool development.	Period 1, 1 - 6

Activity 1.2	
Title	State of play analysis
Start period	Period 1, 1 - 6
End period	Period 1, 1 - 6

Activity 1.2**Description**

€213900, Activity leader: PP7

Delivered by partners in their respective countries with possibility of external support (meaning validating the analysis by external energy-, electricity market- and legal experts to ensure quality and accuracy of the related deliverable. Moreover, extensive market research require significant time investment from experienced professionals).

While A1.1 focuses on target groups, this activity is aimed to analyse the electricity markets, emerging technologies, legal environment, market of energy storage options.

The State of Play analysis constitutes a crucial part of this project. In this phase, partners from each participating country will perform a comprehensive analysis to establish a detailed snapshot of the current conditions in the energy sector. This analysis will cover four key areas:

Structure of the Electricity Market: Partners will evaluate the composition, dynamics, and trends in the electricity market in their respective countries. This will involve understanding the energy mix, the share of renewables, the role of traditional energy sources, and the prevailing market conditions.

Emerging technologies: Almost every week, news breaks about revolutionary energy storage technologies that are promised to change the industry. The pace of these advancements means that the state of technology development can radically change from the time of writing the application to the time of analysis. Therefore, a comprehensive update on current technology trends is crucial to follow these rapid changes.

Legal Environment of Energy Storage Investments: Here, the focus will be on understanding the legal and regulatory framework around energy storage investments. This includes laws, regulations, incentives, and barriers that could impact the growth and expansion of energy storage solutions.

Market of Energy Storage Options: The analysis will explore the various energy storage options available in the market. This includes understanding their advantages, disadvantages, market penetration, and potential for future growth.

The State of Play analysis will serve as a valuable input for several other project activities. It will aid in the selection of best practice sites to visit (A1.4), by identifying successful and innovative implementations of energy storage solutions. This

Activity 1.2	
	<p>analysis will also provide crucial data for the energy storage outlook (A1.3) and the modelling tool (A2.1), allowing for a more informed and strategic approach in these areas.</p> <p>The report generated from this analysis will be published on the project's information platform (A2.1), ensuring transparency and easy access to the target groups involved. To avoid duplication of work, the activity will leverage the results of previous projects such as Danube STRIDE and Danube CSSC LAB. This approach will ensure that the project is built on a solid foundation of existing knowledge, while also addressing new challenges and opportunities in the energy storage market.</p>
Partner(s) involved	Békéscsaba, UP, BSC KRANJ, EG, VERA, CEEO, ICUK, ZMO, AUF, UNIZAG FSB, UNS-FTN, STP MNE

Deliverables 1.2			
Running number	Deliverable title	Description	Delivery period
D.1.2.1	State of Play Report: Energy Storage Landscape in the Danube Region	A comprehensive review of the electricity market, key actors, regulatory environment, and energy storage options in the Danube Region. This report guides strategic project direction and aids in solution development.	Period 1, 1 - 6

Activity 1.3	
Title	Energy Storage Outlook
Start period	Period 1, 1 - 6
End period	Period 1, 1 - 6
Description	<p>€113500</p> <p>Activity leader: LP1 with the contribution of relevant partners with expertise on the field: PP2, PP3, PP4, PP6, PP7, PP11. Involvement of external expertise is also envisaged. Planned to be based on desk research primarily. Collaborative specialisation will be implemented at this stage as different partners represent different expertise (e.g. PP7 has extensive knowledge on the field of Hydrogen economy).</p>

Activity 1.3	<p>A1.3 is designed to build upon the existing body of knowledge about energy storage in the Danube Region, specifically drawing from a comprehensive report published by the Ministry of Foreign Affairs and Trade in Hungary in 2020. This foundational document serves as a guidepost, helping us to understand the landscape of energy storage in the region.</p> <p>Our Associated Partner (ASP2) authored the document and as such will provide invaluable insights, knowledge and feedback during this activity. ASP2 ensures the quality of output by validating the findings of the Outlook document.</p> <p>Our task is not just to reproduce the existing information but to expand and build upon it. Recognising that the energy sector is dynamic and ever-evolving, our analysis aims to incorporate the latest advancements in energy storage technologies, those that have been commercialised since 2020 or are currently under development. These cutting-edge technologies are rapidly reshaping the face of energy storage and have the potential to significantly enhance the efficacy and efficiency of renewable energy systems.</p> <p>Our outlook goes a step further. Instead of focusing solely on large-scale, high-cost storage solutions such as pumped hydro and compressed air storages in underground cavern systems, we pivot towards smaller-scale applications. We believe that by spotlighting options with relatively lower capital expenditure (CAPEX), we can make our long list of solutions practical and beneficial for a large number of renewable energy system (RES) operators.</p> <p>With this in mind, the Energy Storage Outlook is intended to be a comprehensive, forward-looking guide to the state-of-the-art in energy storage solutions, including those on the horizon. It aims to be a key resource for stakeholders interested in implementing or investing in energy storage solutions in the Danube Region, especially for RES operators looking for feasible and cost-effective storage options. This document which is in essence a long list of alternative energy storage solutions will serve several purposes in the project:</p> <ul style="list-style-type: none">- highlighting promising solutions for the best practice sight visits (A1.4).
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Activity 1.3	
	<ul style="list-style-type: none"> - input document for the Analysis and Cataloguing of Energy Storage Solutions activity (A1.5) - publishable document on the information platform which can be seed for further projects with different ambitions on the filed of energy storage.
Partner(s) involved	Békéscsaba, UP, BSC KRANJ, EG, CEEO, ICUK

Deliverables 1.3			
Running number	Deliverable title	Description	Delivery period
D.1.3.1	Cutting-Edge Energy Storage Outlook for the Danube Region	A comprehensive guide updating and expanding upon the existing Energy Storage report, incorporating latest advancements in energy storage technologies. Emphasises on smaller-scale applications, a long list of applicable energy storage solutions in the Danube Region	Period 1 , 1 - 6

Activity 1.4	
Title	Best practice site visits
Start period	Period 1, 1 - 6
End period	Period 2, 7 - 12
Description	<p>€147050, Activity leader: PP7</p> <p>This activity involves conducting a series of site visits to a selection of alternative energy storage installations across the DR and other parts of Europe. This activity will also include visits to locations using lithium-ion batteries as a baseline for comparison.</p> <p>The PROPOSED sites for these visits include the following:</p> <ul style="list-style-type: none"> - Vanadium redox batteries in Pfinztal (20MWh, Germany), Sümeg (24MWh, Hungary) - cutting-edge, large-scale energy storage systems. - Gravity storage systems in Austria, demonstrating an innovative and sustainable approach to storing energy. <p>Knapton Energy Park in East Knapton, Yorkshire, UK, which exemplifies best practices in energy storage and management.</p> <ul style="list-style-type: none"> - Liquid CO2 storage in Sardinia, Italy, showcasing

<p>Activity 1.4</p>	<p>how CO2 can be repurposed for energy storage.</p> <ul style="list-style-type: none"> - A lithium-ion battery storage system in Fuchstal, Germany (PP9) and Békéscsaba, Hungary (LP1), serving as a baseline example of a conventional energy storage solution offering further insights into standard energy storage practices. <p>These proposed sites are based on current knowledge. Actual sites will probably differ at the time of the actual implementation of the Activity. The site visits will be documented meticulously, with key findings and observations consolidated into a comprehensive summary document. This document will feed into the feasibility analysis of the proposed solutions (A1.5) and will be published on the project's information platform (A2.1). Through these site visits, the project aims to gain practical insights into the real-world operation of alternative energy storage systems and to benchmark them against conventional lithium-ion solutions.</p> <p>Site visits to alternative storage locations offer a practical perspective on the operational realities of diverse energy storage solutions. The firsthand experience gained from observing these technologies in use enhances our project's knowledge base and provides a robust framework for our benchmarking process. Comparing these alternative solutions with traditional Li-ion systems allows us to identify each solution's unique attributes and challenges, informing our feasibility study and assisting in developing an 'off-the-shelf' menu of sustainable electricity storage options. Moreover, these visits offer valuable opportunities for networking and establishing collaborative partnerships. Interacting directly with site operators and stakeholders deepens our understanding of the broader contextual factors affecting each solution's success. These connections may lead to future collaborations, enhancing the StoreMore project's outcomes and contributing to a wider community committed to advancing efficient and sustainable energy storage solutions. T</p> <p>Partners will individually decide which visit they will participate in.</p> <p>Costs will be covered by travel flat rate, LP1 and PP9 planned external services for project related public events during visits at their locations.</p>
<p>Partner(s) involved</p>	<p>Békéscsaba, UP, BSC KRANJ, EG, VERA, CEEO, ICUK, ZMO, AUF, UNIZAG FSB, UNS-FTN, STP MNE</p>

Deliverables 1.4			
Running number	Deliverable title	Description	Delivery period
D.1.4.1	Best Practice Site Visit Report	Report of the findings from site visits to alternative and LI-ion energy storage systems. Includes comparative analysis, operational insights, and potential collaboration opportunities, serving as a key reference for our feasibility study and the development of sustainable energy storage options.	Period 2 , 7 - 12

Activity 1.5	
Title	Analysis and Cataloguing of Energy Storage Solutions
Start period	Period 2, 7 - 12
End period	Period 2, 7 - 12
Description	<p>€258600, Activity leader: PP7</p> <p>Within this activity, the project partners, leveraging their unique expertise and experience, will conduct an in-depth analysis of energy storage solutions. The basis for this study will be the longlist of potential solutions created during the Energy Storage Outlook (A1.3). The intention is to provide a thorough evaluation and shortlist these options considering a variety of factors, such as technical feasibility, efficiency, durability, and sustainability. Additionally, the analysis will have a financial perspective, with a preference for solutions that require lower capital expenditure (CAPEX) to ensure the widest possible stakeholder reach.</p> <p>Another integral aspect of this activity will be the environmental impact assessment of the shortlisted storage solutions. Each option will receive an environmental rating, which will be communicated through the modelling tool in Activity 2.1. The rating will not only consider the solution itself but also its potential impact in various settings, for example, the impact of a gravity storage system next to an abandoned mine-shaft compared to one in an urban environment.</p> <p>The findings of this analysis will inform the development of both the Modelling Tool (A2.1) and the Renewable Energy Source (RES) Optimisation Tool (A2.2). They will be particularly crucial for the latter's virtual storage feature, enabling it to provide</p>

