

IEA SHC Solar Academy

20 June 2023



newheat
fournisseur de chaleur renouvelable

01

About Newheat



Newheat, a 100% renewable heat provider

Decarbonise industrial sites and district heating networks without combustion

Our model

An independent heat supplier, managing projects throughout their entire life cycle



Our vision

Selection of the most virtuous technologies without combustion, combined with innovative heat storage systems



Solar thermal



Short or long-term storage



Heat recovery

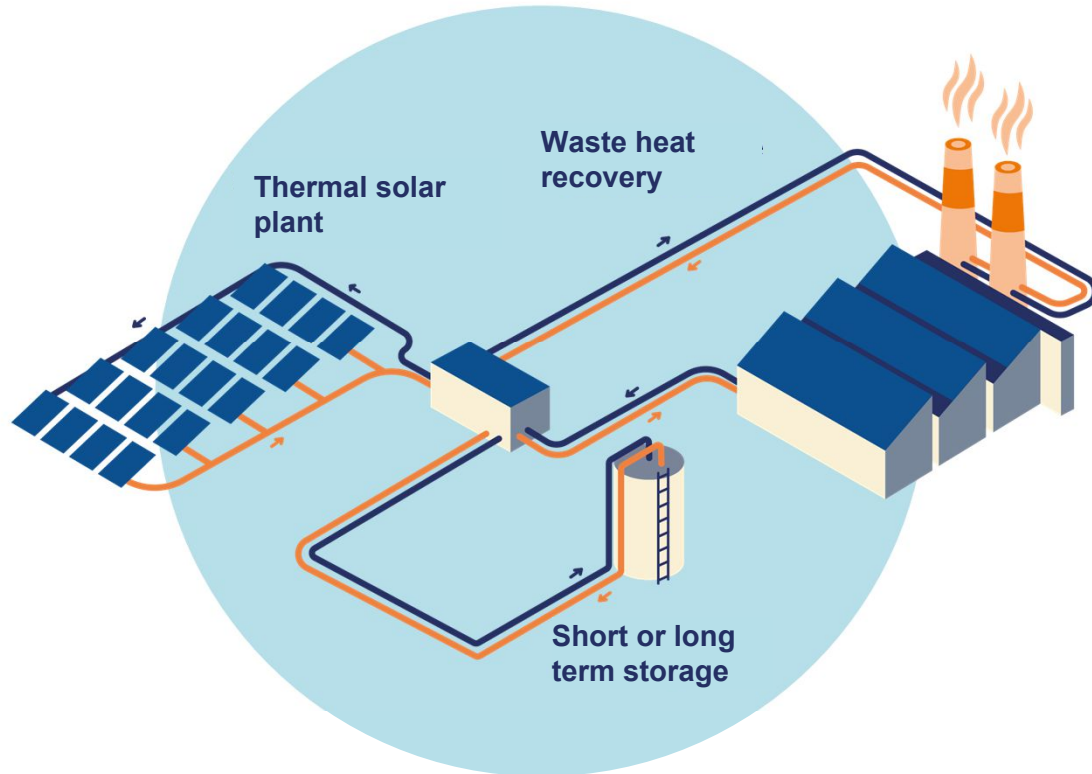
And also: Heat pumps, geothermal, ...

We provide our clients with complete, reliable and competitive decarbonisation solutions, for which we handle the entire set-up and financing over their lifetime



Our technical know-how

Design and operate renewable heating installations, tailor-made for our customer's need



