LIFE Clean Energy Transition

Technical Progress Report

Project acronym and number:	TANDEMS - Project 101077514
Date of submission of the report:	30.06.2023
Period covered by the progress report:	01.10.2022 – 30.06.2023
LIFE call topic:	LIFE21-CET-ENERCOM-TANDEMS
Project start date:	01.10.2022
Project end date:	30.09.2025
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1 Progress of work plan in the period:

WP 1 – Project management & Coordination (KAMP C)

Key objectives	Progress	On track	Delayed
To ensure an inspiring and meaningful collaboration and exchange of ideas and best practices throughout the partnership.	TASK 1.1 Project Management & coordination (Kamp C) Achieved: MILESTONE 1 Quality Assurance Plan & Management Plan (Kamp C) due on M6 The TANDEMS project is strongly committed to evolving from analysis to demonstration initiatives, to replication of the knowledge gained, on a regional and pan-European scale. The project therefore requires very close cooperation between the different project partners and the wide range of actively involved actors outside the consortium. Kamp C as overall coordinator of the TANDEMS project, has focussed on creating a strong climate of collaboration and support within the consortium, encouraging active and critical participation by all partners to ensure cohesion, quality and monitoring of progress, while at the same time engaging with external key stakeholders, other LIFE CET projects and the project officer. The 4 project management pillars (Clear responsibilities, experienced PM team, Periodic consultation/reporting, external advisory board), as presented in the GA, are in place and streamlined. 1 mini kick-off meeting (online at the start of the project) and 2 Consortium meetings (the first in Mechelen, Belgium at M3 and the second in Burgas, Bulgaria at M8) have already taken place. Due to these meetings, as well as due to the extensive Inspiration Sessions (immersion trajectory), the partners know each other and each other's work, barriers, challenges and opportunities in depth and have formed close bonds. At the same time, key <u>External Advisors</u> have already signed in, providing inspiration and advice at regular intervals, from the following organisations: Energy Cities, CAN Europe, RescoopV, Energie Samen, TU Eindhoven, VEKA (Flemish Energy and Climate Agency) and Plovdiv Energy Agency. The Belgian project partners have answered the invitation of VEKA for a closer collaboration, for the inclusion of the lessons- learned from the project pilots to Policy recommendations on a BE level. VEKA (as LIFE contact point) is also organising a series of kno	\checkmark	

Flemish LIFE CET projects. The Project Coordinators of the currently approved projects from the LIFE21-CET-ENERCOM-TANDEMS call (Loop, Heat Connect, Comanage and Tandems) have initiated knowledge exchange and are committed to working closely, bounding knowledge, created tools and communication actions.		
As of the 30 th June this Technical progress report (Del.1.1) will have been submitted.		
Achieved: Del.1.1 Technical progress report (Kamp C) due on M9		
Del.1.3 Extract of the project data from the LIFE KPI webtool (Kamp C + VITO) due on M9		
The LP has created a simple but exhaustive excel document on the TANDEMS consortium Sharepoint platform where the various KPIs included in the GA are listed and filled in by the project partners, ready to be transferred to the LIFE KPI webtool. A delay was announced by CINEA referring to the CET LIFE KPI platform. When the platform is ready, CINEA will organise an instruction webinar. The new due date for this deliverable is not communicated yet.	~	~
KPI: 1 immersion trajectory	\checkmark	

WP 2 – Open collaboration model (VITO)				
Key objectives	Progress	On track	Delayed	
To develop a comprehensive blueprint of an open collaboration model for energy communities, based on a value centred approach (beyond purely financial values) and the roles played by different actors in realising this added value.	 TASK 2.1 Designing a TANDEMS open collaboration model (VITO) Del.2.1 Blueprint design of an open collaboration model (VITO) due on M18 Work on the development of a blueprint architecture for the open collaboration model kicked off with a review of existing guidance documents on community energy development and possible collaborations with local governments (e.g. RESCOOP.eu community energy guide (https://www.rescoop.eu/toolbox/community-energy-a-practical-guide-to-reclaiming-power), SSCALE project guidance (https://www.sccale203050.eu/), the COME RES sustainability assessment scorecard, etc.). First ideas for a blueprint architecture were co-created with the WP2 partners during a full day workshop (Den Bosch, 18 april 2023) and further validated in a workshop organised during the first consortium meeting (Burgas, 1 June 2023) and during a joint meeting with other LIFE projects (online, 15 June 2023). The draft blueprint architecture proposes to organise guidance on collaboration between local governments and local energy community initiative, towards developing ideas & direction, design and planning, and implementation and piloting. Zooming in on groundwork: A collaboration agreement has been signed between Klimaan vzw and the city of Mechelen to employ a half time Tandems staff person to strengthen collaboration efforts of citizens of Klimaan and the city of Mechelen, working together on energy communities and increased solar renewable energy generation. In a detailed meeting on the concept of the open cooperation model by VITO in April 2023, EnEffect confirmed its readiness to strengthen cooperation and coordination between Bulgarian municipalities, linking with the policy related challenges faced in Bulgaria under WP5. 			

	 TASK. 2.3 Impact monitoring and evaluations (VITO) <u>Del.2.3 Estimated and achieved key-performance indicators (KPIs) report (</u>VITO) due in M18 and consecutive reporting in M24 and M30 First ideas on impact monitoring and evaluation tool were presented and discussed with Kamp C. The approach described in the grant agreement was revisited, based on the final output of the COME RES project, and integration of the sustainability scorecard in the Energy Community platform. Also, complementarity of T2.3 and the monitoring of project related KPIs in frame of WP1 was discussed. Participation in workshop with sister LIFE projects suggests alignment of monitoring tool/approach (e.g., indicators assessed) across the different projects. In a next step, a more focused discussion on the monitoring tools in SCCALE, LIFELOOP, COMANAGE, CONNECT HEAT is planned. Meeting with oPENIab project to share insights on their assessment of impact monitoring in frame of different horizon 2020 and LIFE projects. 		
	 KPI: 1 open collaboration model and example agreement that makes cooperation between local authorities and energy communities legally possible. (VITO) → For KPI Webtool Innovation Uptake 1: number of products (goods or services), processes and methods launched into the market by the project 	\checkmark	
To develop new processes and business models in order to remedy market barriers for large scale projects.	TASK 2.2 Business models and early stage financial and technical support <u>Del.2.2 Business models and early stage financial and technical support</u> (AGEM) due on M27 A format based on the business model canvas has been created by AGEM and shared with the pilots. A start has been made with filling in the first pilots. The Cost Price Business model has been created for the Netherlands and shared in multiple sessions within and outside of the consortium.	\checkmark	
	KPI: 2 new business models (Agem/VITO) 1 BM completed	\checkmark	