Activity 1.5	
	<p>optimal storage suggestions based on a detailed database of viable solutions.</p> <p>The culmination of A1.5 will be the creation of a Catalogue of Sustainable Energy Storage Solution (CSESS). This catalogue, presenting the results of the rigorous analysis, will be made accessible to stakeholders through the Online Information Platform developed under A2.1. In doing so, we aim to provide an invaluable resource for decision-makers considering various energy storage options for their specific needs and contexts.</p> <p>Further elements to improve the quality, flexibility and transferability of the catalogue will be:</p> <p>Stakeholder Consultation: Engaging with a diverse range of stakeholders to ensure the catalogue meets real-world needs and expectations.</p> <p>Real World Case Studies: examples of energy storage solutions to demonstrate practical applications and performance.</p> <p>User-friendly Interface: an intuitive, interactive interface for the catalogue to improve its usability and customisation options.</p> <p>Educational Materials: concise guides or visuals explaining how to interpret the catalogue data and make informed decisions.</p> <p>Updating Mechanism: a process in the post-project phase to periodically update the catalogue, keeping information current and relevant.</p> <p>PP7 and LP1 will coordinate the task, LP1 will lean on expertise of academic (PP2, PP11, PP12), specialist (PP4, PP7, PP5) partners and also on external expertise for environmental feasibility analysis. The external expert contracted for the Project Resilience Check will conduct quality control on the catalogue from this aspect.</p>
Partner(s) involved	Békéscsaba, UP, BSC KRANJ, EG, VERA, CEEO, ICUK, ZMO, AUF, UNIZAG FSB, UNS-FTN, STP MNE

Deliverables 1.5			
Running number	Deliverable title	Description	Delivery period
D.1.5.1	Comprehensive Catalogue of Sustainable	This catalogue provides a detailed analysis of various energy storage solutions, taking into account technical feasibility, costs and environmental impact, serves as a vital tool for stakeholders, offering accessible, well-informed guidance for decision-making in the field of renewable energy storage.	Period 2 , 7 - 12

Deliverables 1.5			
Running number	Deliverable title	Description	Delivery period
	Energy Storage Solutions (CSESS)		

Outputs

Output 1.1	
Output Title	Cooperation of partners resulting a State of play analysis , Stakeholders map, Energy storage outlook and Comprehensive Catalogue of Sustainable Energy Storage Solutions (CSESS)
Programme Output Indicator	2.1.2: Organisations cooperating across borders
Measurement Unit	organisations
Target Value	16,00
Delivery period	Period 2, 7 - 12
Output Description	CSESS compiled with the contribution of every partner in the consortium. Part of the output is the Stakeholder database, state of play analysis while the basis of the catalogue is the energy storage outlook and best practice site visits. The catalogue summarises the currently (by the end of Period 2) economically feasible storage solutions and their environmental impact analysis. The catalogue is the input for the development of the modelling tool.

Investments

Specific objective 2

Specific objective title

developed and pilot tested tools for designing storage capacities and optimising RES performance

Objectives

Your objectives should be:

- realistic and achievable by the end of the project;
- specific (who needs project outputs delivered in this specific objective, and in which territory);
- measurable – indicate the change you are aiming for.

Define one project specific objective that will be achieved when all related activities are implemented and outputs delivered.

The specific objective is to develop and pilot test instruments which could lead to more balanced electrical grids, due to tackling the intermittency of RES. This will be achieved through the development of specific tools (e.g. energy modelling and optimization tools), as well as through the elaboration of feasibility studies for sustainable energy storage solutions.

With the support of the energy modelling tool the RES operators and investors can make informed decisions on investments in alternative energy storage facilities. The optimization tool will allow more accurate forecast production and will optimize grid management. Not the least, the feasibility studies may act as a driving force for potential investment in renewable energy projects.

In conclusion, this approach is ultimately contributing to increasing the share of RES in the Danube region, since it investigates alternatives to one of the most important barrier jeopardizing the development of the sector: the energy storage.

Think about the communication objective that will contribute to the achievement of the specific objective. Communication objectives aim at changes in a target audience's behaviour, knowledge or belief.

Innovative and targeted communication tools will be used to raise awareness and engage stakeholders and the general public. The aim is to draw and sustain the attention of the target group (stakeholders and public) with interesting and exiting contents. The results of this specific objective will be translated into an easy-to understand graphical communication content, which make it possible to inform and educate the stakeholders and the public about the energy storage solutions. Based on the stakeholder map, we invite relevant actors to the project opening conference where we introduce the project, present goals and expected outputs and initiate cooperation and offer involvement of stakeholders in the forthcoming activities. We start our pilot tester recruitment during the opening conference.

A series of educational videos and infographics will be created to simplify complex concepts and promote understanding.

Activities

Activity 2.1	
Title	Development of online modelling tool from the analysed storage solutions
Start period	Period 1, 1 - 6
End period	Period 3, 13 - 18
Description	<p>€213900, Activity Leader: PP2 PP2, PP11, PP12 will develop the tools with LP1, PP4 contribution.</p> <p>The modelling tool will operate as a sophisticated, intelligent guide that proposes the most suitable energy storage solutions based on the unique data provided by users. This could include the location, specific details about existing or planned Renewable Energy Systems (RES), and user expectations. It will cater to both existing RES setups and those in planning stages, ensuring broad applicability. One of the tool's most distinctive features is its ability to provide a wide array of information about the recommended solutions. This includes area requirements, legal environment and potential challenges, technical parameters, and comparisons to alternative options. It will also point out locations of existing pilot projects and market providers for the proposed solution. The tool will also provide an estimate of the installation time required.</p> <p>To offer even more valuable insights, the tool will include an innovative 'virtual storage' feature. Users will be able to see a simulated operation of the suggested system using historical data. The feature will allow users to adjust various parameters such as sizing and expected return on investment, providing a dynamic, interactive user experience that aids in making informed decisions.</p> <p>The environmental impact of each solution is another crucial aspect that our tool will address. Users will have the option to prioritise solutions based on this criterion, promoting the selection of the most sustainable energy storage options. We will augment the tool with tutorials and user guides to facilitate easy usage and understanding. We also envisage a feedback system that allows users to provide comments and suggestions, creating a collaborative environment that continually improves the tool. Our overarching aim with this activity is to foster an informed, engaged community</p>

Activity 2.1	
	<p>around energy storage solutions that contribute to a more sustainable energy future.</p> <p>In order to maintain the relevance and accuracy of the online modelling tool, we aim to leverage advancements in AI as much as the current technology allows. The plan is to integrate AI services within the tool to dynamically update and provide the most recent information regarding legal environments and relevant legislation. This feature will be particularly useful for users in the design phase and those intending to invest in specific storage technologies. By delivering this real-time legal and regulatory information the tool can contribute to informed and compliant investment decisions in energy storage solutions.</p> <p>The information platform, a key component of our project, will be established during the initial period. The modelling tool will be published on the platform. The tool and platform, while interconnected, each serve unique purposes within the project.</p> <p>LP1 planned external expertise for financial calculations for the investment design module of the tool.</p>
Partner(s) involved	Békéscsaba, UP, EG, UNIZAG FSB, UNS-FTN

Deliverables 2.1			
Running number	Deliverable title	Description	Delivery period
D.2.1.1	Online Modelling Tool for Energy Storage Solutions	The tool offers a comprehensive guide for selecting storage solutions based on user inputs such as location, existing or planned renewable energy systems, and specific expectations. Designed to be user-friendly and interactive, will be made available on our project's online information platform.	Period 3 , 13 - 18

Activity 2.2	
Title	Development of the AI-Driven Renewable Energy Source Optimisation Tool
Start period	Period 2, 7 - 12
End period	Period 3, 13 - 18

Activity 2.2**Description**

€165000, Activity Leader: PP2

Collaborating with the experts at PP2, PP11 and PP12 our team will focus on the creation of an AI-driven optimisation tool, specifically designed for RES operators. This multi-functional tool will feature four key components:

1) The tool will employ machine learning models to predict RES production based on a selected set of input parameters. This will provide RES operators with valuable insights into potential energy outputs, assisting in the effective management and planning of RES operations.

2) The AI-driven tool will leverage predictive analytics to anticipate future electricity prices. With machine learning algorithms adept at pattern recognition and time series analysis, the tool will decode trends and patterns from past electricity pricing data, producing accurate and reliable future price predictions.

3) optimising the charging and discharging of storage capacities. Leveraging machine learning techniques such as reinforcement learning, the tool will learn from each interaction, refining its strategies to enhance storage efficiency over time. Less computationally intensive methods (operation research) will also be considered.

4) the tool will incorporate a virtual storage emulation feature. This module will use advanced computational techniques to mimic a currently non-existing storage system, providing operators with a realistic scenario of operations as if an actual storage system were in place.

The optimal operation of the RES optimisation tool will be through a centralised, web-based application that is user-friendly and easily accessible from any location. This approach will ensure that the tool remains up-to-date with the latest machine learning models and advancements, and it allows for real-time updates and improvements without the need for individual site deployments. A centralised system also ensures that all RES operators have access to the same tool, promoting consistency in operations and results.

