

## AREA 21 + action

### Updated profile of EID Härmälä

#### What is this paper about?

AREA 21 + action follows up on AREA 21. In the predecessor project, the consortium developed the so-called Energy Improvement District (EID). The energy actors in these areas, including the local and regional authorities, energy providers, building owners as well as citizens, have participated through the EIDs in a cooperative energy planning process. This resulted in the development of EID Strategies and Action Plans to support improved energy efficiency.

AREA 21 + action provides the frame in which first measures from selected EIDs can be implemented and the potential of the EID concept to contribute meaningfully to both integrated energy planning and emissions reductions can be demonstrated.

This briefing paper shows how the EID Härmälä approaches this task, i.e. how they implement their Action Plan developed in the predecessor project. For further information about the EID Härmälä, please refer to <https://area21-project.eu/pilot-areas/tampere/>



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## Achievements so far

**Achievement 1:** The City of Tampere and Tampere University of Applied Sciences developed and tested an energy and indoor condition-monitoring tool for apartment houses. Fifteen tenants in three apartment houses tested the tool. The monitoring tool helped to decrease the energy use in apartments and received mainly positive feedback from the users and other stakeholders. Local key stakeholders were interested in the tool. Thus, it will be used to further develop user-centric energy monitoring tools.

**Achievement 2:** The City of Tampere developed an action model for encouraging and supporting building owners to exchange oil-based heating systems. The action model was developed in the EID process through many workshops in cooperation with building owners and local SMEs. The action model idea got support from local stakeholders and a practical campaign based on the idea started with public funding. The campaign page has already gained over 10 000 visitors (<https://oljystaauusiutuviin.fi/>).

**Achievement 3:** The City of Tampere and Tampere University of Applied Sciences developed an idea of educating building managers in energy issues. The idea got support from the stakeholders and the education started in early 2020. During the first year already over 40 building managers participated in courses.

## Vision and actions for the extension phase

Residential energy use in Härmälä will be carbon neutral by 2030. All cost-effective potential for energy efficiency, demand response and renewable production will be realized in the residential building stock through collaboration between local stakeholders.

**Action 1:** Piloting open data and AI based energy efficiency services for building owners to understand if the idea is viable. Energy audits are done in 8 pilot buildings with accuracy that could also be done mechanically.

**Action 2:** Developing and implementing an operating model for improving energy efficiency in electrically heated buildings. The action includes creating a webpage and organizing a campaign and events for electrically heated buildings.

**Action 3:** Implementing and piloting an operating model to encourage and support building owners to replace oil heating systems with lower carbon alternatives. The operating model consists of an information campaign, events, stakeholder cooperation and peer support for building owners.

## Potentials and expected results

**Goal 1:** 10% reduction of carbon emissions from residential buildings by improved energy efficiency (from 2020 to 2030).

**Goal 2:** Limiting heat demand peaks in district heating networks.

**Goal 3:** Replacement of all oil-based heating systems in residential buildings by 2030.

The main challenge is that building owners lack information on appropriate energy actions. In Action 1 we are aiming to tackle that problem by providing building owners with information on “best-value-for-money” energy actions for their building. Suggestions on energy actions are given by using data from the building.

In Action 2, we are creating new information material and an action model for helping building owners of electrically heated buildings to take energy actions. There are 7000 electrically heated detached houses in

Tampere, and it is estimated that those could reduce emissions on average by 30-40% just by making profitable energy actions.

In Action 3, we are piloting a new approach to support building owners in converting oil-heating to renewable energy. The piloting is based on peer support between building owners that is facilitated by the AREA 21 + action project. There are 4000 oil-heated buildings in Tampere accountable for 7% of total emissions in the city.