A business model to boost solar heat into industrial processes

"Renewable energies for manufacturing industries" Workshop

sunny times for industry

sunti

IEA, Paris, 11 May 2015

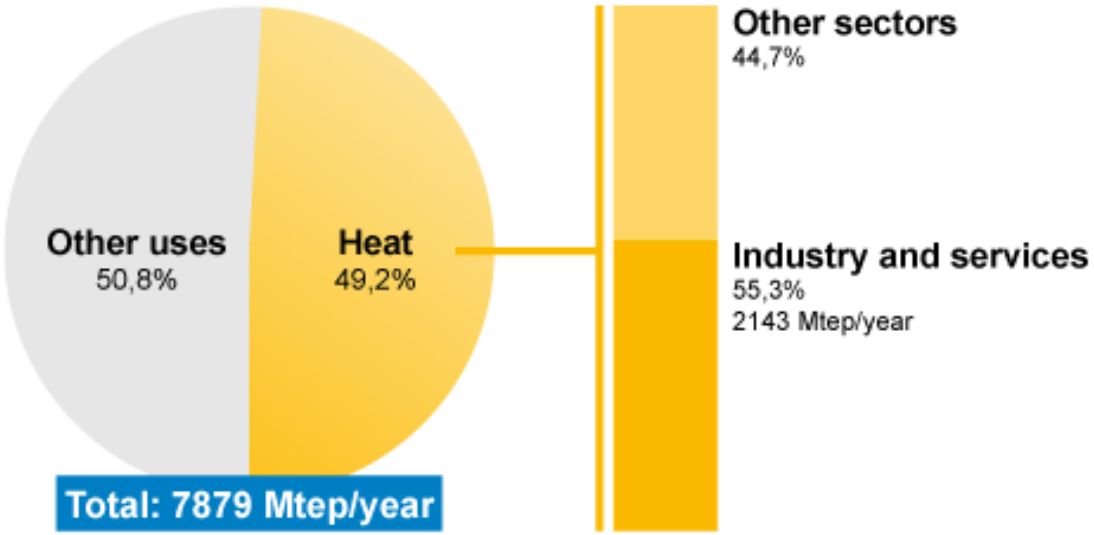
Heat market: a huge potential left to fossil fuels

A good half of the energy consumed throughout the world is used in the form of heat. Industry and services contribute up to 50% of this demand. To produce this heat, today's industry employs fossil fuels massively and almost systematically.