To facilitate deployment, the tool could be hosted on a secure server that allows users to log in and access the system remotely. The interface of the tool would be designed to be intuitive and user-friendly, just like the modelling tool. This is critical

Activity 2.2	
	<p>for widespread acceptance and usability, particularly if users range in their technical knowledge. Clear, step-by-step instructions, tooltips, and customer support would be made available to ensure a smooth user experience.</p> <p>The tool could be designed to be mobile-responsive, ensuring usability across a range of devices - from desktop computers to smartphones. This approach would provide maximum flexibility to RES operators, allowing them to check forecasts and make decisions regardless of their location or device. The tool's design and features would be regularly updated based on user feedback to ensure that it continually meets the needs of its users, thereby optimising RES operations and boosting efficiency.</p>
Partner(s) involved	Békéscsaba, UP, UNIZAG FSB, UNS-FTN

Deliverables 2.2			
Running number	Deliverable title	Description	Delivery period
D.2.2.1	AI-Driven Renewable Energy Source Optimisation Tool	Comprises an advanced, centralised AI-driven tool optimised for RES operators, equipped with four primary functionalities: prediction of RES production, electricity prices, optimisation of storage charging and discharging, and a virtual storage emulation feature.	Period 3 , 13 - 18

Activity 2.3	
Title	Pilot 1 - operation of energy storage modelling tool
Start period	Period 3, 13 - 18
End period	Period 4, 19 - 24
Description	<p>€148600, Activity Leader: PP3</p> <p>Policy recommendations are a crucial component of the StoreMore project, as they have the potential to significantly influence the energy transition within the Danube Region. These recommendations, which will be designed at both transnational/national and regional levels, will serve as a roadmap for promoting alternative energy storage methods,</p>

<p>Activity 2.3</p>	<p>thereby contributing to the broader goals of the Danube Region Strategy.</p> <p>It is crucial at this stage, that policy actors - identified during A1.1 - will be involved in forming these recommendations. Partners are responsible for engaging these actors in their respective countries, maintaining communication and exchange of information to ensure their active participation and support for the Danube road map. To ensure the effectiveness and relevance of these recommendations:</p> <p>We will actively collaborate with external policy actors, drawing from their expertise and insights to shape the recommendations.</p> <p>During national workshops (A3.3) consultation sessions/round tables will be organized, inviting these external actors to provide feedback, share their perspectives, and co-create the policy roadmap. The deliverable from these workshops will be policy briefs (D3.3.7)</p> <p>The "Danube road map" will be jointly prepared, offering regions guidance on improving energy storage capacities and highlighting the environmental advantages of alternative energy storage solutions over conventional batteries. At regional/national level, these recommendations can be tailored to address specific challenges and opportunities within each region, thereby ensuring a more targeted and effective approach to energy transition. This could involve promoting specific types of energy storage methods that are most suitable for the local climate and resources, or advocating for policy changes that can facilitate the adoption of these methods.</p> <p>We aim on every level for decision makers to:</p> <ul style="list-style-type: none"> - realize the utmost importance of large scale investments in sustainable energy storage solutions, - incorporate energy storage as priority in policies, - provide subsidies for investment in energy storage, - design concrete actions (development programmers) for increasing energy storage capacities. <p>Based on Output 1.1, lead by PP3, PP7 and the invaluable contribution of ASP2, Partners and the policy makers they successfully involved will jointly</p>
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Activity 2.3	
	<p>prepare "Danube road map" with recommendations for the regions how to improve energy storage capacities and also what kind of technologies, methodologies can be used to assure long term viability of the energy systems in local/regional environment.</p> <p>The road map will be starting point for changes on policy level and will emphasize the environmental impact of alternative energy storage solutions compared to conventional Li-ion batteries.</p>
Partner(s) involved	Békéscsaba, UP, CEEO, ZMO, AUF, UNIZAG FSB, UNS-FTN, STP MNE

Deliverables 2.3			
Running number	Deliverable title	Description	Delivery period
D.2.3.1	Comprehensive Pilot Testing and Evaluation of the energy storage Modelling Tool	Pilot testing of the modelling tool with PiPs and target groups. Includes providing instructional materials, collecting feedback, tracking use cases following up on investments. The aim is to gather insights for tool enhancement and identify potential investments in energy storage solutions.	Period 4 , 19 - 24

Activity 2.4	
Title	Pilot 2 - operation of RES optimisation tool, collecting data
Start period	Period 3, 13 - 18
End period	Period 4, 19 - 24
Description	<p>€37550, Activity Leader: PP2, LP1</p> <p>Recruitment of External Testers (target groups): The recruitment of testers outside the partnership will be a strategic process, based on the stakeholder map developed in A1. We will identify potential stakeholders of the target group, including energy providers, local authorities, and businesses in the Danube region that are interested in implementing or expanding their use of RES. The recruitment process will be intertwined with the communication activities during A1 and A2. We will approach these potential testers individually and during project</p>

<p>Activity 2.4</p>	<p>events (e.g. opening conference and webinars), explaining the benefits of participating in the pilot testing and how their feedback can contribute to the development of a more efficient and effective RES optimisation tool. This approach ensures that we engage with a diverse range of testers.</p> <p>Installation of the RES Optimisation Tool: The tool will be installed at the PP1 PV plant location with the necessary hardware with sufficient computing power. In parallel, client application installation is necessary at the testers side for data collection and operation control (if the case) The tool will be operated from a central server at the PP1 location, optimising the operation of different testing RES locations at PP8, PP9.</p> <p>Data Privacy Option: For stakeholders who consider their operational data sensitive, there will be an option for individual installation. However, essential information about the economic feasibility of the optimisation tool and virtual storage will still be shared from these stakeholders.</p> <p>Virtual Storage Emulation: An important part of the tool is the virtual storage, which can emulate a storage system and its operation coupled with production data.</p> <p>Multiple User Options for Testing: The tool will offer three user options for testing:</p> <p>Full Simulation Mode with Emulated Storage: In this case, RES plants operate as usual, however, the optimisation tool simulates optimised operation with a selected emulated storage. Pilot testers can compare their usual operation with the virtually optimised performance.</p> <p>Optimised Operation with Existing Storage: The optimisation tool takes control over production scheduling and storage operation in order to maximise efficiency.</p> <p>Hybrid Operation: The pilot tester only uses production prediction module or energy storage optimisation based on their own schedules. The tool can simulate all three options for a selected period and even from past data for analysis and comparison.</p> <p>Pilot Testing and Data Collection: The RES optimisation tool pilot will run for a total cycle of four seasons. Data will be collected throughout this period to evaluate the tool's performance and impact.</p> <p>Adjustment of Machine Learning Algorithm: The</p>
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Activity 2.4	
	machine learning algorithm behind the tool will be adjusted based on a comparison with existing scheduling tools on each testing site and a comparison with actual data collected through the testing period.
Partner(s) involved	Békéscsaba, UP, CEEO, ZMO, AUF, UNIZAG FSB, UNS-FTN, STP MNE

Deliverables 2.4			
Running number	Deliverable title	Description	Delivery period
D.2.4.1	Pilot tested RES Optimisation Tool by partners and external stakeholders of the target groups	A fully operational RES Optimisation Tool, tested by partners and external target group participants. The tool offers multiple user testing modes, data privacy options, and a virtual storage emulation feature. Tested, adjusted and improved based on real-world data and feedback.	Period 4 , 19 - 24

Activity 2.5	
Title	Preparing a Feasibility study for the implementation of at least one selected storage solution for PiPs
Start period	Period 4, 19 - 24
End period	Period 5, 25 - 30
Description	<p>€278290, Activity Leader: LP1 Will involve LP1, PP8, PP9 conducting comprehensive feasibility studies as potential seeds for investment for their existing solar PV and wind turbine sites. These studies will assess the viability of implementing one or two energy storage options selected from the shortlist provided by the StoreMore modelling tool.</p> <p>The studies will examine environmental aspects, technical and financial feasibility of energy storage solutions and can go as deep as providing building designs and can aim to acquire building permits for construction.</p> <p>The feasibility studies will serve as a catalyst for potential investment in renewable energy projects. They will provide detailed insights into the technical,</p>

Activity 2.5	
	<p>economic, legal, and operational aspects of the proposed storage solutions, informing decision-making and implementation strategies.</p> <p>The studies will be conducted in close collaboration with the Pilot Implementer Partners (PiPs), ensuring that the selected storage solutions are tailored to their specific needs, capacities, and constraints. The feasibility studies will also draw on the findings and recommendations of previous activities in the StoreMore project, ensuring a coherent and integrated approach. PiPs will use the developed modelling tool as a first step, then, based on the selected storage options will hire external expertise to deliver the studies.</p> <p>PiPs have committed to taking the results of the project further and implementing energy storage systems coupled with their existing RES capacities. This commitment is contingent on securing funding from other programs or providing their own funding. This approach will ensure an investment leverage effect of the project, contributing to the broader objectives of promoting sustainable and efficient energy use in the Danube region. The implemented storage capacities will serve as a demonstration site also for the StoreMore project, which will be the seed of these large scale investment projects of alternative energy storage solutions.</p>
Partner(s) involved	Békéscsaba, ZMO, AUF

Deliverables 2.5			
Running number	Deliverable title	Description	Delivery period
D.2.5.1	Feasibility Studies for Sustainable Energy Storage systems	Comprehensive feasibility studies on solar PV and wind turbine sites by LP1, PP8, PP9. The studies aim to deliver investment plans for selected alternative energy storage solutions on specific RES production sites. Potential seeds for large scale investments in energy storage.	Period 5 , 25 - 30

Outputs

Output 2.1	
Output Title	Pilot action to test the online modelling tool

Output 2.1	
	involving PiPs and voluntary testers
Programme Output Indicator	2.1.3: Pilot actions developed jointly and implemented in projects
Measurement Unit	pilot actions
Target Value	1,00
Delivery period	Period 4, 19 - 24
Output Description	The first pilot action is a 12-month initiative conducted during Periods 3-4, focusing on the StoreMore energy storage modelling tool. This pilot involves selected Pilot Implementer Partners (PiPs) and external voluntary testers from the Danube region. The action aims to capture real-world applicability and performance metrics of the modelling tool, as well as to identify investment opportunities and areas for tool refinement.
Output 2.2	
Output Title	Pilot action to test the RES optimisation tool involving PiPs and voluntary testers
Programme Output Indicator	2.1.3: Pilot actions developed jointly and implemented in projects
Measurement Unit	pilot actions
Target Value	1,00
Delivery period	Period 4, 19 - 24
Output Description	The second pilot action centers on the RES optimisation tool, installed at the PP1 PV plant location or in a cloud service. Conducted over a full cycle of four seasons, this pilot offers multiple user options for testing, including full simulation mode with emulated storage, optimised operation with existing storage, and hybrid operation. Data is collected throughout this period to evaluate the tool's performance and impact, including adjustments to its machine learning algorithm.

