Rijksdienst voor Ondernemend Nederland

LIFE call for proposals 2021

Organisation: City of Haarlem

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LIFE Call

Our interest lies with the following calls:

- LIFE-2021-CET-ENERCOM (Developing support mechanisms for energy communities and other citizen-led initiatives in the field of sustainable energy).
- LIFE-2021-CET-COOLING: Facing the increase in cooling demand of buildings in the coming years

Both calls are fitting to our project.

The project is currently looking for additional partners for these calls, but is always open for cooperation in other calls or other European subsidies

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Titel project: Citizen-driven solar district heating

A bottom-up project in Haarlem (NL) with a sustainable and scalable district heating owned by citizens.

Introduction

The project was launched in 2017 as an initiative by concerned residents, following the realisation in 2015 of a cooperative solar roof owned by citizens.
Residents shared what principles were important to them for sustainable and cooperative district heating and cooling for the neighbourhood. These principles formed the basis for a research project led by the Delft Technical University (TU Delft). That research showed that Solar District Heating is most interesting for the neighbourhood: PVT panels generate heat and electricity, silent water-to-water heat pumps heat to the homes and a very low temperature district heating and aquifer thermal energy storage (ATES) ensures that the heat generated in the summer can be used in the winter.

Goal

Residents and the municipality are jointly developing cooperative district heating in a residential area within the municipality of Haarlem. The aim is to create a blueprint for similar networks in the Netherlands and share this information in Europe.
Once the project has been completed, 800 dwellings will be natural gas-free and will be heated by locally generated heat. The district heating, storage and source (PVT panels) are in the hands of residents. The residents are uniting for this purpose in a Neighbourhood Energy Association (energy cooperative). This will lead to a CO2 reduction of100% on the heating (and cooling) of these houses compared to the existing

heating by means of (grey) natural gas. The current average natural gas consumption per dwelling is approx. 1,840m3/year. The CO2 saving is therefore approx. 2,782 tonnes of CO2.

Expected results:

- 1 residents' initiative owner of a district heating system
- 800 households in the energy cooperative
- total investments in insulation, sustainable generation and heat network (phase 1; 800 dwellings): €31.8 million
- total gas saving: 1.472 million m3 per year
- total energy savings 14.4 GWh/year
- 100+ residents from the neighbourhood who have participated in an education or training course
- 250+ residents from Europe who have participated in an education or training course
- 50+ civil servants from Europe who have participated in an education or training course
- 10+ residents' initiatives and municipalities who have the intention to replicate (part of) the results of this
- of this project in the short term.
- 30+ residents' initiatives informed about the project
- 30+ municipalities, regions and provinces in the Netherlands informed about the project
- 50+ municipalities, regions and provinces in Europe informed about the project
- Financing model for cooperative heat networks
- Financing model for residents - with special attention to the small-business sector
- Standard policy for cooperation between municipalities and residents' initiatives.
- All results will be summarised in an online toolbox / knowledge platform so that they are easily accessible.

Current partners:

- Municipality of Haarlem
- Technical University of Delft
- Deltares (independent institute for applied research in the field of water and subsurface)
- Duurzaam Bouwloket; an independent energy information point
- Potential partners: energy provider Equans (former ENGIE).