# WEBINAR #5

*Success Story: How Renault Trucks used District Heating to turn off its gas boilers*


ALLICE

# Agenda - #5 INTREPIDH Webinar

Moderator

**Anouk Deportes, ALLICE**

Dalkia

*How do I connect to heat network with Dalkia ?*

**Romain Drouart, Head of DHC *Dalkia***

Intro

**Léo Pasquier, ALLICE**

Renault Trucks

*District Heating use case*

**Simon Vedie, Property Project Manager *Volvo Group***

# Who are we ?

## The leading alliance for industry decarbonisation

Soutenu par

RÉPUBLIQUE FRANÇAISE
Liberté
Égalité
Fraternité

ADEME
AGENCE DE LA TRANSITION ÉCOLOGIQUE

### Why ALLICE ?

- To **connect, inform and support** industrial stakeholders through a **cross-sector approach**
- To **accelerate innovation** for industry decarbonisation
- To **ensure informed decisions**

### Our founders

cetiat – ensemble, innover et valider
CETIM
blunomy
CTCPA
CTMNC Tuiles & Briques
ctp centre technique du papier

### Our organisation

- An **independent and objective** facilitation organisation
- A **membership-based** model
- A governance aligned to **industrial needs**

### Key figures

- Created in **2018**
- **130** members & partners
- **50+** published studies
- Study cumulative budget: **2,5 m€**

# INTREPIDH: PROJECT GOAL

**The project aims to increase awareness and knowledge about industrial process heat based on district heating across Europe.**


- Establish strong project team and network – get smarter together
- Publications and dissemination
  - Best practice catalogue – Published Oct 2025
  - Webinar series – 8 webinars during Nov-2025 to Sept-2026
  - Spreading the word through networks and events (SDEWES, Serbia, …)
  - Recommendations and gaps (at end of project). Focus of role of facilitators such as municipalities, energy agencies,..

**Raise awareness – This solution is overlooked. We encourage everyone to help!**

**Demonstrate that this is possible and attractive for Europe!**

https://dbdh.org/intrepidh-exploring-a-new-type-of-collaboration-between-the-process-industry-and-district-heating/

# Webinar INTREPIDH
# How do I connect to heat network with Dalkia ?

Romain DROUART
Head of DHC in french market

# Dalkia District Heating & Cooling in France

## Design, build & operate heat production to district heating in the same contract

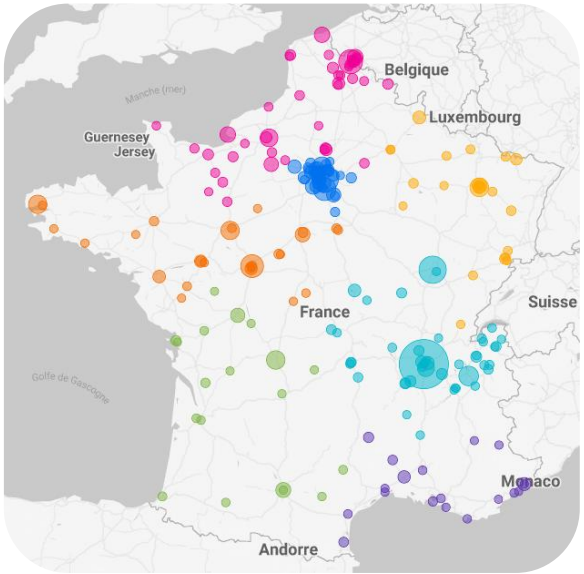
Most District Heating operated by Dalkia and connected to Industrials are result from public tenders (Public Service Delegation - DSP).

To understand factor keys of success of industrial sites connection it's important to understand how theses contracts are working :

- Price : €/MWh (energy transformation, excl. VAT) & €/kW (investment & maintenance, excl.VAT)
- Duration of contract : 25 – 30 years
- Financial risks have to be taken by operator
- Equality of treatment between same kind of users

**DSP in 2025 at Dalkia :**

- 165 district heating & cooling (total Dalkia ≈ 300)
- 14 000 delivery points (≈ 40 industrial sites)
- 8 TWh of heat delivery (total Dalkia ≈ 10 TWh)



# How to Connect Industrial Sites to Low-Carbon DHC?

## Energy needs and temperature :

*Can our network meet your demand?*

- **Annual consumption:** How many MWh do you use per year? (3-year history).
- **Peak power:** What is your maximum power demand (kW or MW) ?
- **Load profile:** Is your consumption constant (24/7) or do you have peaks? Do you stop during weekends or summer?
- **Temperature levels:** What temperature do you need for your process? (Hot water or Steam?)

# How to Connect Industrial Sites to Low-Carbon DHC?

## Technical constraint

*How difficult is the connection?*

- **Current production:** What is your current system? (Gas, oil, or biomass boiler).
- **Equipment age:** How old are your boilers? Are they reaching the end of their life?
- **Space & location:** Is there enough space for a new delivery station (substation)?
- **Internal Network:** How far is the connection point from your production lines?

