

CEN and/or CLC Workshop Guidelines for the Design, Planning, and Management of Positive Energy Districts Supported by Local Digital Twins

Workshop description form

- PART A – Workshop Summary
- PART B – Project Plan



PART A – Workshop SUMMARY

1	WS details																	
1.1.	Organization	<input checked="" type="checkbox"/> CEN <input type="checkbox"/> CENELEC <input type="checkbox"/> Joint with <input type="checkbox"/> CEN lead <input type="checkbox"/> CENELEC lead																
1.2.	Title	CEN/WS “Guidelines for the design, planning, operation and performance evaluation of Positive Energy Districts (PEDs) supported by Local Digital Twins (LDTs)” (select CEN or CLC or leave CEN/CLC in case of joint WS)																
1.3.	Scope	This CEN Workshop aims to develop a CEN Workshop Agreement (CWA) providing practical, implementation-oriented guidelines for the design, planning, operation and performance evaluation of Positive Energy Districts (PEDs) supported by Local Digital Twins (LDTs). Building on the results of the Horizon Europe project TIPS4PED and related European initiatives, the CWA will translate research outcomes, pilot experiences and replication insights into actionable guidance tailored to cities and urban stakeholders.																
1.4.	Does this WS stem from an EU Research project?	<input checked="" type="checkbox"/> YES Name of the project: TIPS4PED Grant number: 101139633 End date 30 June 2027 <input type="checkbox"/> NO																
1.5.	Financial support	<input checked="" type="checkbox"/> EU Research project <input type="checkbox"/> EC/EFTA Grant reference: Type here <input type="checkbox"/> Other Specify, if needed: Type here																
1.6.	WS Proposer/Proposed Chair WS proposer	<table border="0"> <tr> <td>Name:</td> <td>Julen Imana Sobrino</td> </tr> <tr> <td>Organization:</td> <td>ICLEI Europe</td> </tr> <tr> <td>Postal address:</td> <td>Leopoldring 3, 79098 Freiburg im Breisgau (DE)</td> </tr> <tr> <td>Email:</td> <td>julen.imana@iclei.org</td> </tr> <tr> <td>Phone:</td> <td>+49 761 36 89 2-0</td> </tr> <tr> <td>Webpage:</td> <td>https://iclei-europe.org/</td> </tr> <tr> <td>Contact person (name and email):</td> <td>Julen Imana Sobrino julen.imana@iclei.org</td> </tr> </table>	Name:	Julen Imana Sobrino	Organization:	ICLEI Europe	Postal address:	Leopoldring 3, 79098 Freiburg im Breisgau (DE)	Email:	julen.imana@iclei.org	Phone:	+49 761 36 89 2-0	Webpage:	https://iclei-europe.org/	Contact person (name and email):	Julen Imana Sobrino julen.imana@iclei.org		
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1.7.	WS Secretariat	<table border="0"> <tr> <td>Organization:</td> <td>UNI</td> </tr> <tr> <td>Postal address:</td> <td>via Sannio 2, Milan 20139 ITALY</td> </tr> <tr> <td>Email:</td> <td>sviluppo.progetti@uni.com</td> </tr> <tr> <td>Phone:</td> <td>+39 0270024200</td> </tr> <tr> <td>Webpage:</td> <td>https://www.uni.com/</td> </tr> <tr> <td>WS Secretary name:</td> <td>Andrea Mora</td> </tr> <tr> <td>Email:</td> <td>andrea.mora@uni.com</td> </tr> <tr> <td>Phone:</td> <td>(+39)0270024439</td> </tr> </table>	Organization:	UNI	Postal address:	via Sannio 2, Milan 20139 ITALY	Email:	sviluppo.progetti@uni.com	Phone:	+39 0270024200	Webpage:	https://www.uni.com/	WS Secretary name:	Andrea Mora	Email:	andrea.mora@uni.com	Phone:	(+39)0270024439
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Phone:	(+39)0270024439																	
1.8.	CEN and CENELEC Management Centre (CCMC) contact	<table border="0"> <tr> <td>Organization:</td> <td>CEN and CENELEC</td> </tr> <tr> <td>Postal address:</td> <td>Rue de la Science 23B - 1040 Brussels, Belgium</td> </tr> <tr> <td>Webpage:</td> <td>https://www.cencenelec.eu/Pages/default.aspx</td> </tr> <tr> <td>CCMC Project Manager name:</td> <td>Claire Van Thielen</td> </tr> <tr> <td>Email:</td> <td>cwa@cencenelec.eu</td> </tr> <tr> <td>Phone:</td> <td>+32478793545</td> </tr> </table>	Organization:	CEN and CENELEC	Postal address:	Rue de la Science 23B - 1040 Brussels, Belgium	Webpage:	https://www.cencenelec.eu/Pages/default.aspx	CCMC Project Manager name:	Claire Van Thielen	Email:	cwa@cencenelec.eu	Phone:	+32478793545				
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Phone:	+32478793545																	

