SUPPORT DHC

D4.3

Summary of kicking-off direct support activities in all implementation countries

April 2025

TITLE OF THE DELIVERABLE	
Deliverable number	D4.3
Responsible partner	PlanEnergi
Due date of deliverable	30.04.2025
Actual submission date	30.04.2025
Version/document history	1.0
Authors	Per Alex Sørensen and consortium partners
Reviewers	Consortium partners
Work package number and title	WP4 Summary of kicking-off direct support activities in all implementation countries

DISSEMINATION LEVEL (please select one)		
SEN	Sensitive, limited under the conditions of the Grant Agreement	☐
PU	Public, fully open	☒

PROJECT'S INFORMATION	
Grant Agreement No.	101119914
Project Full Title	Supporting a fast implementation of low-grade renewable energy and waste heat for district heating and cooling
Project Acronym	Support DHC
Start Date	01 October 2023
Duration	36 months
Project Coordinator	WIP Renewable Energies
Project Website	www.supportdhc.eu

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Co-funded by the European Union

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Executive Summary

The SupportDHC project aims to accelerate the implementation of low-grade renewable energy (RE) and waste heat (WH) for district heating and cooling (DHC) across Europe. This is achieved by supporting DHC operators in drawing-up transformation plans leading to efficient DHC systems as defined in the Energy Efficiency Directive.

The support of DHC operators is rolled out through 1) extensive support to 11 DHC frontrunner cases, 2) support to minimum 27 follower cases and 3) reaching more than 100 DHC operators by replicating support activities.

This report includes a status of the selection of follower cases and of the support activities carried out for them in the participating countries until April 2025. In WP2 of the SupportDHC project an invitation letter and selection criteria for inviting and selecting followers was elaborated. From summer 2024 the selection process in the countries has taken place. Summary of the status is:

Italy has carried out a careful selection process resulting in five follower cases with five different operators. The followers have already participated in three capacity building courses. All followers have signed agreements defining the content of support.

The selection process in **Austria** has until now resulted in three followers and one candidate with a new DHC system. At least two more followers are planned to be included when the tool and process for integration of waste heat is ready (under development in cooperation with e-think and AGFW). Actual support activities are planned to be started in June 2025.

In **Germany** the follower cases will focus on supporting DH companies using waste heat primarily from data centres. Also, in Germany selection of this kind of followers will take place when the above-mentioned tool and process is ready. The tool will be presented by AGFW to German DH operators in Q3 2025. In this way interested DH operators are acquired as follower cases.

In **Poland** the selection process has resulted in four follower candidates of which one have signed cooperation agreement. Three are expected to follow during Q2 2025. Support activities are not yet planned.

Lithuania has reached out to all DH operators in the country and selected five follower cases with five different operating utilities. Two followers have participated in a study tour to Sweden and a capacity building program has started in 2025. Until now two seminar s and one webinar have been arranged. Four followers have signed cooperation agreements.

Ukraine has started communication with district heating operators in to join the Support DHC project as follower cases in January 2025. By end of April seven district heating operators from 6 cities have expressed their interest to be follower cases. Support activities are not yet planned.

Status until now is that 13 followers have signed cooperation agreements and 12 are in the pipeline. In addition, up to 5 followers from Germany will be expected. Thus at least 27 follower cases will be reached as promised in the project proposal.

The capacity building activities have started in Italy and Lithuania but are for the other countries waiting until more experiences are gained from forerunner cases.

1 Selection of followers

An official invitation for followers, proposed selection process and criteria for selection of followers were developed in WP2, Task 2.3 and reported in deliverable D2.3 “Support action plan” in the Support DHC project in September 2024.

Invitation letter and selection process has been used getting in contact to followers through

- District heating associations
- Dissemination channels of project partners (newsletters, social media)
- DHC frontrunners, that operate multiple networks

The selection process has varied in the implementation countries and is described for each country in this report. The selection process is still ongoing in Austria and Germany.

