

POSITION PAPER

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The Interreg project *Smart Energy Region Emmen Haren (SEREH)* and *Citizen Energy Communities (CEC)*

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1. Objective of this Position Paper

The aim of this position paper is to identify opportunities and obstacles for the SEREH project under the concept “citizen energy communities” (CEC) as defined by the Directive 2019/944/EU (rules on the internal electricity market, -in the following “electricity Directive 2019”). Regarding identified uncertainties, **we recommend that the EU Commission provides further guidelines to the Member States for the transposition of CECs in the national legal frameworks.**

2. The SEREH project – Background

The SEREH project aims at identifying and analysing the preconditions of a local energy system which functions across the national border between the Netherlands and Germany, more precisely the municipality of Emmen (NL) and the municipality of Haren (DE). The idea is to match supply and demand of RES *locally* and *across the national border*. The overall rationale is twofold:

- increasing the share of RES in the region
- reducing system costs caused by RES connected to the distribution grid

Table 1) Societal goals and technical components of SEREH.

Societal goals	
- Contributing to the (political) ambitions of both municipalities to become self-sufficient in energy in the long term: <ul style="list-style-type: none"> - Increasing the efficient production of RES (minimising energy loss in transport and curtailment) 	Regional aims (across national border)
- Keeping the (financial) revenues from RES in the region as much as possible: <ul style="list-style-type: none"> - Shortening distribution chains in order to lower system costs for the benefit of citizen and businesses in the region 	
Technical components	Location
- Wind farm “Fehndorf-Lindloh” (65 MW)	DE
- Wind farm “Zwartenbergerweg” (24 MW)	NL
- Speicherfeld (storage field) (4 MW battery capacity, 4 MW electrolyser, smart container for demand management), connected to the wind farm “Fehndorf-Lindloh”	DE
- former gas purification plant Emmen (gaszuiveringsinstallatie, GZI next (electrolysis, green gas)	NL
- Gas storage facilities	NL
- Industrial demand and demand flexibility	NL and DE

Integrating the technical components across the national border with the overall objective to increase the efficient usage of decentral RES at least possible system costs requires flexibility and in particular storage. The starting point of the SEREH project is to maximise the value of renewable *electricity* (wind). Achieving this aim might require *other energy carriers*, including gas (in form of hydrogen) to store surpluses of renewable electricity. Possibly, this also requires building new, or reviving existing, infrastructural links. For example, an electricity cable connecting the two wind farms on both sides of the border and/or a pipeline for transporting hydrogen across the border.

The SEREH project also aims at exploring legal opportunities and obstacles for implementing such a cross-border local energy system. For the SEREH project these include the two following main issues. The operation of a cross-border connection at distribution system level and the integration of flexibility (including storage and demand response) at distribution system level. One of the promising and recently adopted exceptions are “citizen energy communities” (CEC) as established by Directive 2019/944/EU.