WP 3 – Testing TANDEMS (AGEM)				
Key objectives	Progress	On track	Delayed	
To test the models and scenarios developed in the identified pilot sites, in order to set up viable and innovative energy community projects.	All partners have determined the pilot-projects for Testing Tandems. Many of them are well on their way. Throughout the different inspiration sessions partners have given presentations about the pilots to the other consortium partners, sharing success stories and challenges. This also led to interesting discussions and inquiries to understand the specific context of the pilots in the different member states and ensure transfer of experiences and knowledge. In addition, in the past weeks, the BE partners have been researching and interviewing creators of available Software applications to realise energy sharing within an energy community. This process includes: Market survey regarding existing and developing software applications Line up of requirements for each specific pilot Introduction with so far 4 possible suppliers for the software application. The pilots have been selected to give a high diversity in activities and stages. At the consortium meeting in Burgas on the 1ste of June, all the selected pilots were presented within a specific format. This presentation gives a great overview of the pilots in Testing Tandems and is therefore attached at the end of this report. In the following 9 months, individual work and cross-partner collaboration will be deepened to focus on over-arching challenges and common themes.	\checkmark		
	Here below, some examples per Thematic Task:			
	TASK 3.1 Wind and large-scale Solar TANDEMS (Agem)			
	<u>Del.3.1 Wind and large-scale Solar TANDEMS model in 3 countries</u> (Agem) due on M30			
	<u>Search Area K in the Achterhoek (</u> AGEM)			
	Status: Search Area K is selected as pilot for large scale wind. This project is in the very early stages of development and will benefit from the open collaboration model and citizen engagement within Tandems.			
	<u>Municipal solar park (</u> AGEM)			
	Status: This Large Scale Solar park pilot is selected, is in the final stages of development and will function as a good best practice for large scale solar in the cost price business model.			

TASK 3.2	Solar	TANDEMS	(Klimaan)
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Del.3.2 Solar TANDEMS model in 3 countries (Klimaan) | due on M30

• <u>Otterbeek – energy community in a neighbourhood with social tenants</u> (Klimaan/Mechelen)

Status: Otterbeek is in execution operational phase first street Karekietstraat Klimaan cvso with citizen investment installed 288 kWp solar panels on 70 habitats in Karekietstraat of Otterbeek Quarter. All the habitats are of social housing company Woonpunt Mechelen. An energy community was created among the social tenants, involving also social tenants without PV on their roof. The generated model was juridically checked and approved and is in full roll out phase. In the meantime, extension towards placing solar panels in all streets of Otterbeek quarter is being prepared.

• <u>Apartment communities (VMEs) to install solar panels in apartments</u> (Mechelen)

Status: A major communication campaign. The city of Mechelen participated in a study ordered by Kenniscentrum Vlaamse Steden to thinkE on the options for PV in apartments. Together with Life project Condoreno, the findings were translated to inspire apartment habitants to unite for solar investments. The message was spread through an information evening, television and radio broadcast, website of the city, and through a generated one stop shop all questions of citizens can be responded. 65 questions got a personalized response.

• <u>Solar noise barrier</u> (Mechelen/Klimaan)

Status: In conceptual development. The idea to integrate solar panels in noise barriers was initiated by volunteers of the climate movement Klimaan vzw, to which the city of Mechelen reacted positively. The idea was developed technically with a first rough financial calculation, grid connection verification with DSO Fluvius and technical requirements check of potential solar noise barrier installation. Actors were mapped (Klimaan vzw+cvso, Mechelen & Sint-Katelijne Waver, Energyville, University of Gent & Hasselt, Soltech, ZigZag, Fluvius, AWV) and all accepted to join the pilot project, except AWV that still must be decide.

• Energy sharing (ZuidtrAnt)

ZuidtrAnt has 3 test pilots for energy sharing: Opnieuw & Co, PVs have been installed, first meeting for energy sharing within the different buildings of Opnieuw & Co has been done. Waiting for O&C to finalize the administration. Municipalities of Schoten, WIjnegem &Mortsel: PV will be installed in 2023, starting with energy sharing after installation is final.

TASK 3.3 Heating networks & Citizen-led renovation TANDEMS (ZuidtrAnt)		
Del.3.3 Heating networks & Citizen-led renovation TANDEMS model in 3 countries (ZuidtrAnt) due on M30		
<u>Citizen-led collective renovation Bloemenwijk, Zoersel municipality</u> (ZuidtrAnt)		
Status: ZuidtrAnt has signed a contract with the municipality of Zoersel and first meetings have taken place to set up the internal project team withing the municipality. The kick off meeting with residents was a success, 80 residents present, 14 volunteers signed up, with more meetings for volunteers scheduled before the first half of July.		
Heat network Averegten, Heist-op-den-Berg municipality (Klimaan)		
Status: Contract was signed, partnership was set up (agreement & registration) and the installment of heat/cold piping network has taken plase. Big press release gaining lots of attention (first in the broader region). Scheduled borehole drilling in future appartment-building basement after the summer.		
Bulgarian pilots (Burgas, Gabrovo, Eneffect)		
EnEffect is working in parallel with Gabrovo and Bourgas on their pilot projects. In Gabrovo municipality they are trying to research and fulfil the best legal way to establish an energy cooperative on municipal property (municipal landfill building), the functioning of the community, as well as a financial analysis (income/expenses) and profitability. Work is underway to obtain bids for design and construction, as well as a specific business model and communication strategy. In Burgas, together with the local community, Eneffect has carried out preliminary analyses of the energy cooperative in the industrial zone, which show sustainable results. The next steps are to initiate ongoing communication between the municipality and business representatives to define the necessary future steps.		
KPI: 1 practical guide to start sharing energy within a community, 1 practical guide to actively involve and participate in energy communities for the socially disadvantaged, 1 cooperative wind guide, 1 practical tool for local authorities and developers of wind energy projects who want to work together on local support for new and current projects, 1 citizen-led district renovation guide, 1 apartment block retrofitting and/or energy sharing guide, 1 heat network guide	\checkmark	
→ For KPI Webtool Innovation Uptake 1: 7 products (goods or services), processes and methods launched into the market by the project (BE/NL x5 BG x2)		