The number of followers is in the project proposal expected to be at least 27. It is still the expectation to reach this amount in autumn 2025 so that the followers are in place before the follower activities start in a country

2 Kicking-off direct support activities in the countries

Each participating country has in the following chapters described

- Selection procedure for followers and status of selection
- Short description of each follower (inhabitants in the city, DHC coverage, present DHC system, ideas what to do..)
- Preparatory steps completed
- Direct support activities kicked off

2.1 Italy

2.1.1 Selection procedure for followers and status of selection

According to the contents, aims and workflow of the project, the selection of Italian followers took place in summer 2024 and followed a transparent procedure that included the following main steps:

1. Involvement of Italian district heating associations (AIRU and Fiper), already consulted several times within the project, through interviews on the TEAMS platform and phone calls, and explanation of the activities to be carried out (May - June 2024);
2. Interception of some operators not yet associated;
3. Preparation of the letter to present the project and the activities offered by the consortium to the potential followers. The letter also included the invitation to indicate: i) the district heating system on which they would like to receive support; ii) if there is already a share of renewables/waste heat present and to what extent; iii) which decarbonization or renewable integration initiative is planned; iv) to replay by e-mail (Figure 1);
4. Sending by e-mail the prepared communication to the aforementioned associations, which in turn forwarded it to the associated operators (AIRU in end of June 2024; Fiper in the beginning of July 2024). Some operators not associated with either AIRU or Fiper were reached through direct communication;

5. Collection of the interests from operators (end of July 2024);
6. Interviews with operators via TEAMS platform and phone and exchange of preliminary data via e-mail (August-September 2024);
7. Collection of information and definition of a list of criteria for the selection of associates (August – September 2024, Table 1). A maximum total score of 10 was defined, considering four criteria mainly related to operational conditions, willingness, data availability and future targets;
8. Selection and final list of 5 operators and 5 respective follower cases (end of September 2024;
9. Communication of the selection outcome via e-mail to all candidate operators (September 2024).

Table 1 details related to the survey among the Italian operators for the followers campaign

Company and number of candidates follower	**Cases/ municipalities**	**Contact by**	**Contact modes**
ASM Bressanone - 1	Bressanone	Fiper, survey	e-mail; teams call on 5th Aug. 24
SEM Morbegno - 1	Morbegno	AIRU+Fiper, survey	e-mail; phone call on 2nd Aug. 24
Engie - 4	Aosta, Biella, Cinisello, Fossano	AIRU, survey	e-mail; teams call on 6th Aug. 24; email exchanges
Alto Vicentino Ambiente - 1	Schio	AIRU, survey	e-mail; phone call on 7th Aug.
CAP - 1	Peschiera Borromeo	personal contact	e-mail; (and previous meeting in Spring 2024)
Veolia-Siram - 1	Chivasso	AIRU, survey	e-mail; teams call on 11th Sept.
Iren and A2A - 1	Piacenza	personal contact (*) and AIRU, survey	e-mail; teams call on 9th Sept.

(*) A2A and IREN are the operators of the Italian frontrunners

The campaign was successful, considering also the summer holyday period, since, in about one month, six companies and ten DH systems expressed their candidatures (Table 1).

Since the operator Engie expressed the possibility of working on four cases, respectively the networks of Aosta, Biella, Cinisello, Fossano, discussions were held to select only one of the four cases. The case of Aosta was selected, deemed a priority by the operators.

Even if interesting, the case of Schio (Alto Vicentino Ambiente) was discarded mainly due to some difficulties encountered during the interactions and data exchanges.

Furthermore, the interesting case of Peschiera Borromeo was discarded because it was still in the design phase and theoretically already completely decarbonized.

It has to be underlined that all the candidates, included the two discarded, was invited to the capacity building activities devoted to the Italian frontrunners and followers.

2.1.2 Short description of each follower

The final list of the Italian follower is represented in Figure 1.

The sample includes cases located in both mountain and urban areas of northern Italy, presenting varied figures, climatic conditions, heat density and sizes. Moreover, the companies involved represent large and medium industrial groups, local companies, and cooperatives.