			Type here
1.9.	Tentative date and place of the Kick-off Meeting	Date: 06/05/2026	Place: remote
1.10.	Does the proposed Workshop fall within the scope of existing CEN and/or CENELEC Technical Bodies?¹	<input type="checkbox"/>	YES Specify: CEN/TC465
1.11.	Are there other Technical Bodies or Joint Advisory and Coordination Groups potentially interested in the Workshop? ²	<input type="checkbox"/> x	YES Specify: Type here NO
1.12.	Are the following aspects affected?	Safety matters Management system aspects Conformity assessment aspects Security matters	YES ³ <input type="checkbox"/> NO ⁷ x YES ⁴ <input type="checkbox"/> NO x YES ⁵ <input type="checkbox"/> NO x YES ⁶ <input type="checkbox"/> NO ⁸ x
		Add information/explanations if Management System aspects and Conformity Assessment aspects are affected: n.a.	
2	WS Deliverables		
2.1.	CWA #1		
2.1.1	Title	x <input type="checkbox"/>	Same as WS title (1.2) Other: Type here
2.1.2	Scope		To provide practical, implementation-oriented guidelines for the design, planning, operation and performance evaluation of Positive Energy Districts (PEDs) supported by Local Digital Twins (LDTs).
2.1.3	Does the proposed CWA conflict with a published EN	<input type="checkbox"/> x	YES Specify: Type here NO In case the answer is 'yes', the development of the CWA shall be stopped

¹ Part A and Part B of this form shall be sent by the WS secretary to the secretary of the Technical Bodies identified in this section to inform them about the creation of the WS and register any possible objection within 30 days (45 during the holiday period).

² Part A and Part B of this form should be sent by the WS secretary to the Bodies identified in this section to inform them about the creation of the WS.

³ Work on the proposed CEN and/or CENELEC Workshop shall not be initiated.

⁴ The CEN and/or CENELEC Workshop proposal shall be submitted to the CEN/CENELEC BT(s) for decision.

⁵ CEN-CENELEC Internal Regulations - Part 3, Clause 33 applies.

⁶ For projects dealing with security matters the security risk analysis provided in Annex 1 shall be carried out.

⁷ See Note 2 in CEN-CENELEC Guide 29, Clause 3.

⁸ See Note 2 in CEN-CENELEC Guide 29, Clause 3.

PART B – Project Plan

Abstract

This CEN Workshop aims to develop a CEN Workshop Agreement (CWA) providing practical, implementation-oriented guidelines for the design, planning, operation and performance evaluation of Positive Energy Districts (PEDs) supported by Local Digital Twins (LDTs). Building on the results of the Horizon Europe project TIPS4PED and related European initiatives, the CWA will translate research outcomes, pilot experiences and replication insights into actionable guidance tailored to cities and urban stakeholders.