Investments

Specific objective 3

Specific objective title

To provide solutions for modeling storage systems and optimising RES operation.

Objectives

Your objectives should be:

- realistic and achievable by the end of the project;
- specific (who needs project outputs delivered in this specific objective, and in which territory);
- measurable – indicate the change you are aiming for.

Define one project specific objective that will be achieved when all related activities are implemented and outputs delivered.

The specific objective is to disseminate and promote the tools and technologies developed and analyzed as part of the project, in order contribute to overcoming the bottlenecks which are jeopardizing the spread of RES in the Danube region. The storage modelling and RES optimization tools developed within the project are presented to the public and stakeholders, as possible solutions to challenges faced by the relevant operators. Additionally, the new sustainable storage technologies which were identified and analyzed by the partnership will be widely promoted, so that the Danube region is catching up with the newest technological trends in the field.

Moreover, objective is to ensure, that policy makers acknowledge the critical need for substantial investments in sustainable energy storage, prioritize energy storage in policies, and offer investment subsidies for energy storage.

Think about the communication objective that will contribute to the achievement of the specific objective. Communication objectives aim at changes in a target audience's behaviour, knowledge or belief.

Raising awareness and active engagement of the target group is important for maximising the uptake of the developed solutions. The Information Platform is the main hub of communication but not sufficient for proactive engagement. Therefore we directly address stakeholders of the target group (mapped during A1.1) repeatedly, invite them to webinars, national workshops, closing conference. We deliver a campaign in social media to access also the general public to raise awareness and induce curiosity. Approaching streaming services with an extended project film also serves this purpose.

The communication objective is to have at least one well connected member of the target groups from each partner country using our solutions to plan/deliver investment in sustainable energy storage or deploy the RES optimisation tool to mitigate intermittency of RES. Objective is also to raise awareness of sustainable energy storage solutions and realizing the utmost importance of investment in them.

Activities

Activity 3.1	
Title	Fine tuning of the modelling and RES optimisation tool
Start period	Period 5, 25 - 30
End period	Period 5, 25 - 30
Description	<p>€63000, Activity Leader: LP1</p> <p>Building upon the insights and recommendations generated at the conclusion of Activities 2.3 and 2.4, we will undertake a comprehensive revision of both the modelling and RES optimisation tools. The activity will be performed right after pilot tests are finalised, during the last project Period.</p> <p>This process will involve addressing any identified issues, incorporating suggested enhancements, and refining the tools to better meet the needs of our users.</p> <p>Our partners and stakeholders, including PP2, PP11, PP12 as developers, PiPs as testers and most importantly pilot testers outside the partnership, will play a crucial role in this fine-tuning process. Their expertise and insights, combined with feedback from external consultants as necessary, will ensure that the tools are optimised for practical application in the field of RES.</p> <p>The finalised tools will represent our commitment to promoting investment in RES capacities and energy storage solutions. They will serve as powerful, user-friendly resources for stakeholders across the energy sector, providing valuable insights and recommendations to guide decision-making and planning.</p> <p>Beyond the finalisation of the tools, we are also committed to their ongoing maintenance and improvement. The developers will provide regular updates to ensure the tools remain current with the latest advancements in RES technology and market trends. This commitment to continuous improvement will ensure that the tools remain relevant and valuable for users in the long term and will be stipulated in the Letter of Intent which partners will sign at the end of the project.</p>

Activity 3.1	
	<p>In addition to maintenance, we will also offer consultation services during the sustainability period: LP1 will be responsible for these services and this commitment will also be incorporated in the Letter of Intent. LP1 (with cooperation of tool developers in complex cases) will provide users with expert guidance on how to effectively utilise the tools, interpret their outputs, and apply their recommendations in real-world contexts. This support will further enhance the usability of the tools and ensure that users are able to maximise their benefits.</p> <p>This activity is also an important quality checkpoint where external experts (or internal ones independent from the project implementation) will provide feedback for improvements and validate the quality and usefulness of the tools.</p>
Partner(s) involved	Békéscsaba, UP, ZMO, AUF, UNIZAG FSB, UNS-FTN

Deliverables 3.1			
Running number	Deliverable title	Description	Delivery period
D.3.1.1	Fine-tuned energy storage modelling and RES optimisation tools	Revised of modelling and RES optimisation tools, incorporating stakeholder insights and recommendations. The finalised tools will promote investment in RES capacities and energy storage solutions, providing valuable guidance for the energy sector.	Period 5 , 25 - 30

Activity 3.2	
Title	Formulating Policy Recommendations
Start period	Period 5, 25 - 30
End period	Period 5, 25 - 30
Description	<p>€148600, Activity Leader: PP3</p> <p>Policy recommendations are a crucial component of the StoreMore project, as they have the potential to significantly influence the energy transition within the Danube Region. These recommendations, which</p>

<p>Activity 3.2</p>	<p>will be designed at both transnational/national and regional levels, will serve as a roadmap for promoting alternative energy storage methods, thereby contributing to the broader goals of the Danube Region Strategy.</p> <p>It is crucial at this stage, that policy actors - identified during A1.1 - will be involved in forming these recommendations. Partners are responsible for engaging these actors in their respective countries, maintaining communication and exchange of information to ensure their active participation and support for the Danube road map. To ensure the effectiveness and relevance of these recommendations:</p> <p>We will actively collaborate with external policy actors, drawing from their expertise and insights to shape the recommendations.</p> <p>During national workshops (A3.3) consultation sessions/round tables will be organized, inviting these external actors to provide feedback, share their perspectives, and co-create the policy roadmap. The deliverable from these workshops will be policy briefs (D3.3.7)</p> <p>The "Danube road map" will be jointly prepared, offering regions guidance on improving energy storage capacities and highlighting the environmental advantages of alternative energy storage solutions over conventional batteries.</p> <p>At regional/national level, these recommendations can be tailored to address specific challenges and opportunities within each region, thereby ensuring a more targeted and effective approach to energy transition. This could involve promoting specific types of energy storage methods that are most suitable for the local climate and resources, or advocating for policy changes that can facilitate the adoption of these methods.</p> <p>We aim on every level for decision makers to:</p> <ul style="list-style-type: none"> - realize the utmost importance of large scale investments in sustainable energy storage solutions, - incorporate energy storage as priority in policies, - provide subsidies for investment in energy storage, - design concrete actions (development programmers) for increasing energy storage capacities.
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Activity 3.2	
	<p>Based on Output 1.1, lead by PP3, PP7 and the invaluable contribution of ASP2, Partners and the policy makers they successfully involved will jointly prepare "Danube road map" with recommendations for the regions how to improve energy storage capacities and also what kind of technologies, methodologies can be used to assure long term viability of the energy systems in local/regional environment.</p> <p>The road map will be starting point for changes on policy level and will emphasize the environmental impact of alternative energy storage solutions compared to conventional Li-ion batteries.</p>
Partner(s) involved	Békéscsaba, BSC KRANJ, EG, VERA, CEEO, ICUK, STP MNE

Deliverables 3.2			
Running number	Deliverable title	Description	Delivery period
D.3.2.1	Policy recommendations on national /regional level for prioritizing sustainable energy storage	<p>Policy recommendations for decision makers to:</p> <ul style="list-style-type: none"> - Acknowledge the critical need for substantial investments in sustainable energy storage, - Prioritize energy storage in policies, - Offer investment subsidies for energy storage, - Formulate specific actions to boost energy storage capacities. 	Period 5 , 25 - 30

Activity 3.3	
Title	Knowledge transfer and dissemination
Start period	Period 1, 1 - 6
End period	Period 5, 25 - 30
Description	<p>Budget: €309200,Activity Leader: LP1</p> <p>Tools that function perfectly, offer significant environmental and economic benefits, and leverage investments in the region towards a green transition in the energy economy, are still ineffective if widespread adoption and uptake of these solutions</p>