Figure 1 map of the selected followers (Northern Italy)

Follower Aosta	
Municipality	Aosta
Inhabitants	≈ 33,000 (01/2024)
DHC operator	Telcha SRL (Engie Group)
DHC coverages	N.A.
Present DHC system	• DH network length: ~ 33.2 km • Heat demand: ~ 81.7 GWh/a • High temperature • TES available
Support actions planned	Optimization and integration of short-term thermal storage to better exploit the already installed RES and WH. Definition

	of scenarios, KPIs, environmental and economic benefits, incentive to improve the non-fossil share (e.g. cogeneration optimization, HP integration)

Follower Bressanone	
Municipality	Bressanone
Inhabitants	≈ 22,000
DHC operator	ASM
DHC coverages	Almost 100% of buildings supplied by DHC system
Present DHC system	• DH network length: ~ 122.0 km • Heat demand: ~ 140.5 GWh/a • High temperature • TES available
Support actions planned	Optimization of operating conditions and cogeneration, technical and economic assessments on the optimal sizing of heat pumps, heat recovery from railway tunnels, incentives, investments, self-consumption of the electricity produced

Follower Chivasso	
Municipality	Chivasso
Inhabitants	≈ 26,000
DHC operator	Veolia-Siram
DHC coverages	N.A.
Present DHC system	• DH network length: ~ 8.1 km • Heat demand: ~ 11.0 GWh/a • High temperature • TES available
Support actions planned	Optimization of cogeneration, integration of heat pumps (on CHP e.g.), 100% decarbonization in 2050, Clarifications on rules and regulations. Support in finding the financial feasibility of HP integration

Follower Morbegno	
Municipality	Morbegno
Inhabitants	≈ 12,000
DHC operator	SEM
DHC coverages	50-60% of buildings supplied by DHC system
Present DHC system	• DH network length: ~ 35.0 km

	• Heat demand: ~ 42.6 GWh/a • High temperature • TES available
Support actions planned	Non-technical issues about standards and tariffs. Assessments on digitalization for management optimization, on potential use of geothermal energy for the replacement of CHP and on heat recovery from evaporative towers

Follower Piacenza	
Municipality	Piacenza
Inhabitants	≈ 102,000
DHC operator	Iren and A2A
DHC coverages	About 20% of buildings supplied by DHC system
Present DHC system	• DH network length: ~ 29.6 km • Heat demand: ~ 34.0 GWh/a • High temperature • TES not available
Support actions planned	Optimization and integration of seasonal or short-term thermal storage systems with the aim of covering peak loads, analysis of the use of air-to-water heat pumps of different sizes

2.1.3 Preparatory steps completed

The preparatory steps took place in Summer-Autumn 2024 and included the definition of the contents of the collaboration and of the agreement and its signing. Initial involvement activities and exchanges via e-mail and phone took place. These activities can be summarized as it follows:

- Definition of the Agreement, refinement of contents, and signing (September-December 2024)
- First presentation of support activities (9th October 2024) in the framework of the launch of the Capacity Building measures;
- Beginning of involvement and initial exchanges via e-mail and phone to collect data and needs (October-December 2024).

2.1.4 Direct support activities kicked off

In the first trimester of 2025, interactions and direct support activities were facilitated through the opportunities offered by capacity building measures. A part a light initial reticence, generally the feedback from the involved operators was positive and the responsible of the followers seem available to interact with the consortium and the responsible of the frontrunners, benefitting from their experience. The main support activities are summarized in the following tables.

Table 2 list of the events attended by representatives of all the followers

Direct support activities	Event/Contents	Date
First involvement	Project workshop and start of the capacity building (CB) in Italy - tasks 5.1 and 5.2	9th October 2024
Kick-off event	First course of CB - task 5.1	23rd January 2025
Structured discussion on support activities	Second course of CB - task 5.1	17th March 2025

2.2 Austria

2.2.1 Selection procedure for followers and status of selection

Invitations to apply as followers were spread via Newsletters

- Working group for DH operators of the Austrian Biomass Association, with 2,700 recipients.
- AEE newsletter, with about 12,800 recipients
- LinkedIn via AEE INTEC channel, with 2,395 followers

In addition, AEE INTEC and e-think reached out within their own network with DHC operators to assess the demand for followers. At the moment three specific followers are planned to be supported (St. Lambrecht, Murau and Kreuzstetten). One candidate is still in discussion about the development of a new DHC system (Sonntagberg).

