KeepWarm: Improving the performance of district heating systems in Central and Eastern Europe

Training needs topic questionnaire

Name of the project partner:

Name of the DHS operator/City:

T1 Capacity development on technical concerns

Name of the topic	Give priority to the training topic (1 = lowest, 5 = highest priority)					Insert a few keywords on why you prioritised this topic so high/low
Assessment of energy losses in the district heating grid and determination of actions to improve grids and make them smart, remote metering systems, Metering standards	1	2	3	4	5	
Automatization of boiler house/substation and heat storage optimization	1	2	3	4	5	
Optimizing temperatures of supply/return pipes. Optimizing temperatures of supply/return pipes	1	2	3	4	5	
Optimization of heat networks energy audits and surveillance	1	2	3	4	5	
Modelling of DHS after energy retrofitting of connected buildings (consumers) – Building retrofit reduced heat demand, so DHS often needs to be adjusted to new heat demand	1	2	3	4	5	
Technical evaluation and comparison of the municipal heating system development options, including a comparison of DHS with decentralized solutions in municipalities with reduced heat load density	1	2	3	4	5	
Identification of cost-effective approaches to optimize DHS	1	2	3	4	5	
Use of GIS-based tools (Heat demand assessment, DH network development, mapping of excess heat sources)	1	2	3	4	5	
Suggest other possible topics for training in your country						

T2 Capacity development on the utilisation of RES, waste and excess heat

Name of the topic	Give priority to the training topic (1 = lowest, 5 = highest priority)					Insert a few keywords on why you prioritised this topic so high/low
The inclusion of RES in DHS (solar thermal, biomass, geothermal, heat pumps, …)	1	2	3	4	5	

Topic						
Sustainability of biomass supply (increasing capacity of plant operators and their fuel/biomass suppliers, estimation of biomass potential)	1	2	3	4	5	
The utilisation of waste heat in an urban environment and from industrial sites	1	2	3	4	5	
Feasibility analysis of switching from fossil fuel to renewable energy or waste heat sources and feasibility analysis of using different RES/waste heat	1	2	3	4	5	
Assessment of the biomass quality	1	2	3	4	5	
Suggest other possible topics for training in your country	1	2	3	4	5	

T3 Organizational capacity needed

Name of the topic	Give priority to the training topic (1 = lowest, 5 = highest priority)					Insert a few keywords on why you prioritised this topic so high/low
Identification of measures and processes for improving the organization management of DH&C networks (comprising energy generation, distribution and consumption)	1	2	3	4	5	
The increase of the organisational qualifications of boiler house operators	1	2	3	4	5	
Different possibilities to organise DH companies according to national law	1	2	3	4	5	
Suggest other possible topics for training in your country	1	2	3	4	5	

T4 Financial concerns

Name of the topic	Give priority to the training topic (1 = lowest, 5 = highest priority)					Insert a few keywords on why you prioritised this topic so high/low
Assessment of the economic and financial viability of using RES and waste heat in DHS plants	1	2	3	4	5	
Development of innovative financing mechanisms (on-bill, public-private, inclusion of consumers/citizens…)	1	2	3	4	5	
Tools for economic/financial viability analysis	1	2	3	4	5	
Financial support schemes and funding resources for DHS retrofits and decarbonisation	1	2	3	4	5	
Business plans development	1	2	3	4	5	
Suggest other possible topics for training in your country	1	2	3	4	5	

T5 Managerial concerns

Name of the topic	Give priority to the training topic (1 = lowest, 5 = highest priority)	Insert a few keywords on why you prioritised this topic so high/low

Identification of measures for increasing the attractiveness of DHS for end-consumers, in close interaction with end-consumers and public authorities	1	2	3	4	5	
Training on PR and user engagement towards new and existing consumers	1	2	3	4	5	
How to assess user behaviour	1	2	3	4	5	
Identification of options for individual billing in multi-apartment buildings equipped with building heat meters	1	2	3	4	5	
Increasing transparency of information about bill structure and available energy services to reduce heat consumption	1	2	3	4	5	
Contractual arrangements needed to ensure a smooth retrofit of the DH network	1	2	3	4	5	
Contractual arrangements needed to ensure a smooth biomass supply	1	2	3	4	5	
Suggest other possible topics for training in your country	1	2	3	4	5	

Questionnaire on the training preferences

Name of the project partner:

Name of the DHS operator/City:

PART A: Questions for DHS operators:

1. What is your preferred type of training?
   a. Lectures
   b. Workshops
   c. Webinars
   d. Software training
   e. Field trip
   f. Individual training (1 on 1 consultancy)
   g. Combination of above mentioned, which?
   h. Other
2. What type of training duration and slots would you prefer?

Example:

- 3 days full training with 8 hours slots
- 2 weeks training with 2 hours per day slots
- 1-day full training with 8 hours slot(s)
- Other…

3. Type of learning materials that you would prefer?
   a. Online material (lectures, presentations, exercises)
   b. Scripts
   c. Books
   d. Field trip
   e. Combination of above mentioned, which?
   f. Other

4. What type of personnel would you send to the training?
   a. Managers

b. Financial officers
c. Boiler operators
d. Operation and maintenance workers
e. Engineers
f. IT officers
g. Legal and personnel officers
h. Combination of above mentioned, which?
i. Others

5. Would you like to include any external stakeholders in the training?
    a. Local and/or regional public authorities
    b. Spatial development planners
    c. Development and/or energy agencies
    d. Potential investors/banks
    e. Real estate developers
    f. ESCO companies
    g. Others
6. Describe what would be for you the desired outcome of the training?

PART B: Questions for training organisers:

1. Who will be the lecturers providing training in your country? Describe the necessary qualifications.

2. How will you prefer to evaluate training efficiency?
    a. Signing sheet
    b. Anonymous questionnaire
    c. Combination of the above mentioned
    d. Other
3. What will be the necessary competences and knowledge necessary to participate in and understand planned training?

4. What will be expected learning outcomes of the planned training?

5. Provide a 10-row description of the planned training? After you receive responses on the topic and training preferences from the DHS operators.