The document will address key aspects such as Digital Twin-supported PED planning workflows, data and modelling principles, monitoring and evaluation frameworks, and organisational processes, without prescribing specific technical architectures or duplicating existing interoperability standards. Its primary target users include local and regional authorities from all sizes, urban planners, digital and energy departments, utilities, and solution providers involved in the development of PEDs.

1 Status of the project plan

Draft project plan for public commenting (Version 1.0)

This draft project plan is intended to inform the public of a new Workshop. Any interested party can take part in this Workshop and/or comment on this draft project plan by sending an email to the WS secretary.

All those who have applied for participation or have commented on the project plan by the deadline will be invited to the kick-off meeting of the Workshop on 2026-05-06.

2 Workshop proposer and potential Workshop participants

2.1 Workshop proposer

Person (and organization) 1: Julen Imana Sobrino (ICLEI Europe)

Short description and interest in the subject: ICLEI Europe is a European network of local and regional governments committed to sustainable urban development. As leader of Task 6.2 in the Horizon Europe project TIPS4PED, ICLEI is responsible for standardisation and policy-related outputs supporting the replication of the solutions developed within TIPS4PED on Local Digital Twin (LDT)-enabled Positive Energy Districts (PEDs). Its interest in the Workshop lies in translating project results into a CEN Workshop Agreement that enhances scalability and policy alignment of PED approaches through operational guidance tailored to cities.

Person (and organization) 2: Xavier Casanova Colomé (ICLEI Europe)

Short description and interest in the subject: ICLEI Europe is a European network of local and regional governments committed to sustainable urban development. As leader of Task 6.2 in the Horizon Europe project TIPS4PED, ICLEI is responsible for standardisation and policy-related outputs supporting the replication of the solutions developed within TIPS4PED on Local Digital Twin (LDT)-enabled Positive Energy Districts (PEDs). Its interest in the Workshop lies in translating project results into a CEN Workshop Agreement that enhances scalability and policy alignment of PED approaches through operational guidance tailored to cities.

2.2 Potential participants

This CWA will be developed in a Workshop (temporary body) that is open to any interested party. The participation of the following organisations would be helpful and is desired. It is recommended that:

- Industry and commerce:
 - RINA Consulting SPA
 - IES R&D
 - Factual Consulting SL
 - IREN SPA
 - FairCity Consulting
 - EDP Labellec
- Local Governments:
 - Municipality of Turin
 - Municipality of Kozani
 - Cork City Council
 - District of Kobanya, Budapest
- Academic and research bodies:
 - Fondazione LINKS
 - LUT University
 - Centro de investigación de recursos y consumo energéticos (CIRCE)
 - Politecnico di Torino
 - University College Cork (TYN)
- Non-governmental organizations (NGOs), Associations and Networks:
 - POLIS
 - ICLEI European Secretariat GmbH
 - Cluster of Bioeconomy and Environment of Western Macedonia (CluBE)
 - OASC (Open & Agile Smart Cities & Communities)

alongside with other relevant stakeholders take part in the development of this CWA.

3 Workshop objectives and scope

This CEN Workshop aims to develop a CEN Workshop Agreement (CWA) providing European cities, local governments, and urban stakeholders with practical, replicable, and implementation-oriented guidelines for using Local Digital Twins (LDTs) to design, plan, and manage Positive Energy Districts (PEDs). The Workshop builds on the outcomes of the Horizon Europe project TIPS4PED and related European projects and initiatives, with the objective of translating research results and pilot experiences into operational guidance for cities and urban stakeholders.

The CWA will focus on methodological and process-oriented aspects of LDT-enabled PED development, including planning workflows, data and modelling principles, monitoring and evaluation approaches, and organisational considerations. It will not prescribe technical architectures or interoperability specifications/requirements, but instead provide high-level, practice-oriented guidance and recommendations that complements existing and ongoing standardisation work.

The Workshop will address the needs of cities and local authorities, urban planners, digital and energy departments, utilities, solution providers, and other stakeholders involved in PED implementation and urban digitalisation. Particular attention will be given to ensuring transferability and scalability across cities with

different sizes. The resulting CWA will support the replication of Digital Twin-enabled PED solutions across Europe by providing common terminology, structured workflows, and actionable recommendations grounded in real implementation experiences from the pilots.