To foster the collaboration between local authorities and energy cooperatives	Extensive work is in progress on a pilot level, as well as a policy level. See examples above and presentation at the end of this report.		
	KPI: 23 citizen-led initiatives supported/created by the project, including 1 where the city of Mechelen participates in. \rightarrow For KPI Webtool 23 citizen-led initiatives supported/created as a result of the project (NL x3 BE x16 BG x4)	\checkmark	
To demonstrate the effectiveness of the open collaboration model and tools developed in tangible pilot in diverse situations and contexts in 3 countries.	This objective is taken into account in the development of the collaboration model and tools developed, however, it is an objective to be tackled at a later part of the project.	\checkmark	
	KPI: 67 implemented projects, including 2 new collective renewable heat networks, 1 expansion of an existing heat network into existing homes, 2 district renovation projects, 4 collective energy sharing projects in apartment buildings, 2 projects on energy sharing in the district, 10 projects on social housing, 20 cooperative rooftop solar installations, 20 shared EVs deployed, 4 pv plants, 2 large scale solar 100% locally owned and the initiation of 1 wind project → For KPI Webtool Innovation Uptake 2: 67 real life implementation sites carried out by the project (NL x2 BE x61 BG x4)	\checkmark	

Key objectives	Progress	On track	Delayed	
To develop methods for multi and transdisciplinary collaboration and learning for participatory community energy development and to implement them on pilot regions, monitoring and evaluating the engagement approaches in each of the pilots	TASK 4.1 Training and capacity building (Duneworks)			
	Del.4.1 Training material and capacity building guidelines (Duneworks) due on M18			
	Duneworks has held extensive co-creation workshops with partners in each partner country to identify their needs for support and to learn which pilot to focus on in the development of the train-the-trainers (T4.1) and subsequent ongoing support (T4.2). The train-the-trainer workshops are planned for the autumn, in alignment with progress in each relevant pilot around which the train-the-trainer will be organised.			
	An inspiration Session was organised by Duneworks to share findings and recommendations for a just citizens' engagement from their LIGHTNESS Horizon 2020 project, that is entering its last 6 months before completion. These finding and lessons-learned from the pilots in that project are proving very interesting for engagement in our TANDEMS pilots – and they will partly be included in the train-the-trainer guidelines.	\checkmark		
	Exchanges with partners from sister projects that also develop train-the-trainers has taken place and will continue to take place in the upcoming months to ensure that we can support and strengthen each other's efforts.			
	DuneWorks is internally working on the structure and contents of the train-the-trainer guidelines, as well as an overview/database of engagement tools.			
	Oikoplus is in continuous contact with Duneworks to assess the most effective purpose and target group of the ICT tool. Additionally, knowledge exchange and sharing is held with other LIFE ENERCOM projects about toolkit and services development. As of M9 Oikoplus is still collecting relevant input from WP4 and is in the process of ideation for the ICT tool.			

WP 4 – Strengthening and supporting citizen initiatives (DUNEWORKS)

TASK 4.2 Promoting citizen participation in energy communities (ZuidtrAnt)		
Del.4.2 Best practices in engagement (ZuidtrAnt) due on M18		
ZuidtrAnt and Duneworks have initiated collaboration on this task, zooming in with the current way of engaging ZuidtrAnt cooperants, identifying deeds for alternative citizens' engagement methods with a diverse range of cooperants.	\checkmark	
Once the train-the-trainer workshop is done, the ongoing support of the the pilot partners will continue as part of T4.2.		
\rightarrow KPI Webtool Innovation Uptake 1: 1 product (goods or services), processes and methods launched into the market by the project \rightarrow 1 training package (all countries)	\checkmark	
KPI: 3 trainings, 1 open learning training centre blueprint, 1 ICT tool		

WP 5 – Regional and Local policy framework (ENEFFECT)				
Key objectives	Progress	On track	Delayed	
Key objectives To create a supportive local policy framework for the development of community energy projects and to facilitate a dialogue among different actors involved in community projects.	Progress TASK 5.1 Facilitation of a dialogue among different actors involved in community projects (Duneworks) Del.5.1 Intersectoral collaboration model (Duneworks) due on M30 Cross inspiration between WP2-3-4-5 has been very fruitful in the past months, revealing not only synergies but also common challenges/barriers and lessons, exposed through the development of the pilots and the goals set by the partners. Currently, the consortium is in the process of gathering policy developments in the various countries, under the guidance of partner VITO, as they differ from those during the application submission. Insights from the recently (January 2023) completed project COME-RES project, where VITO was partner, provides an excellent starting point. The consortium is considering the potential of establishing a follow-up to the 'Country Desks' set up in the COME-RES project. Recommendations from that project, as well as the continued guidance provided by RESCOOP EU, is proving beneficial at this stage. EnEffect launched the first Bulgarian platform for multi-level governance dialogue on 2 nd June 2023 in Bourgas during the National NZEB Conference, where the TANDEMS project meeting also took place. The platform aims at strengthening multi-level governance, involving local authorities in the drafting of the NECP and future energy policies, including easier and open access for citizens to initiate energy projects. During the meeting in Burgas the floor was given to the so called first Bulgarian energy community and of the newly established Bulgarian energy communities chamber. A lot of fruitful discussions were conducted and the partners from other countries in TANDEMS were acquainted with the real conditions and situation in Bulgaria. Further development on this Task will be more actively tackled at a later part of the	On track ✓	Delayed	
	<u>Del.5.2 Policy framework report</u> (Eneffect) due on M30			