<p>Activity 3.3</p>	<p>by the target groups is not ensured. Therefore we consider this activity as one of the most important ones in the project and focus efforts and resources accordingly.</p> <p>Our dissemination approach focuses on active target group engagement and raising public awareness of sustainable energy storage solutions. Our main goal is to engage with the target groups promoting the project, its objectives, and progress, emphasizing the benefits of sustainable energy storage and the innovative solutions being developed, maximising the uptake of the developed tools StoreMore can offer. The primary audience includes stakeholders described in section C.2.4, including the general public.</p> <p>Key actions:</p> <ul style="list-style-type: none"> - Establishing an information platform for project updates and hosting outputs. Server support by LP1, PP2, PP11 for running the tools on the platform (without investment from DRP resources). - Hosting opening and closing conferences with online participation options. Invited target group is mapped during A1.1. - Organizing national workshops/conferences preferably in each partner country during the project's final period. - Conducting webinars after delivering the Catalogue of alternative energy storage and two developed tools. These webinars will walk through participants on the tools and how to deploy and use them. - Creating an informational film about forward-looking energy storage solutions with the aim of offering it to streaming services like Nebula, Curiosity (CuriosityStream has 23 million subscribers, Nebula has a modest number of 0.5M but experienced significant growth, attracting over 175 creators who collectively have more than 120M YouTube subscribers). - Maintaining an active online presence, particularly on social media platforms, using engaging content like short videos, infographics, and visual elements. All the videos recorded during activities above will be shared on project's Youtube channel and other platforms. <p>Dissemination tools will include a dedicated website, social media platforms, virtual reality tours (designed and delivered by LP1, PP2, PP11, PP12, PP5), newsletters, press releases, and participation in relevant events. The key messages will highlight</p>
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Activity 3.3	
	<p>the importance of energy storage in the renewable energy transition and the innovative solutions developed by StoreMore. ASPs are crucial channels for reaching the broadest possible range of target groups in each participating partner country, and they can significantly expand the dissemination network.</p> <p>The effectiveness of these activities will be evaluated regularly by PP5 VERA using metrics such as website traffic, social media engagement, newsletter open rates, event attendance, and media coverage.</p>
Partner(s) involved	Békéscsaba, UP, BSC KRANJ, EG, VERA, CEE0, ICUK, ZMO, AUF, UNIZAG FSB, UNS-FTN, STP MNE

Deliverables 3.3			
Running number	Deliverable title	Description	Delivery period
D.3.3.1	Information platform for project updates and hosting outputs	Information platform for project updates and hosting outputs. Server support by LP1, PP2, PP11 for running the tools on the platform (without investment from DRP resources) or optionally cloud service.	Period 5 , 25 - 30
D.3.3.2	Opening conference	An inaugural conference in Békéscsaba along with a baseline visit to kickstart the project, assess the current progress of the already started activities (A1.1, A1.2, A1.3). The event aims to introduce the project goals, expected outputs, and initiate stakeholder cooperation.	Period 1 , 1 - 6
D.3.3.3	Closing conference	The showcase of project results, featuring testimonials from pilot testers and stakeholders. The event serves as a platform for discussing future sustainability and project scalability. Invited target group mapped during A.1.1 and additional participants engaged during project implementation.	Period 5 , 25 - 30
D.3.3.4	National workshops with relevant stakeholders	National workshops/conferences preferably in each partner country during the project's final period targeting national stakeholders and additional participants engaged during project implementation. Include consultation sessions/round tables for policy actors to co-create D.3.2.1	Period 5 , 25 - 30
D.3.3.5	informational film about forward-looking energy	An informational film about forward-looking energy storage solutions with the aim of offering it to streaming services like Nebula, Curiosity, etc. Planned length is 40-60 minutes,	Period 5 , 25 - 30

Deliverables 3.3			
Running number	Deliverable title	Description	Delivery period
	storage solutions	animated, English voiceover.	
D.3.3.6	Stakeholder Engagement Webinars	Industry webinars organised around most promising energy storage solutions. Hands-on workshops for relevant stakeholders to explore cutting-edge technologies in energy storage, presentation and training of developed tools. Exact number of webinars depends on the number of feasible storage solutions.	Period 5 , 25 - 30
D.3.3.7	policy briefs aimed at decision-makers, with key findings and offering actionable recommendations	Policy briefs aimed at decision-makers, summarizing key findings and offering actionable recommendations for sustainable energy storage solutions to support the green energy transition in the DR. Co-created with policy actors during national workshops.	Period 5 , 25 - 30

Outputs

Output 3.1	
Output Title	Developed, tested, fine tuned modelling tool
Programme Output Indicator	2.1.1: Jointly developed solutions
Measurement Unit	solutions
Target Value	1,00
Delivery period	Period 5, 25 - 30
Output Description	<p>The tool supports and encourages investment in RES storage systems.</p> <p>It will be accessible through the information platform. The tool provides help for planning RES storage capacities, offering solutions also indicating their environmental impact.</p> <p>The tool can emulate the operation virtual storage coupled with RES capacity from operational data from the past. Users would be able to check their estimated past RES operation in the alternative scenario when a storage system would have been installed.</p>
Output 3.2	
Output Title	Developed, tested, fine tuned RES optimisation tool

Output 3.2	
Programme Output Indicator	2.1.1: Jointly developed solutions
Measurement Unit	solutions
Target Value	1,00
Delivery period	Period 5, 25 - 30
Output Description	<p>The tool supports RES operators to improve overall performance of RES by high precision production forecasting and storage system optimisation. The tool helps to balance supply/demand peaks during RES operation utilising energy storages, thus contributing to more balanced electricity grids. Virtual storage feature aims to have leverage effect on investment, demonstrating benefits of having (in certain cases additional) energy storage system during operation of RES.</p>

Investments

C.5 Project Results

What do you expect to change because of the activities you plan to implement and the outputs you plan to deliver? Please take a look at the programme result indicators and select those that you will contribute to.

Result 1	
Programme result indicator	2.1.1: Organisations with increased institutional capacity due to their participation in cooperation activities across the borders
Measurement unit	No. of organisations
Baseline	0,00
Target value	27,00
Delivery period	Period 5, 25 - 30
Result description	<p>Upon project completion, a Letter of Intent will be signed by all Partners (including ASPs) committing to sustained cooperation beyond the project's lifespan.</p> <p>The capacity of the consortium members will significantly increase fostering a network of collaboration and exchange that extends beyond the partnership.</p> <p>The cooperation formed between the consortium members and other organisations during this project will continue to after the project's completion. These connections will enable organisations to share knowledge, experiences, and best practices with each other, further strengthening their institutional capacity. The shared understanding and cooperation during the project will pave the way for more effective transnational collaborations in the future. This long-term synergy can lead to the continuous development of the involved organisations.</p> <p>Target value: consortium + AT LEAST 10 external stakeholders of the target group.</p>
Result 2	
Programme result indicator	2.1.3: Solutions taken up or up-scaled by organisations
Measurement unit	solutions
Baseline	0,00

Result 2	
Target value	2,00
Delivery period	Period After project implementation
Result description	<p>The developed solutions are sustainable and have a leverage effect on investment in RES storage. Uptake of solutions by target groups is reinforced through A3.2 and C7.3</p> <p>RES Optimisation tool will be implemented and tested on RES sites within the partnership and by RES operators external to the partnership. External piloting and tool usage after project closure will be documented and followed-up.</p> <p>After the testing and fine-tuning phase the tools will be open for the public for use.</p> <p>Pilot1: Every use of the tool will be documented, requesting user feedback. Partners will follow up the storage investments based on the modelling tool in the sustainability period.</p> <p>P2: Accessing the RES optimisation tool for organisations outside the partnership will be ensured in the sustainability period through LP1, and its developers. Target groups can request the tool through the information platform. In exchange operational data expected to be shared on the information platform with the public.</p>

C.6 Project Time Plan

	Period 1	Period 2	Period 3	Period 4	Period 5	After End
WP1 To identify state of play in the energy ...						
A1.1 Mapping stakeholders, addressing th...	D1.1.1					
A1.2 State of play analysis	D1.2.1					
A1.3 Energy Storage Outlook	D1.3.1					
A1.4 Best practice site visits		D1.4.1				
A1.5 Analysis and Cataloguing of Energy ...		D1.5.1				
2.1.2		O1.1				
WP2 developed and pilot tested tools for des...						
A2.1 Development of online modelling too...			D2.1.1			
A2.2 Development of the AI-Driven Renewa...			D2.2.1			
A2.3 Pilot 1 - operation of energy stora...				D2.3.1		
A2.4 Pilot 2 - operation of RES optimisa...				D2.4.1		
A2.5 Preparing a Feasibility study for t...					D2.5.1	
2.1.3				O2.1		
				O2.2		
WP3 To provide solutions for modeling storag...						
A3.1 Fine tuning of the modelling and RE...					D3.1.1	
A3.2 Formulating Policy Recommendations					D3.2.1	
A3.3 Knowledge transfer and dissemination	D3.3.2				D3.3.1	
					D3.3.3	
					D3.3.4	
					D3.3.5	

					D3.3.6	
					D3.3.7	
2.1.1					O3.1	
					O3.2	
Result indicator						
2.1.1					R1	
2.1.3						R2

C.7 Project management

In addition to the thematic work you will do in your project, you will need time and resources for coordination and internal communication. Please describe below how you plan to organise yourself to ensure the project work runs smoothly.

C.7.1 How will you coordinate your project?

Who will be responsible for coordination? Will you have any other management structures (e.g., thematic groups, SO/activity managers)? How will the internal communication work?

In line with the Lead Partner principle, the LP is responsible for ensuring the sound management and successful implementation of the entire project. Due to this critical role, the LP will involve experienced external expertise to provide support in delivering the specific tasks.

As soon as the project will start its implementation, the LP will have to ensure that certain vital elements are in place, as the appointment of the project management team, the set-up and operationalization of the project Steering Committee, the signing of the Partnership Agreement, or the establishment of the internal communication and reporting procedures within the partnership. Furthermore, already from the start of the project, the LP in cooperation with the MA/JS, will develop the project management plan. The document will represent a management tool, which will define monitoring milestones, delivery dates for the deliverables and outputs, as well as indicative date(s) for the project review(s). The monitoring plan will be discussed and approved within the partnership during the kick-off event of the project.

The pivotal element of the project management will be the Steering Committee (SCOM), composed of representatives of each of the participating partners. Its structure and operation will be governed by the provisions of the Partnership Agreement. The SCOM will have a central role in the decision-making process at strategic level. The SCOM will be chaired by the Lead Partner (LP), who will ensure the operational coordination of the project.

A very important aspect of the coordination activities is represented by the relationship with the MA/JS. This will be the responsibility of the LP, which will make sure that the MA/JS is informed in due time about any circumstance that may have an impact on the planned implementation of the project, in line with the project management plan. In this sense, the proper internal communication will be essential, so that the LP can ensure a reliable, comprehensive and efficient flow of information towards the MA/JS – for the periodic joint activity reports, for submission of the deliverables and outputs, for the project review(s), and any other situation related to the implementation.