At least two more followers are planned to be included on the topic of integrating waste heat from data centers into their DHC network. However, the tool and process developed by e-think (in cooperation with AGFW and one of the associated frontrunner DH operators) has not been finalized yet, hence a cooperation with followers on this topic has not been initiated yet.

2.2.2 Short description of each follower

Follower Kreuzstetten	
Municipality	Kreuzstetten
Inhabitants	1,683 (01/2024)
DHC operator	EQUANS Energie GmbH
DHC coverages	~ 25% of buildings supplied by DHC system
Present DHC system	• Heat generation: 2 MW_{th} (2 x 1 MW_{th}) biomass boilers, • PV: 88.5 kWp • 40 m^3 buffer storage • Grid supplies approximately 140 consumers • Grid length: 8,700 m • Heat demand: ~ 5.3 GWh/a
Support actions planned	EQUANS is interested, if they can supply the DHC network in the summer period via a P2H unit that utilises mainly the electricity from their own 88.5 kW_p PV system. Within Support DHC, the energyPRO model prepared by Planenergi und modified by AEE INTEC for the frontrunner Kapfenberg will be used to assist EQUANS in this request.

Follower St. Lambrecht	
Municipality	Sankt Lambrecht

Inhabitants	1,791 (01/2024)
DHC operator	Wärmeliefergemeinschaft St. Lambrecht reg. Gen.mbH
DHC coverages	~ 32% of buildings supplied by DHC system
Present DHC system	• Heat generation: 6.5 MW_{th} (1 MW_{th} biomass boiler, 2.5 MW_{th} biomass boiler, 3 MW_{th} oil boiler) • 90 m^3 buffer storage • Grid supplies approximately 190 consumers • Grid length: 11,600 m • Heat demand: ~ 9.8 GWh/a
Support actions planned	The operator is interested to integrate a P2H unit in the DH system, because there is an excess of electricity from PV in the area of Sankt Lambrecht in the summer. The aim is to determine a suitable size and an economically sound operation concept for a P2H system. Within Support DHC, the energyPRO model prepared by Planenergi und modified by AEE INTEC for the frontrunner Kapfenberg will be used to assist the operator in Sankt Lambrecht.

Follower Murau	
Municipality	Murau
Inhabitants	3,365 (01/2024)
DHC operator	Murauer Stadtwerke GmbH
DHC coverages	• ~ 9% of buildings supplied by DHC system • Energie Steiermark operates another DHC system in Murau, that supplies about 32% of buildings
Present DHC system	• Heat generation: 5 MW biomass CHP, 5 MW_{th} biomass boiler, 1.2 MW_{th} Power-to-Heat, 1.5 MW_{th} bi-directional heat exchanger to DHC-network of Energie Steiermakr • 146 m3 buffer storage • Grid supplies approximately 100 consumers • Grid length: 12.000 m • Heat demand: ~ 13.4 GWh/a
Support actions planned	The operator is interested to increase the capacity of their already existing 1.2 MW P2H unit. The aim is to determine a suitable size and an economically sound operation concept for the enlarged P2H system. Within Support DHC, the energyPRO model prepared by Planenergi und modified by AEE INTEC for the frontrunner Kapfenberg will be used to assist the operator in Murau.

2.2.3 Preparatory steps completed and

2.2.4 Direct support activities kicked off

The support actions for the followers in St. Lambrecht, Murau and Kreuzstetten were discussed and agreed upon with the DHC operators, but no specific actions were taken so far.

Actual support activities are planned to be started in 06/2025.

2.3 Germany

In Germany, the activities will focus on supporting DH companies, developing projects for using **low-grade waste heat from data centres or other industrial sources**.