Our approach

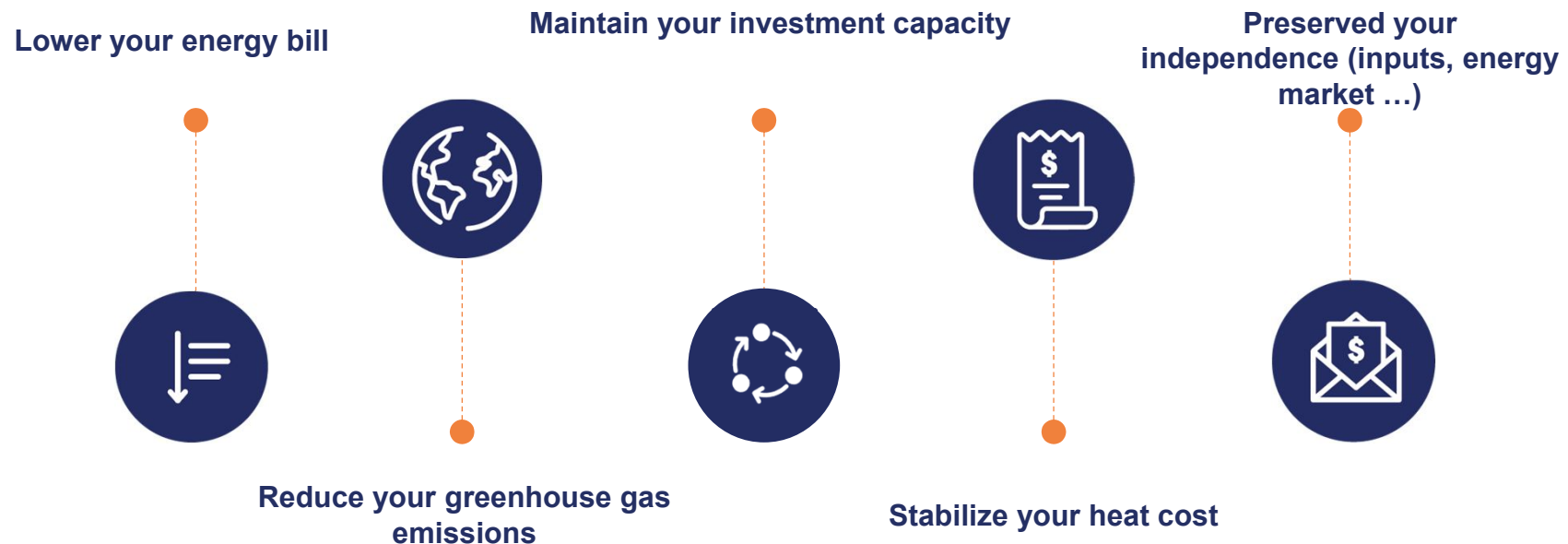
- **We model heat requirement** (energy flow, temperatures, dynamic behaviour, etc.)
- **We analyse the potential for heat recovery and energy efficiency**
- **We design a renewable heat plant tailor-made for the production site:**
 - Taking into account the local context (available area, specific administrative rules, etc.)
 - Aiming for an optimal energy mix depending on local resources and relevant technologies
 - Committing on reliable and competitive technical solutions.

A project-by-project approach ensuring a competitive heat price and securing the delivery of energy directly into the process

Our offer: third-party investment

Renewable heat-as-a-service

Our Heat Purchase Agreement with mutual delivery commitment over 15 to 25 years: **a competitive heat price with decisive advantages**



We take care of all aspects of the project:

- Technical: design, implementation and operation
- Financial: financing the entire project, obtaining finance aid (ACCU, Energy Saving Certificate, grants, etc.)
- Administrative: administrative authorizations and land management (search and rental of land, etc.)

Our global presence

A local presence in the markets covered



02

**Solar Heat in Industrial Processes (SHIP)
NEWHEAT References**



More than 40MW of Renewable Heat Plants in operation

Newheat, leader of solar heat supply for industrial processes

● **1st FPC solar thermal plant with trackers in the world**



Condat Paper Mill

Capacity of 3,4 MWth

Storage: 500 m³

Commissioning date: January 2019

Design – Build – Own – Operate



● **Largest solar thermal plant in the EU for industry (in operation)**



Malteries Franco-Suisses

Capacity of 12,7 MWth

Storage: 3000 m³

Commissioning date: November 2020

Design – Build – Operate



● **Largest solar thermal plant in the EU for industry (in construction)**



Lactoserum powder factory

Capacity of 13,3 MWth

Storage: 3 000 m³

Commissioning date : Q4 2022

Design – Build – Own - Operate



Our references: industrial sites

Condat Paper Mill (Lecta group)