Within this task, work on the policy framework is slowly starting and gathering momentum. In the Netherlans, partner AGEM has been participating in a NVDE (Dutch Renewable Energy Federation) working group on decentralized electrification representing Dutch energy communities (EnergieSamen). In the working group they are developing a position paper on the transposition of EU energy sharing guidelines in the Dutch Energy Law. In addition, as framed in the GA, AGEM aims to create at least one new policy measure at a regional level (for 8 municipalities) that will lead to a better process for the selection of locations for large solar and/or wind farms. Within the AGEM pilot Search Area K, a new wind vision is being created by the local municipalities Oost Gelre and Berkelland.	
In Mechelen Belgium, a governance note on the Otterbeek pilot model for Social renters' energy communities was composed, including lessons-learned and governance advice. It was shared and distributed through RESCOOP-Flanders, DSO Fluvius, VEKA and VVSG. It is already gathering a lot of interest on a regional and federal level.	
The political situation in Bulgaria has been quite dynamic in the last 3 years, as 5 parliamentary elections have been held during this period. In January 2008, the European Commission referred Bulgaria to the European Court of Justice for failing to transpose the EU's Renewable Energy Directive into national law. Many NGOs, relevant associations and citizens are ready for the process of establishing energy communities in Bulgaria to be legally open and defined. In April, new texts were proposed in the Bulgarian Renewable Energy Law to incorporate the EU Renewable Energy Directive but have not yet been adopted due to the lack of a regular parliament. The EnEffect team revised the texts, which include definitions and clarifications of energy communities, own energy consumers, one-stop shops for energy communities; some financial barriers are minimised; some administrative procedures are reduced and shortened in time; one-stop shops for energy communities are provided. There is a lack of methods for the promotion of RES, options for net metering, no tariff forms and defined conditions between energy subjects on the market, no specification of the geographical proximity and borders of energy communities, specific local and regional conditions are not taken into account. An attempt is being made to directly transpose the texts of the RES Directive into Bulgarian legislation.	
KPI: 5 policy / strategy recommendations KPI Webtool \rightarrow Innovation Uptake 1: number of products (goods or services), processes and methods launched into the market by the project (NL x1 BE x2 BG x2)	

NP 6 – Sustainability,	, replication a	nd exploitation of	of project res	ults (KAMP C)
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Key objectives	Progress	On track	Delayed
To ensure the outcomes of the TANDEMS are relevant and sustainable and have operational persistence and impact even after the funding period. (see also WP4) To develop methods for multi and transdisciplinary collaboration and learning for participatory community energy development and to implement them on pilot	 TASK 6.2 Communication - Dissemination Strategy and Hub set-up (Oikoplus) The digital and communication hub refers to a centralised structure that bundles and streamlines all external communication by the consortium. <u>The Hub</u> includes the project website, defined and completed in D6.3, as well as social media channels and the digital building blocks for communication. Oikoplus is successfully created two social media channels for TANDEMS: LinkedIn, where the project currently has 62 followers and Twitter with 40 followers. Additionally, Oikoplus has developed a project logo, visualizations, document templates and is continuously producing communication material such as videos, photographs and graphics. These elements, used by all project partners currently provide a unified and streamlined communication material. All material, which Oikoplus has developed for the Hub is freely available for all partners for their internal or local communication and is placed on Sharepoint, which is currently the main platform of information sharing among TANDEMS partners. Achieved: Del.6.2 Dissemination and Communication Strategy (Oikoplus) was due on M6. The dissemination and communication strategy (D6.2) has been completed and submitted in M6 of the project timeline. The logos KPI was 1 logo and 3 project claims, all of which was completed. 	~	
regions, monitoring and evaluating the engagement approaches in each of the pilots	TASK 6.3 Communication - Dissemination Materials, Events and Partner Support (Oikoplus)Oikoplus has ensured ongoing dissemination and communication work in relation to other partners, their individual work under TANDEMS and the shared work of partners specifically for TANDEMS.	\checkmark	

Content creation in both visual and written form through social media channels and website is ensured before, during and after important events, meetings, pilot activity etc. This includes preparation of material for stakeholders such as workshop plans, posters, roll-ups, presentations etc. There is also an array of template documents available for partners at the TANDEMS sharing platform Sharepoint, which includes press-kits, visual identity guidelines, letterhead, presentations, project posters and other relevand documents required for PR. These are provided in or adapted to the languages of the project partners.	
Oikoplus also arranges a quarterly newsletter titled 'TANDEMS Quarterly', which is distributed though the website as well as email and includes partners individual activities under the TANDEMS project or reports from shared TANDEMS meetings, where Oikoplus collects video and photographic material.	
The KPI for videos was 3 videos in English and this has been achieved.	
The KPI for conferences is 2 cross European events promoting TANDEMS. Apart from two consortium meetings in Mechelen and Burgas, TANDEMS participated in the nZEB Roadshow event in Burgas with a presentation under the panel 'The future of Energy Communities in Bulgaria'.	
Achieved: Del.6.3 Development of a dedicated project website and pages on the beneficiaries' <u>websites</u> (Oikoplus) was due on M6.	
Together with the submission of the Dissemination and Communication strategy, Oikoplus has submitted a dedicated project website under D6.3 (lifetandems.eu) and ensured the presence of TANDEMS on all partner's internal websites.	

