



## 3<sup>rd</sup> Capacity-building Hub Finance and Technology Day

### UNEP-DTU Partnership Tools and Methodologies to Implement Sustainable Energy Systems in Cities, Districts and Buildings Concept Note

#### Background:

We are contributing to UN's SDG-7, 11 and 13, through increasing energy efficiency and implementing smart cities. We focus on three key areas: climate planning and policy, climate transparency and accountability, and business models and markets. The capacity-building scope of UDP focuses on policy-makers, private sectors and engineers of stakeholders from cities and countries with special concentration on energy efficiency, e.g. district energy (heating and cooling) system, building and long-term energy mapping and planning. With input from our partners, e.g. Germany energy agency (dena) and Danish energy agency (DEA), we are developing a virtual/online Knowledge Management System (KMS) to share the state-of-art technologies, tools and project development methodologies on district and building energy systems with developing countries and emerging economies. The KMS include: 1) Six training modular of energy efficiency in energy systems, e.g. fundamental concepts, stakeholder coordination, policy development, energy mapping and planning, business models, MRV strategy development etc. 2) evaluation tools for energy efficiency and investment potential on projects of street lighting, water pumps, building energy efficiency and district heating and cooling systems. 3) collection of training materials by UDP, including webinars, reports etc. 4) materials for further reading, including case studies and best practices. Even though UDP and its partners have carried out numerous physical training in national or sub national (cities) level, due to COVID, we believe it would be more relevant to develop an online knowledge sharing platform so as to engage more relevant stakeholders and raise the awareness on energy efficiency from developing countries and emerging economies.

#### Objectives:

- The session will focus on the virtual knowledge management system (KMS) of energy efficiency, and the evaluation tools of district and building energy systems developed by UDP, dena and DEA.
- These embedded training modular, recorded webinars and case studies in KMS, and evaluation tools developed by the three organizations are results of long-term implementation experiences in both developed and developing countries.
- The audiences can use the tools and knowledge in the KMS to develop energy efficiency projects, integrate energy mapping and planning in their long-term





development plans of cities and countries, and finally design suitable business models and enable investment environment to implement projects.

- The audience can understand what KMS, tools and methodologies of energy planning are, how they are developed and what they can be used to do.
- The audiences can also have the chance to use some of the tools on site, and get the direct contact information if they have any questions in the future.

### Format:

Venue: 3<sup>rd</sup> Capacity-building Hub within COP26 (Blue zone)

Location: Glasgow, UK

Date: November 4<sup>th</sup>, 2021, Thursday

Length: 60 minutes

Language: English

Power Point presentation, screen shots of website of tools and other training modules

Q&A session

### General Structure:

Speakers		
Name	Role	Affiliation/Organization
Zhuolun Chen	Presentation	Senior Advisor, Team Lead of District Energy Systems
Ang Ye	Presentation	Team lead, Energy-Efficient Buildings City International
Lars Grundahl	Presentation	Team lead, Program of District Energy in China
ICLEI (tbc.)		

Moderators		
Name	Role	Affiliation/Organization
Zhuolun Chen	Moderate, guiding the Q&A section	Senior Advisor, Team Lead of District Energy Systems

Draft agenda:

Presentation 1 (10min): Capacity building needs in municipality level for implementing sustainable energy systems in district and buildings. ICLEI (tbc.)

Presentation 2 (13min): Tools and methodologies for rapid assessment and pre feasibility analysis of district heating and cooling systems in developing countries. Mr. Zhuolun Chen (UDP)

Presentation 3 (13min): Use energy mapping and planning to accelerate the implementation of sustainable district energy system: Experience and tools (DHAT) from Denmark. Mr. Lars Grundahl (DEA, online)





Presentation 4 (13min): Advanced building energy efficiency and its application: experience and tools of Passivehus (PHPP) in Germany. Ms. Ang Ye (dena)  
Q&A session (11min)

### Outcomes:

- Awareness for energy efficiency and low carbon development in cities and districts are raised among different stakeholders.
- Use of energy efficiency tools, methodologies and virtual knowledge sharing hub are demonstrated and shown to the audiences.
- The theories of these tools and methodologies are illustrated.
- Best practices and case studies of implementing energy efficient district and building energy systems are shared.
- The stakeholders or audiences knows how to use the demonstrated tools and where to look for training materials, learning webinars and other relevant materials after this session.
- More stakeholders will be attracted for capacity building on energy efficiency of district and building energy systems.

### Relevant Links:

UNEP DTU Partnership: <https://unepdtu.org/>

dena: <https://www.dena.de/en/home/>

DEA: <https://ens.dk/en>