- >> Commissioning: Januar 2019
- >> First solar thermal plant using trackers in the world



Newheat's role



Key indicators

- Peak power: 3,4 MW_{th}
- Solar collectors area: 4 210 m²
- Total land area: 1,4 ha
- Storage capacity: 500 m³
- Annual energy delivery: ~3 900 MWh pa
- CO2 emissions avoided: ~1 000 Tons pa

Specificity of the site

- Rehabilitation of the old carbonated sludge storage area
- Preheating of steam boiler make-up water

Details on the HPA

- Grants: French Energy Agency (ADEME)
- Client: Condat Paper Mill
- Duration of the HPA: 20 years

Our references: industrial sites

Malteries-Franco-Suisses Malthouse (Boortmalt Group)

- >> Commissioning: April 2021
- >> Largest solar thermal plant for industrial process in Europe



Newheat's role

Design

Develop

Build

Operate

Key indicators

- Power peak: 12 MW_{th}
- Solar collectors area: 15 000 m²
- Total land area: 3,2 ha
- Storage capacity: 3 000 m³
- Annual energy delivery: ~8 600 MWh pa
- CO2 emissions avoided: ~2 000 Tonnes pa

Specificity of the site

- Preheating of the drying air in the kiln
- Implementation of the solar field over 3 different zones

Details on the HPA

- Grants: French Energy Agency (ADEME)
- Third-party investors: Kyotherm
- HPA duration: 20 years

Our references: industrial sites

Milk powder facility Lactoserum-France (Lactalis Group)

- >> Commissioning: November 2022
- >> Largest solar thermal plant in France



Newheat's role



Key indicators

- Power peak: 13,3 MW_{th}
- Solar collectors area: 15 317 m²
- Total land area: 5 ha
- Storage capacity: 3 000 m³
- Annual energy delivery: ~8 000 MWh pa
- CO2 emissions avoided: ~2 000 Tonnes pa

Specificity of the site

- 2 integrations in the drying tower:
 - ✓ Preheating of the main air inlet
 - ✓ Preheating of the regeneration air from the dehumidification system