The key instrument for this activity, is an advanced tool for the assessment of the economic feasibility of the integration of waste heat from data centres into existing DH systems, developed by SUPPORT DHC partner e-think in close cooperation with AGFW and one of the associated frontrunner DH operators. The tool allows to calculate technical as well as economic parameters of the system for both the DH operator as well as the DC operator. The tool is based on an hourly calculation of costs for the heat recovery and integration into the DH system and comparison with short run marginal costs of alternative heat production in the existing plants. This allows to estimate the expectable cost savings from integrating the waste heat into the DH system while considering all relevant cost elements of the new system. These cost elements are investments, running costs of the heat pump and booster system, potential subsidies as well as payments between the DH operator and the DC operator. These payments can be set by the user and thus be transparently discussed in the negotiations. This is further facilitated by a visualisation of the waste heat recovery system including automatic representation of the calculation results.

In the third quarter of 2025, AGFW will present the tool to German DH operators through its communication channels and a dedicated event. In this way, interested DH operators are acquired as follower cases. They will be provided with an introduction to the tool and supported in using it as a follow-up to the event.

2.4 Poland

2.4.1 Selection procedure for followers and status of selection

The selection of followers in Poland has been led by the Association of Municipalities Polish Network "Energie Cités" (PNEC), in close cooperation with AGFW, due to their joint work with Polish frontrunners.

PNEC initiated the recruitment process by contacting member cities via email and through direct outreach, inviting municipal district heating (DHC) operators to participate in the project as followers. As of the end of April 2025, four operators have been identified as prospective recipients of support under Work Package 4 activities:

Przedsiębiorstwo Energetyki Cieplnej Sp. z o.o. in Płońsk – a letter of support has been signed, and the operator's final decision is awaited.

Miejskie Przedsiębiorstwo Energetyki Cieplnej in Nowy Sącz – participation is currently under discussion.

CEZ Skawina S.A. – contact established.

Miejskie Przedsiębiorstwo Energetyki Cieplnej Sp. z o.o. in Włocławek – confirmed participation, in the process of signing agreement

2.4.2 Short description of each follower

Follower Włocałwek	
Municipality	Włocławek
Inhabitants	80 000
DHC operator	**Miejskie Przedsiębiorstwo Energetyki Cieplnej Spółka z o.o. in**
DHC coverages	N.A
Present DHC system	Miejskie Przedsiębiorstwo Energetyki Cieplnej Spółka z o.o., based in Włocławek, has, among others, a heat source located at ul. Zakręt 8 in Włocławek, which burns fuel oil and renewable fuel - biomass (pellets). The share of heat produced from biomass and supplied to the network fed from this source in relation to the total heat supplied to this network in 2017 was 60.92%. The share of heat produced from biomass and supplied to the network supplied from this source in relation to the total heat supplied to all networks owned by the company in 2017 was 0.19% .
Support actions planned	The operator is interested in increasing the share and capacity of renewable energy sources in an economically viable manner. The project will utilize tools from the

	SUPPORT-DHC toolbox, including the energyPRO model, to support these efforts.

2.4.3 Preparatory steps completed

Initial contact and information exchange with the follower candidates were conducted in Q1 and Q2 of 2025. PNEC provided guidance on the project framework, the support opportunities available, and next steps in the collaboration. The preparation of agreements and planning of initial support activities is currently underway.

2.4.4 Direct support activities kicked off

Formal support activities will commence following the finalization of agreements with confirmed followers. These activities will include among others involvement in capacity building initiatives organized within the project framework. Initial data collection and assessments are planned for Q2–Q3 2025.

2.5 Lithuania

2.5.1 Selection procedure for followers and status of selection

Two of the existing followers (Utena and Ukmergė DH operators) expressed their interest from the very beginning of the project by signing LoI. LSTA communicated directly to local DH community about the SupportDHC opportunities inviting to become followers (during weekly online meetings with DH company managers and other events).
At the end of summer 2024, official invitations to join the project as followers were distributed via email (to over 600 recipients) and also published on the LSTA website (see here) .
Tauragė DH and Jonava DH responded to the invitation, while direct communication by phone was carried out with other potential candidates.
At the end of October, the final list of followers was approved, and communication continued regarding the signing of cooperation agreements and the collection of other necessary data.