3.1 Workshop background

LDTs are emerging as a key enabling technology to support data-driven planning, scenario analysis, and operational management of urban energy, mobility and built environment systems. However, cities often lack practice-oriented guidance on how to apply Digital Twins in the design, deployment and management of PEDs.

Existing standardisation (not PED-specific) efforts mainly address technical interoperability (e.g. ISO/IEC 30141:2024), data exchange (e.g. EN ISO 19650-1:2018), and reference architectures (e.g. ISO 23247:2021), while less attention has been given to guidelines on implementation processes, performance monitoring, and integration into municipal planning.

The Workshop stems from the Horizon Europe project TIPS4PED, which has generated valuable insights through testing and validation activities in pilot cities, as well as replication activities at local, national and EU-level. These activities highlight the need for a common European reference that consolidates methodologies, best practices and evaluation frameworks for Digital Twin-enabled PED planning and operation. The proposed CWA responds to this gap by providing structured, city-oriented guidance that bridges research outputs and real-world implementation conditions.

Existing relevant standardisation efforts and related activities include but are not limited to: CEN TC 465 Ad hoc Group Climate-Neutral Smart Cities and Communities activities, IEC Technology report on PED (to be published) and the ongoing CWA “Guidelines for the Integrated and Context-Sensitive Development of Positive Energy Districts”. The Workshop will contribute to ongoing European standardisation efforts without duplicating existing technical standards.

4 Workshop programme

4.1 General

The kick-off meeting is planned to take place on 6th May 2026 as a virtual meeting. A draft for public commenting at the end of the drafting phase will not be published.

A total of 6 Workshop meetings (kick-off meeting and 5 Workshop meetings) and web conferences will be held, during which the content of the CWA(s) will be presented, discussed and approved.

The working language (language of meetings, minutes, etc.) of the WS will be English. The CWA will be written in English.

4.2 Workshop schedule

Find hereby the tentative dates.

Initiation (15 February 2026 - 30 April 2026):

- Workshop description form submission and TC response (deadline: 27 March 2026)
- Open commenting period on draft project plan (3 April to 4 May 2026)

Operation (1 May 2026 - 20 December 2026):

- Kick-off meeting (6 May 2026)
- CWA development (6 May to 18 December 2026)
- CWA finalized and approved by Workshop participants (18 December 2026)

Publication (21 December 2026 to 7 February 2027):

- CWA(s) publication (7 February 2027)



Table 1: Workshop schedule (preliminary)

CEN/CENELEC Workshop	Feb26	Mar26	Apr26	May26	Jun26	Jul26	Aug26	Sep26	...	Dec26	Jan27	Feb27	...
Initiation													
1. Workshop description form submission and TC response													
2. Open commenting period on draft project plan (mandatory)													
Operation													
3. Kick-off meeting													
4. CWA development													
5. CWA finalized and approved by Workshop participants													
Publication													
6. CWA publication													
Dissemination (see 7)													
Milestones				K	V	V		V	V	V / A		P D	

Legend:



- K** Kick-off
- M** Workshop meeting
- V** Virtual Workshop meeting
- A** Adoption of CWA
- P** Publication of CWA
- D** Online distribution of CWA

5 Resource planning

The Workshop will be financed within the framework of the Horizon Europe research project TIPS4PED (GA n. 101139633).

6 Workshop structure and rules of cooperation

6.1 Participation in the Workshop

The Workshop will be constituted during the kick-off meeting. By approving this project plan, the interested parties declare their willingness to participate in the Workshop and will be formally named as Workshop participants, with the associated rights and duties. Participants at the kick-off meeting who do not approve the project plan are not given the status of a Workshop participant and are thus excluded from further decisions made during the kick-off meeting and from any other decisions regarding the Workshop.