Zooming in on dissemination the Mechelen / Klimaan example: The TANDEMS project started with a bang ('knal' in Dutch) at the KNAL Energy Festival on October 1 st 2022 in Mechelen, where the project goals and pilot ideas were presented for open input and inspiration to citizens and other local authorities, coinciding with the TANDEMS project's start-date. Afterwards the model of the Otterbeek pilot, to generate an energy community with social renters, was broadly disseminated to other potential replicators. Presentations were provided through Belgodyssee press release to radio and newspapers, other Flemish municipalities through a site visit and presentations on their national climate exchange event (LEKP of VVSG), other RESCOOPS during a RESCOOP United day, SAAMO working on energy poverty, Architects of Turnhout dissemination day, several other social housing companies and Renewable Energy Source Cooperatives (RESCOOPS) as for instance also the Walloon HebsEnergy, students of the University of Leuven that study the innovative casus, collaboration in the expert group of energy community,		
KPI: 3 trainings, 1 open learning training centre, 1 ICT tool		
KPI Webtool \rightarrow 350 Skills: number of market stakeholders trained with increased skills and competencies on energy issues due to the project (NL x100 BE x150 BG x100)		
KPI Webtool \rightarrow 6 Employment: number of jobs created in FTE (NL x2 BE x2 BG x2)		
KPI Webtool \rightarrow 2300 Number of citizens taking part in energy communities as a result of the project (NL x1200 BE x900 BG x200)	\checkmark	
KPI Webtool \rightarrow 37 Number of local and regional authorities committed to replicate best practice experiences (NL x9 BE x23 BG x5)		
KPI Webtool \rightarrow 1,358 Number of actors with increased skills in the area of community energy (local and regional authority officials or other relevant actors) (NL x100 BE x1238 BG x20)		
KPI Webtool → KPI: 30,000 people reached		
KPI Webtool \rightarrow Communication: 30 number of stakeholders reached through media and events during the project (NL x10 BE x10 BG x10)		

2 Progress on milestones (optional)

Milest. no.	Milestone title	Delivery date in Annex 1	Means of verification	Achieved	lf not achieved, forecast date	Comments
MS 1	Quality Assurance Plan & Management Plan (Kamp C)	M4 Sent on 06/02/2023	Report	YES		Sent to TANDEMS project officer Stamatis Sivitos

3 Other issues

After receiving the green light from our project officer Stamatis Sivitos, Kamp C engaged the project coordinator of the LIFE LOOP project Energy Cities (Anna Francis and Sofia Corsi) as External Advisors. Over the course of the spring months a number of meetings took place to initiate a core inspiration and knowledge exchange group, to initiate an active collaboration with other LIFE CET projects: LIFE LOOP, COMANAGE, CONNECT HEAT. The first session, which took place on 15th July 2023, proved very successful and will be continued on a §-monthly basis, culminating in joint End Conference in June 2025.

Collaborations are already under way within active Flemish LIFE CET projects, initiated by the Flemish LIFE Contact Point VEKA (Flemish Energy and Climate Agency). The Introductory meeting took place in May 2023 and project coordinator Kamp C presented TANDEMS. As Hannes Van Gansen of VEKA is an external advisor to Tandems, a close exchange is ensured.

Lastly, partner Eneffect is keeping a close eye on the transposition development in Bulgaria. Mitigation measures, as expressed in GA are already being undertaken.

Risk Number: 12 | Work Package No(s): WP3 | Description: Delay in the transposition of Directive (EU) 2018/2001 in Bulgaria.

Proposed Mitigation Measures: Despite the delay, EnEffect's (and other parties') analyses in 2021 show that even with current legislation it is still possible (although complicated) to establish energy cooperatives. Within the project, EnEffect, Burgas and Gabrovo will deepen these analyses and make sure that at least 4 energy cooperatives are actually established.

Requests for deadline extension for WP4 | Strengthening and supporting citizen initiatives

For WP4, the first milestone (the completion of the train-the-trainer workshops) was set on M12. As a preparation for these workshops, Duneworks has held co-creation sessions (4 sessions) in April and May 2023 with the partners, which were preceded by interviews (March). The aim of this intensive preparation is that Duneworks can focus the train-the-trainer workshops on those aspects that are relevant in the context of the specific pilots. Having inventoried partners' needs, Duneworks is now in the process of preparing the train-the-trainer workshops (materials and process). Several partners have indicated that they prefer to have these workshops in autumn and not in the summer. Therefore, Duneworks consider it wise to call for an extension of milestone 6, so that sufficient time can be taken to plan and hold these workshops in line with partner needs. After these workshops, the collaboration and support will continue and that is where T4.1 merges into T4.2, which will also need a longer running time because it takes off later when the train-the-trainer workshop are moved towards the autumn.

Furthermore, the goal of T4.2 is to *"collect all the evaluative lessons learned from the start of the development of the guidelines until the implementation of the engagement trajectories (and the implementation of (decisions on) the physical energy community projects, and these will be reported in on D4.2."* We see that in practice citizen engagement is best done in accordance with local pilot context dynamics (practical, institutional, political, social dynamics as well as local events), rather than being pushed by external planning schedules. Hence to be able to evaluate the lessons from the implemented engagement activities that have been developed in T4.1, we consider it wise to take a longer time frame (M27). This delay will be beneficial for the inclusion of more developed results to the Testing Tandems deliverables and the After-LIFE plan.

In summary we ask for:

- Extension deadline MS6: from M12 to M18
- Extension deadline T4.2: from M18 to M27
- Extension deadline D4.2: from M18 to M27

(for D4.1, no extension will be necessary)

4 Use of resources

The project partners submitted a detailed 'unofficial' declaration to the project coordinator. As of M8, no major over- or under-spending is becoming evident compared to initial allocation. Slight underspending is identified in some partners, but this relates mostly to the building-up of workload towards M18, where several deliverables and milestones are scheduled. Some overspending is due to the flying start made by some of the pilot partners.

Partner ZuidtrAnt is keen to discuss the potential for sub-contracting, inclusion as a partner (or another instrument) for their sister organisation ZuidtrAnt-W. A specific request will be made in the coming weeks.

WP3 Testing Tandems

Pilot presentations























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WP-3 Testing Tandems – Pilot presentations

Wednesday 31st of May – 15:45 – 18:00

- Goal: Create overview of the different pilots in Tandems
- Setup: Short 10 min pitch per partner + 5 min questions
- 30 min reactions and reflections from the External Advisors

Time start	Time End	Partner
15:45	15:50	Introduction Agen
15:50	16:05	Burgas
16:05	16:20	Gabrovo
16:20	16:35	Klimaan/Mecheler
16:35	16:45	Brake
16:45	17:00	ZuidtrAnt
17:00	17:15	KampC
17:15	17:30	Agem
17:30	18:00	Input External Adv



risors

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Presentation format

Overview of the pilot

- Who is the pilot owner and who are the (intended) partners?
- What phase is the pilot in (idea planning or operation)
- What are the objectives?
- What are the activities?