The internal communication will be structured on several layers. At activity level, there will be an activity leader, nominated in each case. Its responsibility is to follow-up on the progresses achieved in case of each relevant deliverable. Besides the timely achievement, the follow-up shall focus on the quality, as well. Due to their professional background, the activity leaders are expected to provide guidance and professional support for the partners involved, ensuring an exchange of know-how and a process of transnational learning. Each partner shall designate a person responsible for a given activity, which shall be the contact person with the activity leader. The activity leaders will set-up specific mailing groups and will establish other communication channels, by using dedicated apps in this sense (whatsapp, viber, zoom, etc). This will allow real-time communication and rapid flow of information. The contacts in between the activity leaders and the partners shall be regular and as frequent as needed (at least monthly).

Each Specific objective will have an OP Coordinator. These partners will be responsible for ensuring the timely achievement of the project outputs and, in this scope, they will organise regular online meetings with the activity leaders, at least every second month of implementation. The goal of the meetings will be to allow a close monitoring of the progresses at activity level, to secure the synchronisation in between the activities (especially, in case there is a consecutive chronology of the

activities), but also to signal problems and to try to identify solutions for them.

Finally, the LP will convey online meetings with the SO Coordinators every third month (Project Board), in order to have an overview of the project implementation. During these meetings, the participants will review the status of implementation, analysing the problems which appeared during the implementation. Based on the analysis, the Project Board will decide about the steps to be taken in order to solve the challenges – further consultations with the partners, addressing the project Steering Committee, informing the MA/JS, submitting a formal request for change, etc.

In order to avoid bottlenecks during implementation, the LP will prepare a Risk Management Plan. The document will become available already in the beginning of the project, and will define several risks specific for the implementation of the territorial cooperation projects. Furthermore, the RMP will establish procedures to be followed by the partnership in case the risks will materialise. The document will be presented to the partnership during the first SCOM meeting.

C.7.2 Which measures will you take to ensure quality in your project?

Describe specific approaches and processes and responsible partners. If you plan to have any type of project evaluation, please describe its purpose and scope here.

The consortium will set-up a quality management structure, meant to ensure that the outputs of the project are reaching the required standard of quality. Besides this very important role, the structure will also facilitate a transnational learning process, through the transfer of information and knowledge which will be induced. Hence, the main role of the quality management structure will be to ensure the quality of the project outputs.

We dedicate a specific objective coordinators (SCO) for each SO with the task of preparing output factsheet and quality report signed by an independent expert. These responsible partners are: PP7 for SO1, PP2, for SO2, LP1 for SO3. For each of the outputs, the relevant SCO will designate a Quality Assurance Manager (QAM), who will be an expert in charge of reviewing the quality of the outputs. It is very important the QAM is an independent expert, not involved in the implementation of the activities which are leading to the specific output.

The QAM will be designated already in an early phase of implementation, so that he/she can follow the development process of the output, assessing the entire process of developing the output. Whenever relevant, together with the SOC, the QAM may set quality milestones, which shall indicate if the development of the output is on a right track. In case these milestones are not met, corrective measures shall be initiated as soon as possible, so that the implementation is not altered. The feedback received from the QAM will also represent a very good opportunity of learning and of improving the quality of the outputs.

The QAM will have the responsibility of elaborating two documents – the Output Factsheet and Output Quality Report. The templates of the documents are provided by DRP, being mandatory for the QAM. The Output Factsheet and the first draft of the Output Quality Report will be discussed within the Project Board and then submitted for discussion in the project SCOM. Based on the recommendations included in the Quality Report, the SCOM may propose active measures for corrections.

The partnership will engage into a complex evaluation exercise, which will be regular throughout the duration of the project and will serve both as a learning instrument and as a tool to apply correction measures, if needed. The evaluation will target both the project management and the project content. Firstly, the partners will investigate the efficiency and effectiveness of the procedures which were applied based on the Project management and coordination plan. The first milestone when this evaluation will be performed will be around the First-Year-Review procedure. Sufficient time would have passed in order to be able to understand if the procedures and processes applied within the partnership are efficient enough. The evaluation of the management will be included in the agenda of the SCOM meetings where the Plan will be reviewed and modifications will be operated, if the case.

A very important element of the evaluation will be the opinion of the target groups. The partners will continuously collect inputs and feedback from the target groups, inquiring for suggestions for improvement. The major goal will be to increase the impact of the project, therefore the target groups will be asked to contribute with proposals which may enhance the sustainability, durability and transferability of the project outputs.

Adapting to the specificities of the Danube Region, this quality management strategy is set to ensure the highest standards in all our operations and outputs. A significant aspect of quality control is the involvement of PAC PA02 (Ministry of Foreign Affairs and Trade of Hungary) from Hungary. We expect that their cooperation as an ASP will bring great value to the project and offer direct control over quality and professional validation of StoreMore outputs.

C.7.3 What will be the general approach you will follow to communicate about your project?

Who will coordinate project communication and how will he/she ensure the involvement of all partners? How will the communication function contribute to transfer your project results? Please ensure that the mandatory communication requirements are met. Please note that all communication activities should be included in the different specific objectives, as an integral part of your project. There is no need to repeat this information here.

Throughout the whole project, active engagement of stakeholders and the general public, dissemination of results will be in the focus. A communication team will be set up at the beginning of the project. LP1 and PP5 will coordinate communication, majority of expenditures planned is concentrated in their budget.

Objective: The main objective of the communication plan is to raise awareness about the StoreMore project, its goals, and its progress. This includes promoting the benefits of energy storage and the innovative solutions that the project is developing.

Target Groups: The primary target groups for communication are project partners, stakeholders in the energy sector (including policy makers, industry professionals, researchers, business support organisations, NGOs, enterprises), and the general public.

Concrete actions:

- Information platform as a main hub of project related information, news and hosting the outputs of the project.
- Opening and closing conference will be held at a central location. To address and involve as many stakeholders as possible we will also offer online participation on these events. The opening conference will follow activity A1.1 and A1.2 so we will have an up-to-date stakeholder map (to address relevant actors) and state of play analysis (to present current challenges and our proposed solutions to address them) at hand.
- In the last project period, each partner (per country) may organise national workshops /conferences promoting the results of the project to stakeholders and also the general public – also with the possibility of online participation.
- Webinars right after delivering the Catalogue of alternative energy storage, solutions and the two developed tools (modelling and RES optimisation). These webinars are to inform stakeholders about project outputs and recruit testers for the pilot operations.
- Active online presence described in the communication tools and channels section below.

Our aim is to promote storage solutions in an entertaining and interesting way. To achieve this, on social media platforms, we share easy-to-understand and interesting project content. We will use the most innovative and modern digital tools to achieve the goals. These contents will appear in a form of short videos, info-graphics and other visual elements.

Furthermore, our aim is to create an informational video (60-90 minutes) about forward looking energy storage solutions and promote it through streaming services like Curiosity Stream, Nebula, etc.

Communication Tools and Channels:

Website: A dedicated project information platform will be created to provide comprehensive information about the project, its objectives, progress, and results. The website will also host downloadable resources such as reports, publications, and promotional materials.

Social Media: Platforms like LinkedIn, Twitter, and Facebook will be used to share updates about the project, engage with the audience, and promote events.

Virtual Reality (VR) Tours: We could consider utilising VR technology to offer virtual site tours, showcasing the implementation of our storage solutions in different settings. This can provide a near-real experience of the solutions in operation, helping potential adopters better understand the technology and its benefits.

Newsletters: Regular newsletters will be sent to subscribers providing updates on project activities, achievements, and upcoming events.

Press Releases: Press releases will be issued at key stages of the project to generate media coverage.

Events: Outside StoreMore events, participation in relevant industry conferences, workshops, and seminars to present the project and its findings.

Key Messages: The key messages will revolve around the importance of energy storage in the transition to renewable energy, the innovative solutions being developed by the StoreMore project, and the project's progress and achievements.

Timeline: The communication activities will be carried out throughout the duration of the project, with specific milestones for the release of newsletters, press releases, and events.

Budget: envisaged budget for each communication activity is 333.200 EUR including direct staff cost, external services and flat rates. Each partner planned its own budget according to the expected contribution to communication activities. Majority of expenditures planned is concentrated in LP1's and PP5's budgets, other partners will mostly engage with national stakeholders and disseminate results on national level.

Evaluation: The effectiveness of the communication activities will be regularly evaluated through metrics such as website traffic, social media engagement, newsletter open rates, event attendance, and media coverage. Evaluation will be delivered by PP5 VERA.

C.7.4 How do you foresee the financial management of the project and ensure that the spending forecast is kept?

Define responsibilities, deadlines in financial flows, reporting flows, project related transfers, reclaims, etc.

In line with the reporting obligations imposed at the level of Interreg Danube Programme, the project partnership will set up internal procedures which will support the rapid and efficient exchange and transfer of information. This information will be channelled by the partnership towards the MA/JS through the reporting procedures applied at Programme level, allowing the accurate monitoring of the project implementation status. The basis of the entire procedure will be the Subsidy Contract, the Partnership Agreement and the Application Form, while one of the most important tool applied will be the management plan, agreed in the starting phase of the project implementation. The partners will make use of the other templates provided by the Programme, but they may develop other tools and instruments to support the reporting procedures.

Based on the Programme rules, every partner will prepare a partner report at the end of each 6 months of implementation, which will provide information on the activities performed, target groups involved, and deliverables achieved. The report will be elaborated in the Jems platform, and the LP will have access to it. The information provided there will be used for the regular activity reports, prepared by the LP and submitted at the end of each year of implementation. In case the information will be ambiguous or further details would be needed, the LP will approach the respective partner for clarifications. The contacts will be done through emails or online meetings.