As a rule, the request to participate in the Workshop is closed once it is constituted. The current Workshop participants shall decide whether any additional members will be accepted or not.

Any new participant in the Workshop at a later date is decided on by the participants making up the Workshop at that time. It is particularly important to consider these aspects:

- a. expansion would be conducive to shortening the duration of the Workshop or to avoiding or averting an impending delay in the planned duration of the Workshop;
- b. the expansion would not result in the Workshop taking longer to complete;
- c. the new Workshop participant would not address any new or complementary issues beyond the scope defined and approved in the project plan;
- d. the new Workshop participant would bring complementary expertise into the Workshop in order to incorporate the latest scientific findings and state-of-the-art knowledge;
- e. the new Workshop participant would actively participate in the drafting of the manuscript by submitting concrete, not abstract, proposals and contributions;
- f. the new Workshop participant would ensure wider application of the CWA.

All Workshop participants who approved the publication of the CWA or its draft will be named as authors in the European Foreword, including the organizations which they represent. All Workshop participants who did not approve the publication of the CWA will not be named in the European Foreword.

6.2 Workshop responsibilities

The Workshop Chair is responsible for content management and consensus building. The Workshop Chair is supported by the Workshop Vice-Chair (if any) and the responsible Workshop secretariat, whereby the Workshop secretariat will always remain neutral regarding the content of the CWA(s). Furthermore, the Workshop secretariat shall ensure that CEN-CENELEC's rules of procedure, rules of presentation, and the principles governing the publication of CWA(s) have been observed. Should a Workshop Chair no longer be able to carry out her/his duties, the Workshop secretariat shall initiate the election of a new Workshop Chair. The list below covers the main tasks of the Workshop Chair. It is not intended to be exhaustive.

- Content related contact point for the Workshop
- Presides at Workshop meetings

- Ensures that the development of the CWA respects the principles and content of the adopted project plan
- Manages the consensus building process, assesses when the Workshop participants have reached agreement on the final CWA, on the basis of the comments received
- Ensures due information exchange with the Workshop secretariat
- Represents the Workshop and its results to exterior

The Workshop secretariat, provided by a CEN and/or CENELEC Member, is responsible for organizing and leading the kick-off meeting, in consultation with the Workshop proposer. Further Workshop meetings and/or web conferences shall be organized by the Workshop secretariat in consultation with the Workshop Chair. The list below covers the main tasks of the Workshop secretariat. It is not intended to be exhaustive.