Relation to Tandems

- Why did you select this pilot for Tandems?
- What is the main link between the pilot and the Tandems project?
- Is there a best practice in the pilot that you can share?
- Is there something specific you would like to test?
- solve.
- Any questions for the external advisory board?



What challenge do you face of which you hope the Tandems project will help you

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WP3. Burgas Pilots

Ivaylo Trendafilov Municipality of Burgas

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PRIMARY SCHOOL GEORGI BENKOVSKI







- Roof: 350 square meters;
- Detailed data will be available soon in burgas.solarcities.bg;
- 335 pupils. -

English

Карта

Информация

- Electricity consumption, 2022: 22, 74 MWh = 9 000, 00 EUR.
- Central heating, 2022: 259.26 MWh = 18 500, 00 EUR.

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PRIMARY SCHOOL GEORGI BENKOVSKI

- Who: Municipality of Burgas
- **Phase**: Planning financial plan and communication preparation. ٠
- **Objectives:** •
 - Reduce energy bills and invest money in school infrastructure, equipment and services.
- Activities
 - Design of PV installation and cost- benefit analyses.
 - Attract parents, graduates, families from the neighbourhood;
 - Implementation.
 - Why this pilot?
 - It is easier to attract people to support school development.



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REGIONAL LIBRARY PEYO YAVOROV





- Roof: 176 square meters;
- Detailed data will be available soon in burgas.solarcities.bg;
- visitors.
- Electricity consumption, 2022: -313, 167 MWh = 117 000, 00EUR

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Карта Информация English

REGIONAL LIBRARY PEYO YAVOROV

- Who: Municipality of Burgas
- **Phase**: Planning financial plan and communication preparation. ٠
- **Objectives:** •
 - Reduce energy bills and invest money in equipment and services.
- Activities
 - Design of PV installation and cost- benefit analyses.
 - Attract visitors, private companies, involve popular artists, etc.;
 - Implementation.
 - Why this pilot?
 - The library is one of the most recognized buildings.

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ANAEROBIC INSTALLATION / INDUSTRIAL ZONE BURGAS

- 6 206 MWh production of electrical energy;
- 6 800 MWh production of heat energy;

- 40 companies (industry, logistics, services);

- Some of the companies have built PV installations.

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ANAEROBIC INSTALLATION / INDUSTRIAL ZONE BURGAS

- Who: Municipality of Burgas
- Phase: Preliminary analyses.
- **Objectives:** •
 - Increase the competitiveness of companies;
 - "Green" industrial zone
- Activities
 - Preliminary analyses on covering energy need through RES;
 - Technical design of infrastructure;
 - Establish joint company.
 - Why this pilot?
 - An innovative pilot project.
 - Contribute to achieving Burgas climate objectives.

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ANAEROBIC INSTALLATION / INDUSTRIAL ZONE BURGAS

SCENARIO 1: Every company satisfies its energy needs on its own.

Benefits / Constraints:

- Easy for realization, everyone is doing it.
- A very small amount of energy consumption is covered;
- The most expensive.

SCENARIO 2: Cooperation within the industrial zone.

Benefits / Constraints:

- Higher percentage of produced energy is used on site;
- Less fees for energy transfer;
- Additional costs for design and construction;
- Need of balancing powers.

SCENARIO 3: Cooperation within the industrial zone and connection with the anaerobic installation.

Benefits / Constraints:

- Almost all of the produced energy is used on site;
- Constant electricity price;
- Better balancing through the anaerobic installation.
- Additional costs for design and construction;

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• Best Practice

- Support public infrastructure. If successful, it could be easily replicated afterwards.
- Business, state and local authority work together for "green" industry.

• What do we want to test

- Citizens involvement;
- Business, municipal and state cooperation. •
- Challenges
- Lack of experience and legal framework.
- No previous experience.
- Question for the External Advisory Board
- Similar examples from Europe.

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WP3 Gabrovo Pilots

Todor Popov-Municipality of Gabrovo

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Gabrovo Pilot 1: Cost price model - Municipal Energy

- Who: Municipality of Gabrovo
- **Phase**: Planning financial plan and communication preparation.
- Objectives
 - treatment of non-hazardous waste and a separation system for household waste).
 - Involving citizens in the investment and creating a community.
- Activities
 - green energy production.
 - A campaign to raise the necessary investment
 - Realization of the investment.
 - connecting to the transmission network
 - •
 - Why this pilot?
 - participants. Good solar exposed site and guaranteed daily energy consumption.

Develop and supply local sustainable electricity at a cost price for municipal use (a landfill for the

• Development of a business model and project for solar energy, for joint public and private investment in

Energy provider: Energy is used by community members, with excess traded on the energy market, by

Multiplication of the model to other public facilities - hospitals, schools and administrative buildings.

Engages the public, serves to demonstrate the benefits of communities, balanced benefits for community

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Gabrovo Pilot 1: Cost price model - Municipal Energy (2)

• Best Practice

- An opportunity for citizens and small businesses to invest in clean energy
- Use the energy on site
- Adapting existing opportunities to the goals of energy communities
- What do we want to test
- The ability of citizens and local authorities to work together
- The potential for realizing an energy community business model
- Challenges
- Lack of experience and legal framework.
- dynamic energy market
- Question for the External Advisory Board
- How to overcome the increasing solar energy supply and sustainable energy storage?

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WP3 Klimaan / Mechelen pilots

Steven Laurijssen – Klimaan Bart De Bruyne Stad Mechelen

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Klimaan / Mechelen Pilot 1: Otterbeek

Who: Klimaan – City of Mechelen – Woonpunt Mechelen **Phase:** Startup implemented – 2nd phase planned **Objectives**

- Develop a social cooperative business model focusing on PV for social housing
- Beneficial pricing model for all social tenants
- (below Belgian social tariffs)
- Maximize rooftop solar potential, lower sensitivity to market pricing
- Activities
 - Installing solar installations (20 buildings, 70 units) create energy community to share solar energy
 - Extend to cover the full quarter and optimize the energy community
- Why this pilot?
- First social quarter energy community in Europe Open concept for dissemination

Klimaan / Mechelen Pilot 1: Otterbeek (2)

• Best Practice

- Partnership: Mechelen & Klimaan Woonpunt Mechelen Fluvius (DSO)
- Solar panels installed
- energy community operational

• What do we want to test

- Challenges
 - Operational hurdles due to innovation • Overcoming technical, economic, legal, ...
 - obstacles

 - Grid stability
 - Extension

 - Open feedback?