**109**

**kgCO2e/MWh**

*2025 Annual Survey of District Heating Networks - Fedene*

# How to Connect Industrial Sites to Low-Carbon DHC?

## Strategy and decarbonization

*Aligning the project with your goals.*

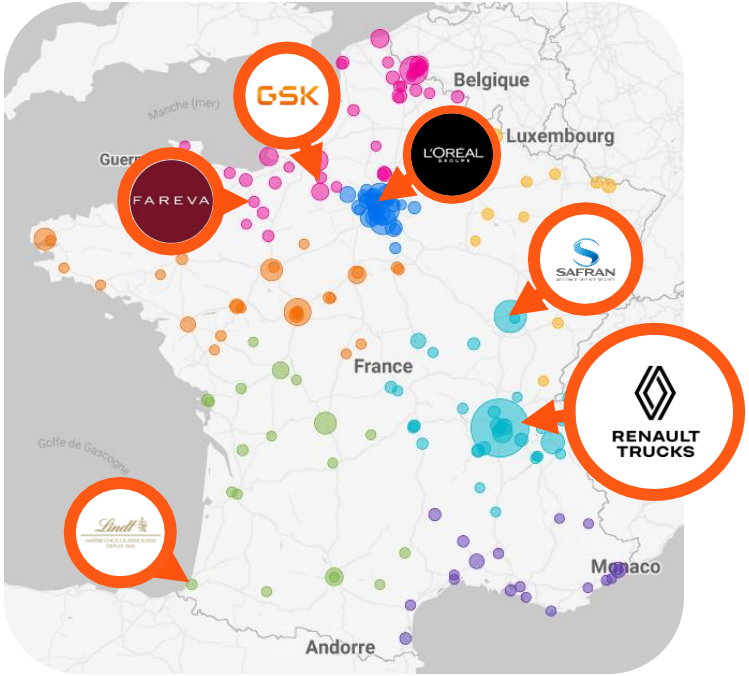
- **CO2 Goals:** What are your targets for carbon reduction?
- **Carbon Market:** Are you part of the ETS ?
- **Price stability:** Do you have a long-term gas contract? When is the end date?
- **Backup System:** Do you want to keep your old boiler as a backup for emergencies?

## Economis and contracts

*Making the project competitive*

- **Total cost of energy**: What is your current global cost per MWh? (Including fuel, taxes, maintenance, and equipment depreciation).
- **Contract Duration:** Are you ready for a long-term partnership? (Usually 10 to 20 years).
- **Investment (CAPEX):** Who pays for the connection works? (Possible financing options from the network operator).

# More and more Industrial Sites connected !



# Thank you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# Renault Trucks A Volvo Group company


VOLVO

- 2nd world's manufacturer of trucks, buses, construction equipment as well as marine and industrial engines.
- 99 000 employees
- Production in 17 countries
- 45 de billions € net sales

# Renault Trucks Commitment for Climate

## “1.5 °C” scenario

SCIENCE BASED TARGETS

RENAULT TRUCKS

**SCOPE 1** Own operations direct greenhouse gas emissions

**SCOPE 2** Purchased energy emissions

**1%** of our $CO_2$ emissions

*- 50% $CO_2$ in 2030 vs. 2019*

**SCOPE 3** All other indirect green-house gas emissions, incl. use of sold products

**99%** of our $CO_2$ emissions

*- 40% $CO_2$ in 2030 vs. 2019*

**100% fossil-free vehicles in 2040**
**Net zero company in 2050**

# Towards sustainable Heat

## PROJECT

The Vénissieux internal heating network project is at the heart of the energy transformation of Renault Trucks and its region.

It consists of moving from decentralised and carbon-based heating production to centralised and carbon-free production.

### What is waste heat?

This is the heat produced by our industrial activities (machines, processes, technical rooms, etc.) and which has not been used until now.

The internal heating network aims to recover this energy to heat our buildings or power our industrial processes. The waste heat is thus reused and becomes a local resource.

## OBJECTIVES

- To meet the challenges of the energy transition and reduce our greenhouse gas emissions.
- Strengthen our energy independence from fossil fuels and strengthen our competitiveness.
- To recover the site's waste heat in a circularity approach.

### 2019 PLANNING

Carrying out studies to build a decarbonization roadmap by 2040:

- Definition of the source of waste heat on the site.
- Operational feasibility.

### 2022 INITIATION

Implementation of the first waste heat recovery project to heat the main building of the stamping centre from:

- Stamping processes.
- Air production.

### 2024 MUTUALISATION

Operation and pooling of three new heat sources on a new network via technical galleries, some of which are a hundred years old and restored.

**The carbon-free internal heating network was born.**

### 2026 OPERATION

Power supply from the grid to most of the buildings on the Vénissieux site for heating and certain processes at the Vénissieux plant.