3. Opportunities and Obstacles for SEREH as Citizen Energy Community

Table 2: SEREH and CEC – Opportunities and Obstacles

	SEREH	CEC	Opportunity / Obstacle
Members	<ul style="list-style-type: none"> - Municipalities - Enterprises (wind park developer, industry) 	<ul style="list-style-type: none"> - voluntary and open participation - effective control by members or shareholders (natural persons, local authorities, including municipalities, or small enterprises) 	Opportunity: <ul style="list-style-type: none"> - Broad range of actors who can be members of CEC
			Unclear: <ul style="list-style-type: none"> - What is the role of citizens in CEC? - What are minimum requirements to comply with “effective control”?
Activities	<ul style="list-style-type: none"> - Electricity generation - “Power to hydrogen” - Storage - Industrial demand flexibility/management - Aggregation 	<ul style="list-style-type: none"> generation, distribution, supply, consumption, aggregation, energy storage, energy efficiency services or charging services for electric vehicles or provide other energy services to its members or shareholders; 	Opportunity: <ul style="list-style-type: none"> - Broad and non-exhaustive listing of activities, focus is not on defining activity, but on facilitating CECs
			Unclear: <ul style="list-style-type: none"> - Does “energy storage” include hydrogen production and storage installations? - Can a CEC operate a cable?
Purpose	<ul style="list-style-type: none"> - increasing the share of RES in the region - reducing system costs caused by RES connected to the distribution grid 	<ul style="list-style-type: none"> - environmental, economic or social community benefits for members or shareholders or to the local areas rather than to generate financial profits 	Opportunity: <ul style="list-style-type: none"> - Placing community benefits central - Variety of ways to distribute benefits within CEC and CEC area
			Unclear: <ul style="list-style-type: none"> - Can CECs be excluded from financial profit making?
System Operation	<ul style="list-style-type: none"> - Possibly operation of cross-border link for electricity and hydrogen pipeline, and storage facilities 	<ul style="list-style-type: none"> - Minimum requirement: DSOs have to cooperate with CECs to facilitate electricity transfer within CEC - Optional: CECs as operators of systems 	Opportunity: <ul style="list-style-type: none"> - DSOs have to cooperate and have to facilitate electricity transfer within CEC
			Unclear: <ul style="list-style-type: none"> - What does “within CEC” mean? Does this require proximity of the members? - What are the conditions for DSOs to cooperate?
Cross-border	<ul style="list-style-type: none"> - cross border operation 	<ul style="list-style-type: none"> - cross border “participation” is optional 	Opportunity: <ul style="list-style-type: none"> - Cross border element mentioned
			Unclear: <ul style="list-style-type: none"> - What does “participation” entail? - Can a CEC operate cross-border? - Can a CEC only operate cross-border link, but extend CEC beyond?

4. Recommendations

CECs offer various opportunities for the SEREH project. It is positive that the concept is broad and open, as this allows a wide implementation of CECs. Yet, **we recommend the EU Commission to provide guidance to the Member States for the transposition of CECs**. This is especially relevant for cross-border initiatives such as SEREH. On the basis of the experience and ambition of the SEREH project we recommend to provide guidance for Member States regarding the following points:

Members

The definition requires at least a legal entity as organizational form which is “effectively controlled” by its members. The definition does not further specify which measures are required to comply with the condition “effective control” by members. Furthermore, it is not clear whether the direct inclusion of citizens is obligatory.

- **We recommend to clarify that CECs are not exclusively “citizen entities”, but can also be established solely by enterprises and municipalities.**

Purpose

While the directive aims at providing a level-playing field for CECs, so that they can compete on equal footing with well-established “traditional undertakings”, the primary purpose of CECs extends beyond the one of “traditional undertakings”. The definition states that the purpose of CECs is to provide “*environmental, economic or social community benefits to its members or shareholders or to the local areas where it operates*”, rather than financial profits.

- **We recommend to clarify that CECs are not excluded from making profits, but can generate financial profits in line with the aim to provide a level-playing field for CECs.**

Cooperation with DSOs

Member States have to ensure that DSOs cooperate with CECs “*to facilitate electricity transfer within the CEC*”. This does not sufficiently define the relation between CECs and DSOs and potentially leaves large discretion to the willingness of DSOs in determining the cooperation.

- **We recommend to clarify the conditions for DSOs in order to provide a level-playing field for CECs in the cooperation with DSOs.**

Proximity and Cross-border

The definition of CEC does not include a proximity element, so CECs are in principle not bound by a confined geographical area or grid. Member States may decide to allow CECs to be open to “cross-border participation”. This does not clarify whether this includes the physical connection of CECs across borders or whether participation is confined to membership. This implies two uncertainties: whether Member States implement the cross-border element and how they define “participation” .

- **We recommend to clarify that cross-border participation should not be categorically excluded and to extend “participation” in this context beyond membership.**

Coordination between Member States

Especially for facilitating the cross-border potential of CECs Member States have to coordinate the implementation of the preceding issues.

- **We recommend the EU Commission to urge the Member States to cooperate and coordinate the transposition of the provisions on CECs in their national legal frameworks.**