Details on the HPA

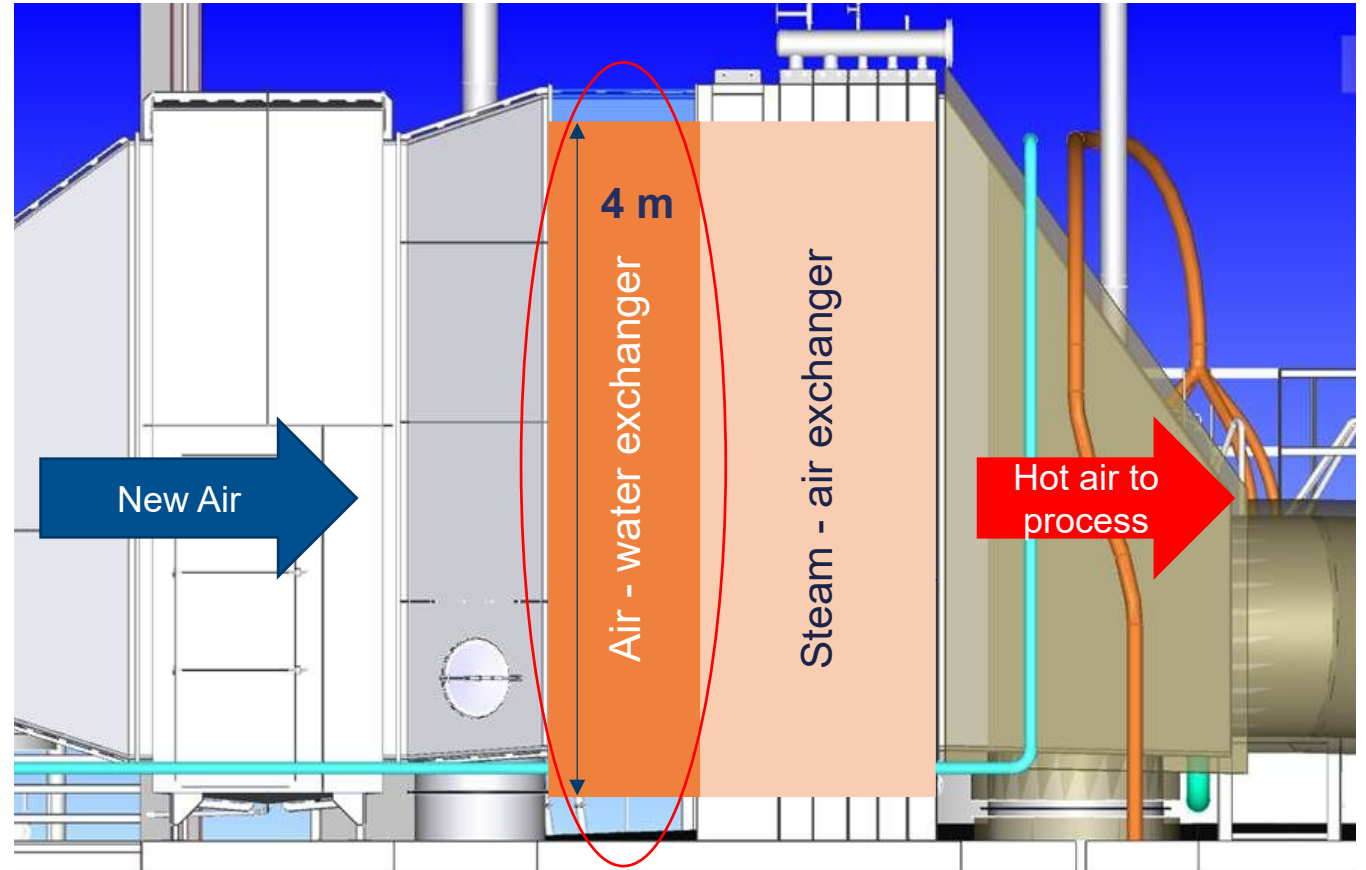
- Grants: French Energy Agency (ADEME), Région Grand-Est and GIP « Objectif Meuse »
- Client: Lactoserum France
- HPA duration: 25 years

Lactalis project highlights

Example of heat integration for air preheating in a spray dryer



Installation of the air/water exchanger (10t) in the Lactalis spray drying tower
(source: Newheat)



Drying air heating circuit, flow rate 80,000m³/h

(source: Newheat)

Lactalis project highlights

Newheat successfully led and- coordinated an industrial project in an operating factory, with multiple public and private stakeholders

Interfaces with the natural environment

- Preservation of a pond for an **endangered frog species**
- Modifications to civil works in an area of the site presenting an **archaeological interest**
- **Sheep** will graze in the solar field to **control vegetation growth**



Interfaces with the built environment

- **Railway line crossing**, 2 pits and a horizontal well to enable the hot and cold water lines from the solar plant to connect to the process
- Negotiation of a **permanent access to SNCF** (French railway authority) **land**
- Part of the plant is under **ATEX regulations** (airborne powder)
- Permitting obtained to account for a **high voltage transmission line above the solar field**

No production interruptions for Newheat's operations

- Whilst installed in 2019, the exchanger was connected only in Q3 2023, after the completion of the solar field construction. As **the connection did not require a process interruption**. This ensured **process continuity for the plant**.
- Compliance with **food production standards** for the work (tool disinfection)
- No disruption to **road traffic within the plant**



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renewable heat supplier

Thank you

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