Monitoring and constant search for optimization in a continuous improvement approach ($CO^2$, energy, costs).

### 2030 DEVELOPMENT

Provision of carbon-free heat on site thanks to a power reserve and allowing the connection of:

- New buildings and processes.
- Last existing buildings.

# How it works ?

## GENERATION

Production of heat is done through different sources


District heating
Lyon city

Waste heat
Foundry Vénissieux

Waste heat
Stamping/compressed air

Boiler room n°3

## A 3 STEPS CYCLE

**1. RECOVERY**

Heat from our processes is recovered during work hours warm water.

**And if the waste heat is not sufficient ?**

The other productions, district heating, boiler room n°3 ensure hot water production at 70°C.

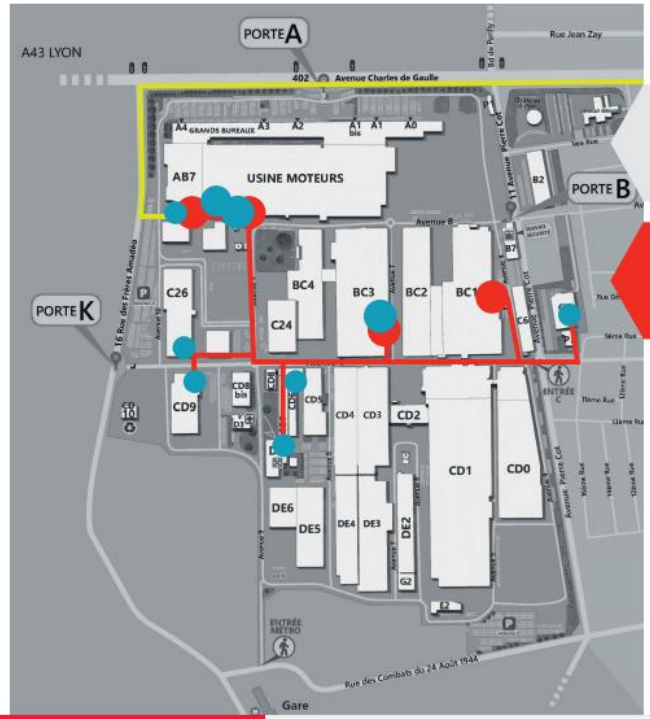
**2. DISTRIBUTION**

The water go through heat exchangers and is thanks to pumps go to the network.

**3. USE**

Heat from water is used to heat buildings, domestic hot water and processes.

# The internal heating network in summary




The internal heating network is a local and efficient solution to meet the challenges of decarbonization and energy security.

SUSTAINABLE AND CARBON-FREE ENERGY
**2.4KM OF NETWORK THAT SUPPLY THE SITE**

- Distribution substation
- Production substation
- Internal network
- District Heating Network

RENAULT TRUCKS VOLVO

MÉTROPOLE GRAND LYON

PRIME ECO CHALEUR

Funded by

RÉPUBLIQUE FRANÇAISE

ADEME

FONDS CHALEUR
PLUS D'ÉNERGIES RENOUVELABLES, PLUS D'INDÉPENDANCE ÉNERGÉTIQUE

# Why another production

- Ensure back-up for our internal network in case of heat recovery failure or specific climatic conditions
- Ensure stable source of heat independently of our production lines
- Increase power of the network during the time

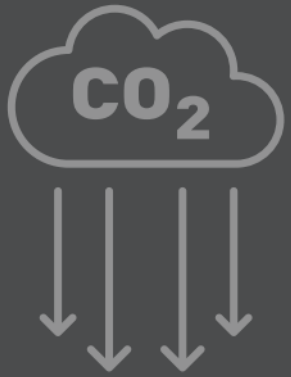
**The different keys to choose district heating :**

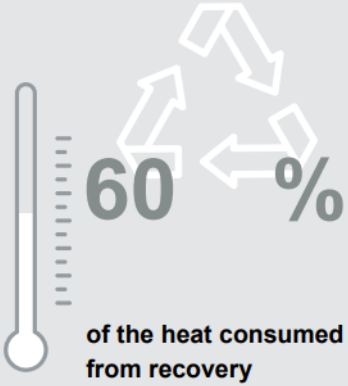
- Development close to our site, the **closer is the network, the cheaper is the CAPEX**
- Low CO2 emission factor with, **plan to continue lower it**
- District heating availability and back-up
- Alternative to electrification to decarbonize and keep electricity for other specific needs
- Energy cost under control with **less influence of fossil energy market**
- Energy cost **less expensive than natural gas or electricity**

**13 000 kW**
of
Installed power

**7**
**Dismantled boiler rooms**

SAVING
of
**2160**
tons of
CO2 / year




of the heat consumed
from recovery

**85 000 m 2**
of
Heated buildings

**8 000 MWh/an**
**saved**


RENAULT
TRUCKS

# Thank you

# Network synoptic