The financial part of the of the regular partner reports will be managed also through the Jems platform. The costs declared by the partners will be verified by the authorised national level controllers, who will issue a certificate about the conformity of the declared costs with the Programme's rules. After every six months, the LP will compile a project level financial report, which will consist of the certificates of all the partners. When doing this, the LP will check the costs declared by the partners, making sure that these are relevant for the project. This will be done by a dedicated financial manager at the level of LP, who will fill-in a verification checklist. These services will be subcontracted by LP1 to an experienced external service provider. In case during this process there will be concerns about some elements of cost, these will be clarified by the financial manager with the specific partner and its national controller.

A very important task of the financial manager will be to monitor the spending plan of the project. In case, based on the certificates, significant delays in spending or in reporting are identified (exceeding 15% of the plan), the financial manager of the LP shall contact the respective partner and investigate the causes. If there are important circumstances which led to the delays, the MA/JS will be informed without delay and a solution shall be sought together.

As regards the continuous reporting and monitoring, the partnership will rely on the internal communication described under section C7.1. As presented there, each of the activities and Specific Objectives will have a responsible partner, which will be in charge of following-up and monitoring the achievements of the deliverables and outputs. They will be the central players in the reporting architecture created at the level of the partnership.

Once a deliverable is achieved, the responsible Activity leader will inform the SO Coordinator and the LP about it, by using a special template designed in this sense by the LP. Further on, the LP will inform the MA/JS, asking for feedback. In case further details will be necessary, or in case the MA/JS will formulate certain recommendations related to the specific deliverable, the LP will inform the Activity Leader and SO Coordinator. Based on the observations received from the MA/JS, the partners will decide about the further steps to be taken.

A very similar approach will be followed in case of the outputs, the difference being that the responsibility of reporting about the outputs (by using the dedicated template) will be borne by the SO Coordinators. The feedback received from the MA/JS will be discussed by the LP and the relevant SO Coordinators and activity leaders, who will decide about the actions to be taken in order to comply. The partnership will prepare for the project review procedure, where the activity leaders, SO Coordinators and the LP will report about the achievements, will present the challenges and will outline the plans for the remaining part of the project. The review procedure will be attended by all partners.

In line with the LP principle, City of Békéscsaba will be responsible for the communication of the partnership with the MA/JS. This task will be assigned to the dedicated project manager. Given the importance of this position, the LP will subcontract these tasks to an experienced external service provider.

C.7.5 Cooperation criteria

Please select all cooperation criteria that apply to your project and describe how you will fulfil them. Please consider that at least 3 cooperation criteria shall be selected and Joint development and Joint implementation are mandatory.

Cooperation criteria		Description
Joint development	Yes	The submitted EoI and AF is the result of extensive cooperation within the partnership. Through numerous individual and joint meetings tasks have been distributed for writing the EoI and AF documents. Partners already committed to specialist tasks developing the Application and we set up teams responsible for thematic parts of the AF. Assignment of responsibilities were agreed through meetings and via a dedicated Slack workspace and Discord server for the project. AF annexes are available on the dedicated project Discord server which provides opportunity for individual discussions and informal networking activities.

Cooperation criteria	Description
Joint implementation	<p>Yes</p> <p>The partnership represents diverse expertise on different fields. These fields add up to a capable team to cover the topics of the project but also external expertise is envisaged for the implementation. As each partner has unique contribution to the consortium, either by expertise, experience or infrastructure to build on, a cooperation and joint work is indispensable during the implementation. Project activities has been carefully planned to involve relevant partners, partner budgets are already building on envisaged tasks according to the work plan of the project. A Discord server is already operational dedicated to the project and the partnership in order to ensure real-time communication between partner meetings.</p> <p>First step during the implementation will be an opening partner conference where decisions will be made about:</p> <ul style="list-style-type: none"> - setup of the Project Steering Committee of the project - management structure - thematic teams for implementing activities - assignment of responsibilities <p>The SCOM will oversee the effectiveness and quality of the implementation of the StoreMore project.</p> <p>LP will convey online meetings with the SO Coordinators every third month (Project Board), in order to have an overview of the project implementation. During these meetings, the participants will review the status of implementation, analysing the problems which appeared during the implementation. Based on the analysis, the Project Board will decide about the steps to be taken in order to solve the challenges – further consultations with the partners, addressing the project Steering Committee, informing the MA/JS, submitting a formal request for change, etc.</p>

Cooperation criteria	Description
Joint staffing	<p>Yes</p> <p>As soon as the project will start its implementation, the LP will have to ensure that certain vital elements are in place, as the appointment of the project management team, the set-up and operationalization of the project Steering Committee, the signing of the Partnership Agreement, or the establishment of the internal communication and reporting procedures within the partnership. The Steering Committee (SCOM) will be a pivotal element of the project management, composed of representatives of each of the participating partners. Its structure and operation will be governed by the provisions of the Partnership Agreement. The SCOM will have a central role in the decision-making process at strategic level. The SCOM will be chaired by the Lead Partner (LP), who will ensure the operational coordination of the project. The leader of communication is expected to be delegated from PP5 VERA with relevant experience and expertise. The expertise on the field of energy and energy storage is ensured by specialists within the consortium. Participation of these designated experts from the partners also contributes to the joint staff of the project.</p> <p>The joint staff for coordinating the implementation is expected to be organised within the structure below:</p> <ul style="list-style-type: none"> - core management team: LP1, PP2, PP7 - energy specialist team: PP2, PP4, PP7, PP11, PP12 - networking and communication team: LP1, PP5, PP6, PP7, PP13 - team for pilot implementation (PiPs): LP1, PP8, PP9 - environmental aspects: LP1, PP3, PP5, PP7 <p>These teams are jointly responsible for the implementation of the work plan, contributing to activities according to institutional and personal expertise and experience.</p>
Joint financing	<p>Yes</p> <p>During the preparation of the budget, every partner carefully considered participation in tasks according to the work plan. Each partner budget reflects to activities and each activity will be carried out with cooperation of different partners. Thus, the budget proposed in this EoI is the result of joint planning, sums for each partner and activity add up according to envisaged partner participation in carrying out tasks. The total budget of the 13 activities indicated in the AF is €2,200,040 plus the preparation lump sum of €18,500 which adds up to the total budget of partners: €2,218,540. Building partner budgets was performed according to participation in activities, as a result the joint project budget is organised in line with activities carried out by each project partner.</p> <p>As a result, each activity is jointly financed by partners.</p> <p>Lead Partner City of Békéscsaba is also aware of:</p> <ol style="list-style-type: none"> 1.the responsibility for the administration of the project and is prepared for reporting both at partner and programme level. 2.the responsibility for the distribution of funds to the partners.

C.7.6 Horizontal principles

Please indicate which type of contribution to horizontal principles applies to the project, and justify your choice.

Horizontal principles	Type of contribution	Description of contribution
Sustainable development	positive effects	<p>The City of Békéscsaba (LP1) is a CraFt city - CrAFt: the EU-funded project for cities to become climate-neutral, beautiful and inclusive. (https://craft-cities.eu/project-partners-meet-the-crafters/). As such, committed to the New European Bauhaus initiative and integrating its core values into the project.</p> <p>The commitment to sustainability has driven the city in building this capable partnership to deliver change in order to increase the share of RES in the Danube region.</p> <p>The projects aims to have a positive effect on sustainability through:</p> <ol style="list-style-type: none"> 1) Facilitating energy storage solutions to incentivize investment in RES integrated with storage systems. By mitigating the intermittent nature of RES through the endorsed storage solutions, we can ensure a consistent supply of electricity generated from RES during peak demand periods. This equilibrium between supply and demand within the electricity market curtails the need for fossil fuels as balancing power, fostering sustainability. 2) An environmental impact analysis will be conducted for each alternative storage solution. We project that the highly polluting supply chain and restricted availability of the prevalent Lithium-ion batteries can be replaced with alternative, eco-friendlier solutions. Each storage solution will receive an environmental rating, highlighting the sustainability quotient to users via the modelling tool. The rating, derived from a comprehensive lifecycle analysis, will encapsulate not just the supply chain, but also the overall environmental footprint of the solution. <p>Through the integration of cleaner storage systems, we aim to significantly reduce greenhouse gas emissions while enhancing the overall environmental quality. The StoreMore project embodies the spirit of sustainable energy transition and contributes actively towards a cleaner, greener future.</p>

Horizontal principles	Type of contribution	Description of contribution
EU Charter of fundamental rights, gender equality, non-discrimination	positive effects	<p>Throughout the course of the StoreMore project, all partners are dedicated to respecting the principles enshrined in the EU Charter of Fundamental Rights, with a particular emphasis on gender equality and non-discrimination. These principles guide every aspect of the project's implementation, from team composition and partnership to stakeholder engagement and output dissemination.</p> <p>While the project's primary focus lies in the realm of energy storage solutions, it inherently promotes the principle of environmental protection, which falls under the solidarity title in the Charter: StoreMore significantly contributes to Article 37 of the EU Charter of Fundamental Rights by promoting sustainable development through its innovative approach to renewable energy storage. By developing and implementing alternative electricity storage solutions, StoreMore supports the integration of renewable energy sources into the power grid, thereby reducing reliance on fossil fuels and contributing to environmental protection. This reliance is also decreased by lower dependency on peaker plants (through more balanced supply for the existing demand patterns) which usually use natural gas. Furthermore, the project's emphasis on local energy production and storage reduces transmission losses and promotes energy efficiency, another key aspect of sustainable development. By fostering a more balanced, secure, and sustainable energy system in the Danube region, StoreMore directly aligns with the Charter's mandate for high-level environmental protection and the improvement of environmental quality.</p>

Horizontal principles	Type of contribution	Description of contribution
Strategic Environmental Assessment (if applicable)	positive effects	<p>The planned pilot projects will not have a direct significant impact on the environment, including nature, as well as on human health, which would fall into the scope of the SEA Directive and/or that of the UN Protocol on strategic environmental assessment of the Espoo Convention.</p> <p>In the contrary, the impact of the project will only positively effect the environment. Furthermore, although the scope of activities does not reach the level where a Strategic Environmental Assessment would be relevant, the StoreMore project is likely to have a positive contribution to SEA principles.</p> <p>Here's why:</p> <ol style="list-style-type: none"> 1) Environmental Integration: The project directly focuses on improving energy storage, an essential component of renewable energy systems, which inherently aids environmental protection and promotes sustainable energy use. It aims to reduce dependency on non-renewable energy resources and mitigate environmental impacts associated with their use. 2) Promotion of Sustainable Development: By offering a range of energy storage solutions, the project can help foster the sustainable development of the energy sector across the Danube Region. It does this by allowing for more efficient use of renewable energy resources, reducing energy wastage, and enabling more stable and reliable energy supply. 3) Public Participation and Transparency: The project's commitment to target group involvement and open communication supports the SEA principle of engaging the public in decision-making processes. Activities like stakeholder mapping, best practice sharing, and dissemination of project results through various platforms contribute to this aspect. 4) Consideration of Alternatives and Mitigation: The project involves exploring, analysing, and categorising various energy storage solutions and includes an environmental impact analysis. This aligns with SEA principles of evaluating different strategic alternatives and their environmental impacts.