2.5.2 Short description of each follower

Follower Ukmerge DH	
Municipality	Ukmergė City
Inhabitants	21,954 (01/2025)
DHC operator	UAB „Ukmergės šiluma“
Present DHC system	• Installed heat capacity 42 MW • DH system consists of 4 separate hydraulic networks • Total length of pipe routes: 25 km • Annual heat production: ~ 62 GWh • Fuel mix: 23,2 GWh /a (49%) still produced from fossil fuels mainly natural gas, • 7243 users (7135 domestic (221 buildings) and 108 other consumers (60 buildings)) are connected to DH network (456,000 m2)
Support actions planned	The Company is interested to receive technical support for the preparation of investments plan for heat generation plants of RK – 2 network zone, where all heat energy is produced from natural gas. The boiler house (5 WW heat capacity and 12 GWh annual heat production) is located in the central part of the city. Replacement of fossil fuels is rather complicated because the boiler plant is situated very close to apartment buildings (noise, environmental restrictions). Within SupportDHC, LSTA will assist in evaluating special solutions to eliminate the use of fossil fuels. One of the options is to adapt the EnergyPRO model prepared for the frontrunner Kaunas (Neveronys DH).

Follower Utena DH	
Municipality	Utena District municipality
Inhabitants	25,587 (01/2025)
DHC operator	UAB „Utenos šilumos tinklai“
Present DHC system	• Heat generation: 125 MW (heat), 2,9 MW (power)) capacity • 3 condensing economizers, which cover 16% of the heat produced

	• 130 kW photovoltaic solar power plant • Heat demand 46 MW • Annual heat production: ~ 170 GWh • DH network length 51 km • 9370 domestic users and 257 other consumers are connected • Fuel mix: 97% from biomass, 3 % (5 GWh/a) natural gas and fuel oil
Support actions planned	• There is potential to connect new industrial heat consumers. • There are plans to increase the efficiency of the existing CHP plant by installing thermal energy storage. • The company wants to increase the generation of "green" electricity in a more flexible manner. • The company is seeking to generate more electricity during hours of higher demand. • Interested in assistance for the development of a technological scheme and setting optimal parameters. Within SupportDHC, EnergyPRO model prepared by LSTA for the frontrunner Alytus DH will be used to assist in optimization of Utena biomass CHP plant operation by integration of short-term heat storage tank.

Follower Klaipeda DH	
Municipality	Klaipėda District (Gargzdai city)
Inhabitants	15,461 (01/2025)
DHC operator	AB „Klaipėdos energija"
Present DHC system	• Installed heat capacity 57 MW (4 boiler houses) • Max heat load 17,3 MW • Total length of pipe routes: 14 km • Annual heat production: ~ 38 GWh • Fuel mix: 24 GWh (60%) natural gas and 15 GWh (40%)from biomass • 3546 users (170 buildings) are connected to DH network
Support actions planned	DH operator is seeking feasible solutions to reduce fossil fuel usage. Following the experience with Kaunas frontrunner, LSTA will assist in evaluating solutions - EnergyPRO model prepared for the frontrunner Kaunas (Neveronys DH) will be used.

Follower Jonava DH	
Municipality	Jonava District municipalityity
Inhabitants	26,680 (01/2025)
DHC operator	UAB Jonavos šilumos tinklai
Present DHC system	• Jonava DH company operates several district heating networks, the largest of which is the Jonava city network. • Installed heat capacity 71 MW (2 boiler houses in Jonava city network)) • Max heat load 35 MW • Grid length: 51 km • Annual heat production: ~ 120 GWh • Fuel mix: 104 GWh (87%) biomass and 16 GWh (13%) from natural gas