• Business case for solar on social housing Implementing energy communities / energy sharing scheme

- Market dependence & social tariff cap,
 - shrinking subsidies

Question for the External Advisory Board

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Mechelen / Klimaan Pilot 2: Solar Noise Barrier

- · Objectives

 - Activities

•

- pilot tests

- •

• Who: Tandem city of Mechelen / Sint-Katelijne-Waver & Klimaan • **Phase**: Pilot design

 Proof of Solar Noise Barrier concept to get it certified by AWV (Flemish Agency of Road Infrastructure)

Develop with citizens the business use case of generated energy from solar noise barriers

Exchange visits and mobilize actors around pilot – co-create

Plan 1 or 2 pilot tests

Why this pilot?

• First application in Belgium of a solar noise barrier

When accepted a renewable energy production accelerator open as option for all Belgian municipalities

Mechelen / Klimaan Pilot 2: Solar Noise Barrier (2)

- Best Practice
 - Initiative and drive Klimaan volunteers already noise datasets of test sites
 - Expertise partners: Energyville Universities (Ghent-Hasselt)
 - Local communities and cities support: Sint-Katelijne-Waver & Mechelen with potential test sites.
 - Support of FLUVIUS: GRID DSO with already studied grid connection
 - Producers of the concept: SOLTECH & ZIGZAG

• What do we want to test

- Involve AWV accepting solar noise barriers for the Belgian market.
- Get test projects
- A proven energy use business model with citizen movement co-investment.
- Challenges \bullet
- Get AWV on board
- Overcome technical, economic, legal, ... obstacles
- **Question for the External Advisory Board**
- How to board AWV?

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Mechelen / Klimaan Pilot : Solar appartment buildings

- **Who**: City of Mechelen, Klimaan •
- Phase: Organic growth
- **Objectives**
- Activities

•

- owners and syndics
- Why this pilot?

 - buildings

 - Find adequate Business Case

Facilitate solar installations on apartment buildings

Creation of guidance and support systems for associations of co-

• 30% of all buildings in Mechelen are flats Collective ownership inhibits deployment of Solar on appartment

Overcoming Bottlenecks to speed up solar investments

Mechelen / Klimaan Pilot : Solar appartment buildings (2)

- Best Practice
 - **Tools**: Toolkit + start brochure (with Th!nk E & Kenniscentrum) Vlaamse Steden), split incentive, Zonnewijzer
 - **Spread the message**: info-evening, appartmentTV, Radio
 - One to One: Individual questions, Energy house, talks with syndics

What do we want to test

Get apartments started with PV, with a convincing business model

Challenges

Overcoming technical, economic, legal, ... obstacles

Question for the External Advisory Board

Open feedback?

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Klimaan / ZuidtrAnt Pilot : Heatnet Averegten

- Who: Klimaan ZuidtrAnt Municipality of Heist-op-den-Berg
 - Project developer
- **Phase**: Project startup
- Objectives
 - Deploy a geothermic heatnet (BES) in a residential project development

• Activities

- Set up business case
- Contract closing & setup of project partnership
- Project presentation to local gov't
- Why this pilot?
 - Good example of cooperative relations (ICA 6)
 - First collective heating project (Klimaan)
 - Relationship building with local gov't starting from a project

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Klimaan / ZuidtrAnt Pilot : Heatnet Averegten (2)

- Best Practice
 - Transparency with project developer
 - Attractive project for local municipality "LEKP" (convenant of mayors) goals fullfilled, free of charge
- What do we want to test
 - Project responsibility sharing partnership / project developer / municipality
- · Challenges
 - Long time between start of investment (now) and an operational project (2025)
- Question for the External Advisory Board
 - Open feedback?

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Remaining pilots Klimaan Not presented because of timing constraint

Name pilot	Status
Schools as Energy communities	One sc in july
Improving Zonnewijzer	Study of measure
Improving Zonnewijzer.biz	Improv
E-mobility	Severa months
Extension Heatnetwork Rijmenam	Past co with pr

- hool with new solar installation, another starting
- of expansion towards heatpump-boilers, EEres, renovations
- ved proposition towards businesses
- (6) new cars deployed in the region the coming
- ontract close (w. Developer) seeking expansion oject partner and municipality of Bonheiden

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WP3 ZuidtrAnt / Antwerp bilots

at an and the

Sophie Loots - ZuidtrAnt

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ZuidtrAnt – pilot renovation

Unique partnership with municipal authorities – 12 municipalities

- Climate ambitions staff shortage
- Close to citizens large CO2 emissions
- Renovation ambitions of individual houses + renewable energy
- 1: The individual approach 304 euro
- **Different situations**
- Starts with energy label
- Unburdening with search for contractors only energy renovations
- Control of work
- Update EPC

2: The neighborhood approach - tailor-made offer

- In cooperation with municipality + financial
- intensive traject in which we move into the neighborhood
- Neighborhood of the future not only houses (mobility, greens, water,...)

BUR

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ZuidtrAnt – pilot renovation Individual approach: 7 free lancers – citizens of 21 municipalities

70 homeowners in region advice 20 renovations ongoing 10 renovations finished every week 3 registrations - continuous

Neighborhood approach: starts in Zoersel

first info meeting: 70 visitors ongoing 3 other municipalities want to sign agreement

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ZuidtrAnt- pilot large solar + energy sharing Pilot research: How to optimise and share solar power with other buildings and the neighbourhood - Mortsel

- 350 kWpiek of solar panels on rooftop
- Cradle to cradle stationary batterie from old battery packs of electric vehicles – 50kW – 111kWh
- Flexibility market
- Solar power:
 - is consumed in building
 - is shared with outher buildings of the same owner
 - stored in battery
 - research to share is with new neighborhood private customers
 - research of platform that facilitates energy sharing with different customers

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WP3 Kamp C Pilot

Maro Saridaki – Kamp C

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Kamp C Pilot 1: REC Kamp C (1)