C.8 Durability and transferability

As a programme, we aim to support projects that have a long-lasting effect in the DRP territory and those who will benefit from them. Please describe below what you will do to ensure this.

C.8.1 Not applicable

Please enter the text "N/A" in the field!

N/A

C.8.2 (in case of 1ST CALL FOR PROPOSALS): Durability / (in case of PAC / DSP CALL): Durability and transferability

(in case of 1ST CALL FOR PROPOSALS): All outputs should be used by relevant groups (project partners or others) after the project's lifetime, in order to have a lasting effect on the territory and the population. For example, new practices in urban transport need to be used by local authorities to have cleaner air in the city, and the whole population will benefit from this. Please describe how your outputs will be used after the project ends and by whom, as well as how the institutional and financial support will be ensured. / (In case of PAC/DSP CALL): please describe below what you will do to ensure the durability and transferability of the project.

Our project is designed with a strong focus on the durability of its outputs, ensuring their sustainability across financial, institutional, and political dimensions for at least additional 5 years after project closure. The outputs will be further promoted and accessible for the target group to use and the consortium will provide ongoing support for that after the project's lifetime. This ongoing commitment will be confirmed by a Letter of Intent, signed by all participating partners, including ASPs at the end of the project.

Financial Sustainability: The project's primary outputs, the RES optimisation and modelling tools, will continue to be available to stakeholders of the target groups after the project's conclusion. Target groups will have unrestricted access to these tools, promoting their widespread use and adoption. LP1, PP2 and PP11 will commit to maintaining servers hosting the tools by signing the Letter of Intent, covering the cost from own resources.

Institutional Sustainability: Developers of the tools (PP2, PP11, PP12 and LP1 in case of the modelling and RES optimisation tools) will assume the "ownership" of the project outputs, ensuring their continued availability and relevance after the project's end. Developers will maintain and update the tools, adapting them to evolving RES technologies and strategies. This institutional commitment ensures that the project's outputs continue to serve the needs of stakeholders, both public and private, long after the project's completion. Additionally, the establishment of pilot sites operated by our Pilot Implementing Partners (PiPs) of LP1, PP8, PP9 will provide continuous data and feedback, further enhancing the usability and relevance of our project's tools and resources.

Political Sustainability: The project aims to have a lasting structural impact, leading to improved policies (A3.2), legislation, and practices in the field of sustainable energy. By providing public authorities with unrestricted access to the tools, the project fosters the adoption of greener policies and practices. The tools provide detailed insights into the technical, economic, legal, and operational aspects of various energy storage solutions, informing decision-making and implementation strategies. This knowledge can contribute to the development of more informed and effective policies and legislation in the field of renewable energy. ASP2, as PAC will play a crucial role in strengthening political sustainability and giving weight to policy recommendations.

One of the key features of our StoreMore project is the creation of an information platform, where users can readily access the Catalogue of Sustainable Energy Storage Solutions (CSESS) of

alternative energy storage solutions. This menu will provide a variety of resources, guidelines, and tools to foster adoption and usability of the project's outputs.

A crucial aspect of the information platform is the upkeep of CSESS and the energy storage modelling tool. We understand that parameters, particularly those pertaining to financial aspects, may change over time due to shifts in economic conditions, technological advancements, and policy modifications. To maintain its relevance and accuracy, the modelling tool has been designed with flexibility and adaptability at its core. LP1 will have the capability to conveniently update these fluctuating parameters, ensuring that the tool continually provides up-to-date and reliable information. We are also committed for regular updates to the CSESS for which LP1 takes responsibility. These updates are planned yearly and will be based on research of current technologies, especially emerging new solutions. However, we are aware that additional financial resources will be needed for a deep comprehensive analysis of solutions therefore we will seek for funding to cover these expenses from national and EU funded programmes.

For the RES optimisation tool, we envision a different approach in terms of maintenance. As this tool is heavily reliant on machine learning algorithms, it is designed to self-update by constantly monitoring market fluctuations and adapting its predictive models accordingly. This application of cutting-edge AI technology enables the tool to learn from new data and refine its algorithms, thereby improving its predictions over time. As AI/ML expert, PP2 will oversee the tools further operation and ensure its functionality.

Another fundamental pillar of our project is the establishment and ongoing operation of pilot sites, even after the project's completion. These sites will serve as real-world examples of the project's outputs, providing valuable insights into their operation and effectiveness. Operated by our Pilot Implementing Partners (PiPs) of LP1, PP8, PP9, these sites will offer continuous data (within reasonable limits) and feedback (also strengthened by signing the Letter of Intent), further enhancing the usability and relevance of our project's tools and resources

C.8.3 (in case of 1ST CALL FOR PROPOSALS): Transferability / (in case of PAC / DSP CALL not applicable - add "N/A")

(in case of 1ST CALL FOR PROPOSALS): All outputs that you will deliver ideally could be adapted or further developed to be used by other target groups or in other territories, even outside the DRP area. What will you do to make sure that relevant groups are aware of your outputs and are able to use them?

Addressing the pressing issues surrounding sustainable energy requires us to think beyond local scope. Energy security and transitioning to green energy are urgent concerns, probably now more than ever. These challenges are not confined to one region but extend across the globe. In light of this, our approach to tackling these issues emphasises the flexibility and transferability of our project outcomes.

It's clear that each country within the Danube Region possesses a unique energy portfolio. This variation stems from diverse geographical, historical, and political contexts, which in turn lead to different regulatory environments, development levels, and commitments to green transition. Moreover, the motivations of stakeholders also differ due to these circumstances.

Despite these differences, our project aligns well with the objectives of the European Green Deal. We aim to address common challenges and offer flexible solutions tailored to diverse needs. We plan to leverage existing facilities like REPowerEU and the EU Recovery (for last minute small scale projects) and Resilience Facility to support our goals by providing financing opportunities to investments supported by the modelling tool.

Our project aims to make our tools useful and appealing to the target group from every country in the Danube Region. We offer benefits for all stakeholders involved in the renewable energy field (public

and private RES operators, energy service companies, companies offering innovative storage solution technologies). These tools are designed to be easily deployable at various locations within the region. We provide a comprehensive off-the-shelf menu of alternative energy storage solutions. These innovative solutions could give the necessary boost to projects that otherwise might not materialise. We aim to spark new thinking, moving away from conventional reliance on lithium-ion batteries. Ensuring the transferability of our tools is a primary focus. After the project concludes, we will continue to provide access to the off-the-shelf menu, as well as the modelling and renewable energy source (RES) optimisation tool. LP1, with assistance from co-creators, particularly PP2, PP11, and PP12, will offer support for deploying these tools.

All partners will stay committed to disseminating the results and providing support within their respective countries. They will assist stakeholders who express interest in our solutions. This ongoing commitment will be confirmed by a Letter of Intent, signed by all participating partners, including ASPs, at the completion of the project. This will ensure a sustained cooperation beyond the project's lifespan.

Adding to the transferability strategies already in place, we will expand our initiatives in a few ways: **Interactive Workshops:** To promote engagement and hands-on learning, we plan to conduct interactive workshops in various countries within the Danube Region. These workshops will provide stakeholders a practical understanding of our energy storage solutions, empowering them to implement these technologies in their own contexts.

Online Platform: We intend to create an online platform hosting a plethora of resources, including detailed how-to guides, video tutorials, FAQs, and a community forum. This platform will not only support stakeholders in using our tools but also encourage knowledge exchange between users, fostering a sense of community.

Partnership Opportunities: To catalyse the uptake of our solutions, we will explore partnerships with universities, industry bodies, and other stakeholders of the target groups. These collaborations can serve as vehicles for introducing our solutions into new territories.

To maximise the transferability of the Catalogue of Sustainable Energy Storage Solutions (CSESS, O1.1) and tools (O2.1, O2.2), we observe these important aspects:

Interactive User Interface: To make the CSESS and the Tools highly accessible and easy-to-use, we design a user-friendly, interactive interface. Customizable parameters will allow users to manipulate data according to their specific needs and get the most relevant results. The intuitive design will aid users in understanding the tool's operations and results easily.

Instructional Content: Alongside the tools, we provide simple and easy-to-understand guides or video tutorials. These should detail how to effectively use the tools and interpret the results. Diagrams or infographics will be beneficial to simplify complex concepts or processes, promoting better understanding.

Post-Launch Assessment: We will maintain a feedback mechanism after the tools are launched. This feedback of the target groups will be used to regularly update and refine the tools based on the user's experience and evolving needs. Additionally, tracking the tools' usage and impact will aid in understanding their effectiveness and areas for further improvement.