	• 520 buildings, over 14100 end-users are connected to DH network
Support actions planned	The operator is interested : • Installation of heat accumulation tank (>1000 m^3) • Absorption heat pump (2.0 MW) • Wastewater heat recovery (2.0 MW) • Fuel conversion of small boiler houses with heat pump installations) Following the experience with Kaunas and Alytus frontrunner, LSTA will assist in evaluating solutions usinng EnergyPRO model prepared for the frontrunner Kaunas (Neveronys DH) for simulation of decarbonization alternatives in small fossil fuels firing boiler plants, which must be decarbonised. Also LSTA will assist in development of technological scheme and setting of the optimal parameters for Jonava city DH network

Follower Taurage DH	
Municipality	Taurage District municipality
Inhabitants	21,404 (01/2025)
DHC operator	UAB Tauragės šilumos tinklai
Present DHC system	• Installed heat capacity 86 MW (5 boiler houses in Tauragė DH network)). Most boilers are worn out. • A steam turbine (0.8 MWe) has been installed in the Berze boiler house, generating about half of the required electricity. The turbine operates mainly during the heating season, in parallel with the steam boiler. • Max heat load 25 MW • Grid length: 36 km • Annual heat production: ~ 65 GWh • Fuel mix: 99% biomass and 1% peat, shale oil, diesel • 177 apartments houses, 118 individual houses, 111 commercial and other buildings (over 5638 end-users, 487.000 m2) are connected to DH networks
Support actions planned	The operator is interested : • ORC biomass CHP plant • Installation of an absorption heat pump • Installation of solar thermal collectors, thermal storage tank • Waste heat utilization Tauragė DH is preparing for the modernization of its CHP plant and is considering the installation of a thermal storage tank. The operator needs assistance in determining the optimal parameters (would resort to burning fossil fuels if the winter is particularly cold). Following the experience with Alytus frontrunner, LSTA will assist in evaluating solutions using EnergyPRO model in development of technological scheme and setting of the optimal parameters for Taurage DH system.

2.5.3 Preparatory steps completed

During September–November 2024, collaboration agreements were signed with 4 followers: Utena DH, Ukmergė DH, Tauragė DH, and Jonava DH. The last agreement with Klaipėda DH is planned to be signed at the end of April or in May.

General interest of followers can be summarized as:

- Feasibility of efficiency measures in wood chip-fired boiler plants.
- Technological solutions and economic aspects of thermal energy storage
- Planning and expansion of district heating (DH) systems
- Marketing and attraction of new DH consumers
- Coupling of the DH and electricity sectors
- Initial development of district cooling networks
- Regulatory and pricing framework of the DH sector

2.5.4 Direct support activities kicked off

In September 2024, LSTA, in cooperation with SweHeat (Sweden) association, invited SupportDHC frontrunners (Kaunas DH, AlytusDH) and 2 followers (Ukmerge DH and Klaipėda DH) to participate in a study-tour in Gothenburg on the theme of "Large to Small-sized Heat Pumps in District Heating Networks". Participants had the opportunity to get acquainted and gain practical knowledge about scalable heat pump solutions, enhanced energy efficiency through integrated systems, adaptation of energy systems to allow for mixed energy sources, such as biomass and waste heat.

Since the beginning of 2025, LSTA has started implementing a capacity building programe, where all followers are involved to participate: 2 seminars have been organized on 30 January in Prienai and on 26 February in Vilnius. Also on April 7 LSTA organized webinar during which EnergyPro calculations, simulations of frontrunner cases (Alytus and Kaunas) has been presented in detail to followers.

2.6 Ukraine

2.6.1 Selection procedure for followers and status of selection

City Institute started communication with district heating operators in Ukraine to join the Support DHC project as follower cases in January 2025. In March 2025 – a first DH operator – Zhovkvateploenergo expressed an interest. In order to increase the number of followers from Ukraine, City Institute organized a campaign on Facebook in the beginning of April 2025 and additionally announced the opportunity to become the follower case at Support DHC project during the District Heating Module of the Resilience Academy, organized by the Association of Ukrainian Cities on 14-15 April. As a result, 7 district heating operators from 6 cities expressed an interest in being follower cases within Support DHC project:

- Teploenergo in Lozova, Kharkiv region
- Teplovodoservis in Lozova, Kharkiv region
- Zhovkvateploenergo in Zhovkva, Lviv region and in Lviv municipality
- Sambirteplokomunenergo, in Sambir, Lviv region
- Vinnytsiamis'kteploenergo in Vinnytsia
- Chornomorskteploenergo in Chornomorsk, Odesa region
- Bilhorod-Dnistrovskteploenergo in Bilhorod-Dnistrovskyi, Odesa region

2.6.2 Short description of each follower

Follower DH - Teploenergo	
Municipality	Lozova, Kharkiv region
Inhabitants	53 thousand people
DHC operator	Municipal Enterprise „Teploenergo“
Present DHC system	• Installed heat capacity 518,3 MW • Max heat load 72,6 MW • Grid length: 115,4 km • Annual heat production: ~ 140 GWh • Fuel: natural gas, coal • Customers: 20264
Support actions planned	RES integration, financing, technical aspects of low temperature district heating
Follower DH - Teplovodoservis	
Municipality	Lozova, Kharkiv region
Inhabitants	53 thousand people
DHC operator	Municipal Enterprise „Teplovodoservis“
Present DHC system	• Installed heat capacity 16 MW • Max heat load 12 MW • Grid length: 7,6 km • Annual heat production: no information • Fuel: natural gas Customers: 350
Support actions planned	RES integration, financing
Follower DH - Sambirteplokomunenergo	
Municipality	Sambir, Lviv region
Inhabitants	34 thousand people

DHC operator	Municipal Enterprise „Sambirteplokomunenergo“
Present DHC system	• Installed heat capacity 34 MW • Max heat load 7 MW • Grid length: 7,36 km • Annual heat production: ~ 8.74 GWh • Fuel: natural gas Customers: 42
Support actions planned	RES integration, financing, technical aspects of low temperature district heating
Follower DH - Zhovkvateploenergo	
Municipality	Zhovkva, Lviv region
Inhabitants	13.8 thousand people
DHC operator	Municipal Enterprise „Zhovkvateploenergo“
Present DHC system	• Installed heat capacity 35 MW • Max heat load 12 MW • Grid length: 17,62 km • Annual heat production: no information • Fuel: natural gas Customers: no information
Support actions planned	RES integration, financing, technical aspects of low temperature district heating
Follower DH - Vinnytsiamis'kteploenergo	
Municipality	Vinnytsia
Inhabitants	367,9 thousand people
DHC operator	Municipal Enterprise „Vinnytsiamis'kteploenergo“
Present DHC system	• Installed heat capacity 915 MW • Max heat load 320 MW • Grid length: 195 km • Annual heat production: ~ 724,5 GWh • Fuel: natural gas, biomass Customers: 80000
Support actions planned	RES integration, energy efficiency, financing
Follower DH - Chornomorskteploenergo	
Municipality	Chornomorsk, Odesa region
Inhabitants	57,98 thousand people
DHC operator	Municipal Enterprise „Chornomorskteploenergo“
Present DHC system	• Installed heat capacity 186 MW • Max heat load 83 MW • Grid length: 76 km • Annual heat production: ~ 93,57 GWh • Fuel: natural gas Customers: 19153 residential users
Support actions planned	RES integration, energy efficiency, financing
Follower DH - Bilhorod-Dnistrovskteploenergo	
Municipality	Bilhorod Dnistrovskyi, Odesa region
Inhabitants	47,72 thousand people
DHC operator	Municipal Enterprise „Bilhorod-Dnistrovskteploenergo“
Present DHC system	• Installed heat capacity 105 MW

	• Max heat load 37 MW • Grid length: 36 km • Annual heat production: ~ 49,44 GWh • Fuel: natural gas Customers: 10423
Support actions planned	RES integration, financing, technical aspects of low temperature district heating

2.6.3 Preparatory steps completed and

2.6.4 Direct support activities kicked off

Kick-off meeting with all follower cases is planned to be on 30th of April in online format. After that, separate meetings will be planned.