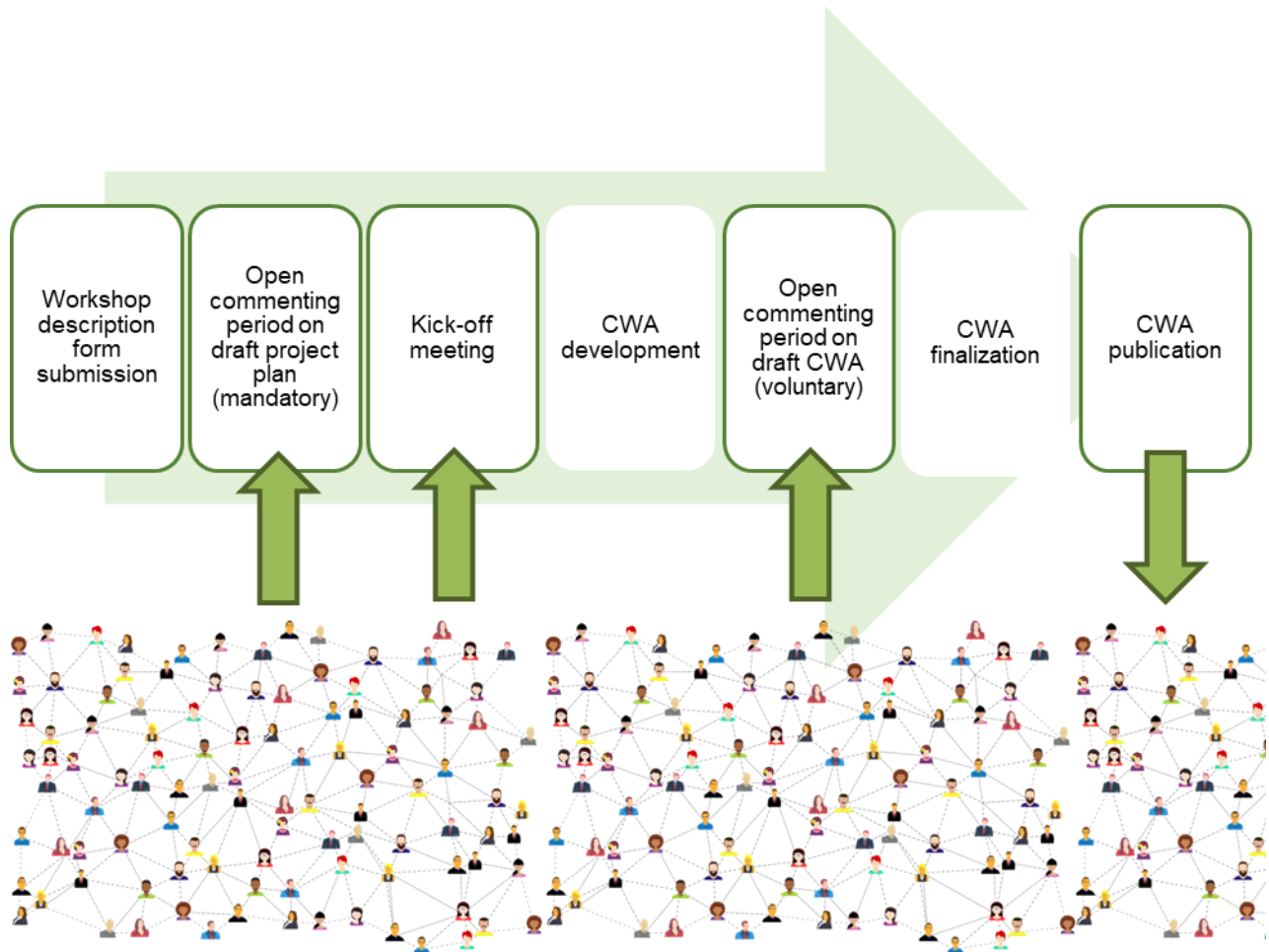
- Administrative and organizational contact point for the Workshop
- Ensures that the development of the CWA respects the principles and content of the adopted project plan and of the requirements of the CEN-CENELEC Guide 29
- Formally registers Workshop participants and maintains record of participating organizations and individuals
- Offers infrastructure and manages documents and their distribution through an electronic platform
- Prepares agenda and distributes information on meetings and meeting minutes as well as follow-up actions of the Workshop
- Initiates and manages CWA approval process upon decision by the Workshop Chair
- Interfaces with CEN-CENELEC Management Centre (CCMC) and Workshop Chair regarding strategic directions, problems arising, and external relationships
- Advises on CEN-CENELEC rules and brings any major problems encountered (if any) in the development of the CWA to the attention of CEN-CENELEC Management Centre (CCMC)
- Administrates the connection with relevant CEN or CENELEC/TCs

6.3 Decision making process

The CEN and/or CENELEC Workshop Chair is responsible for ensuring that the development of the CWA follows the principles and content of the project plan described in this document and the requirements of CEN-CENELEC Guide 29. The CEN and/or CENELEC Workshop Chair may take decisions on the conduct of the CEN and/or CENELEC Workshop on the basis of the comments expressed by the participants and of CEN-CENELEC Guide 29.

Decisions shall be taken based on consensus of the WS participants.

7 Dissemination and participation strategy



Potential participants identified in section 2.2 and potential interested stakeholders identified in Part A should be informed of the open commenting phase, if any, and of the publication of the CWA.

In addition to the CCMC website, the final CWA might be advertised on the TIPS4PED website, its newsletter and social media channels.