- neighbourhood + social housing + energy cooperative
- **Phase**: Idea start up
- Objectives

 - To foster the tandem ideal (energy cooperative + municipality)
 - To chase the dream: Kamp C climate neutral by 2030
 - To scale up the REC idea/model to other municipalities (LEKP)

• Activities

- Feasibility study for the REC Kamp C & scenarios (technical side and role)
- Development of suitable sustainable energy production facilities
- First steps towards realization
- Share knowledge, scale up to help other municipalities and share costs and risks

• Who: Kamp C (owner) & province of Antwerp & business park companies, municipalities Olen/Westerlo +

• To develop a working, innovative and inspiring REC where citizens are included and not only companies

• Configuration of site potential (Values – Practices – Technologies – Infrastructures – Policy – Resources) · Citizens/Companies/Municipalities/ECs engagement processes in order to actively participate in REC

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Kamp C Pilot 1: REC Kamp C (2)

- Why this pilot?

 - To prove that the collaboration with an Energy Cooperative is more than 1+1=2!
- Best Practice
 - The Starters Guide from the cVPP project
- What do we want to test
- Challenges
 - Taking the first step, even when the challenges seems difficult to overcome
 - Ensure a level playing field for energy communities in the prov. Antwerp
- Question for the External Advisory Board
 - Are there future policy changes that could facilitate/simplify our pilot?

• To realise a good, replicable model of a REC in prov. Antwerp where citizens play a central role

• Kamp C business site is already 20 years busy developing sustainable building an living practices Linking innovation in Circularity ('t Centrum) with innovation in the Clean Energy Transition • Experience in trainings for local authorities, building sector and citizens (e.g. Dream-Dare-Do days)

• How far can we go with this realisation, within and despite the challenges and policy limitations (internal and external) while staying true to our values (economic, social and ecological)

• Is this pilot representative/scalable in your view and are there inspiring examples for us to learn from?

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WP3 Agem Pilots

Justin Pagden - Agem

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Agem Pilot 1: Cost price model - Municipal Energy

- Who: Agem Gemeentelijke Energie B.V. other municipalities
- **Phase**: Operational scale up
- Objectives
 - and streetlights).
 - Scale up cost price model to other municipalities.
- Activities
 - Develop and exploit sustainable energy production facilities
 - Billing
 - Share knowledge and scale up to help other municipalities and share costs and risk.
- Why this pilot?
 - effect towards local energy communities.

Develop and supply local sustainable electricity at a cost price for municipal use (buildings)

Energy supplier: Forecast – Balance Responsible Role (BRP) – Trading – Customer Care and

• This is our most concrete and successful project on the cost price model and enables municipalities to actively participate in the energy transition with direct local impact. This can create a trickle-down

Agem Pilot 1: Cost price model - Municipal Energy (2)

• Best Practice

- Cost price business model
- Council decision making process
- Collective solar park (Braamt)
- Legal framework compliant with public tendering rules
- Activities and system requirements for energy supplier role
- What do we want to test
 - How do you calculate and integrate the cost price of your own solar park • Can we create an Energy Service Provider (ESP) for public entities that can service the cost price
 - model

• Challenges

- Sharing our experience effectively and efficiently.
- Getting other municipalities and provinces to join and make the deep dive.
- Because of regulations for public entities it is difficult to combine this with citizen energy communities.
- Question for the External Advisory Board
 - We know this model can work in the Dutch Context. Is it also feasible in the Bulgarian and/or Belgium • context and is it worthwhile exploring that further?

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Agem Pilot 2: Cost price model - BioZon

- Who: Coöperatie BioZon Agem Energie Experts EnergieSamen
- **Phase**: Operational per 1-1-23 scale up
- Objectives

 - Scale up cost price model to other Energy Communities
- Activities
 - Exploitation of the landfill gas engine.
 - Billing
 - Share experience and knowledge and scale up to help other EC's.
- Why this pilot?

Supply the electricity from the landfill gas engine of BioZon at a cost price to its members

Energy supplier: Forecast – Balance Responsible Role (BRP) – Trading – Customer Care and

• This is our most concrete and successful project on the cost price model for citizens. It is a good showcase that the cost price model is possible and effective. We believe this model is the future for Energy Communities and we want to further develop it and help other EC's implement it.

Agem Pilot 2: Cost price model - BioZon (2)

• Best Practice

- Cost price business model
- Activities and system requirements for energy supplier role
- Actual energy and financial data
- What do we want to test
 - How does the business model perform in practice?
 - How do we calculate and communicate the cost price.
- Challenges
 - Help new and existing EC's understand and implement the cost price model • Scale up – Build our own ESP - we now are using the Municipal Energy supplier infrastructure
- Question for the External Advisory Board
 - We know this model can work in the Dutch Context. Is it also feasible in the Bulgarian and/or Belgium context and is it worthwhile exploring that further?

Agem Pilot 3: Search Area K – Large scale Wind

- **Phase**: Early stage Idea phase
- Objectives
 - Develop wind turbines in 100% citizen ownership to be used in the cost price model
- Activities

 - Develop cost price model bid for tendering procedure
- Why this pilot?
 - our chance?

• Who: Local Energy Community - Agem Energie Experts – Municipality of Berkelland and Oost Gerle

Citizen participation – creating an Energy Community who can become owner of the windmills.

• Wind in 100% citizen ownership is essential for a successful cost price model. This project is perfect because it is in an early stage so there is still room for real participation. There is a strong energy community that wants to implement the model and also the municipality is on board and play's an important roll. There is not yet wind available for the cost price model in the Achterhoek. Will this be

Agem Pilot 3: Search Area K – Large scale Wind (2)

- Best Practice
 - Start with citizen engagement early in the process.
- What do we want to test
 - cost price model and strong support?
- · Challenges
 - Implementing a good participation process
 - Communicating the benefits of the cost price model
 - Getting a fair chance against the commercial developers.
- Question for the External Advisory Board
 - developers?

• Can we develop wind with real participation from citizens and does that lead to implementing the

· What tools can we or the municipality use to secure our position and not lose it to the commercial

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Reactions and reflections from the External Advisors

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