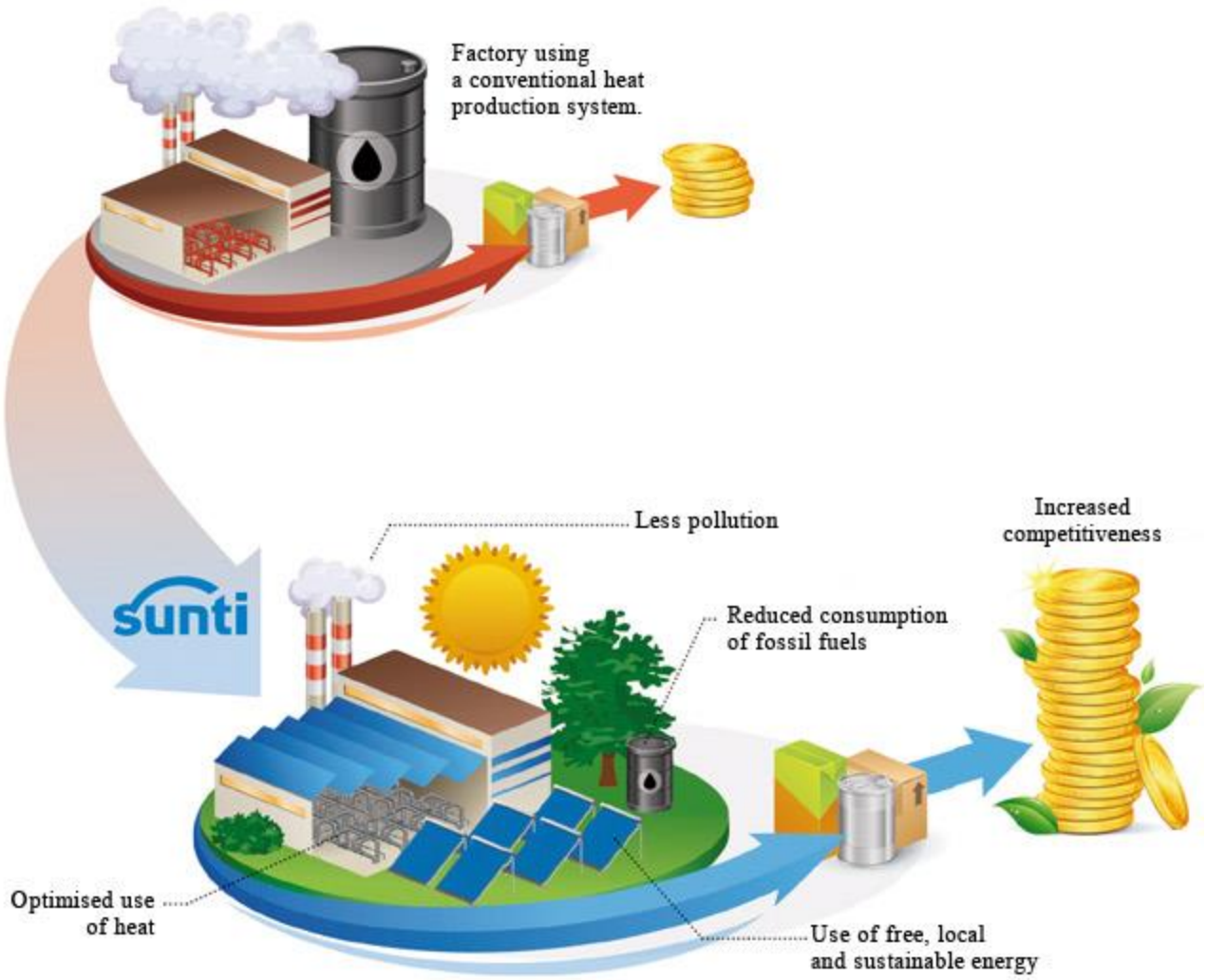
A successful energy transition requires solar process heat to take a major role.

World energy demand in 2010

Energy balances of non-OECD countries, IEA, 2012



The principle



sunti

Main barriers to overcome

Main barriers to massive deployment	Solutions fitted to industries
Investment issues	Third investment model
Solar competitiveness	Go big: large plants with large collectors
Awareness of the process industries	Communication and dissemination of references directly to the Industries
Technological and financial risk perception	Risk holder is the energy provider / solar plant owner

The business model

Benefits for the manufacturing industries

Reduction of energy consumption and improvement of sustainability.

1. Reduction in fossil fuel consumption / Immediate decrease of energy bills.
2. No development or investment costs.
3. Fossil fuel price risk mitigation.
4. Quality of operations assured / Long term relationship.
5. Improvement in the environmental balance sheet for the production sites.
6. Legitimate access to communication and product marketing enhancing a “sustainable development” policy.
7. Zero risk.

Sunti’s position and business model is a solution to trigger projects and therefore to boost solar process heat.

sunti

Main projects' challenges

Even overcoming the main barriers, Solar process heat must face specific challenges in each project.

- Competitiveness vs. Conventional fuel prices
- Available suitable space (ground or roofs)
- Temperatures limitation
- Heat demand profile (storage, seasonality)
- Long term commitments
- Heat recovery: a chance and a threat

sunti

Some examples

- Göss Brewery (Austria):
  - Industriel sector: beer production
  - Application: heat to the mashing process (~80°C) and preheating
  - 1.375 m² of collectors (1 MW_{th})
- Prestage Foods (USA, North-Carolina)
  - Poultry production
  - Process water
  - 7.804 m² (5,46 MW_{th})
- Pampa Elvira Solar (Chile):
  - Copper mine(Minera Gaby – Codelco)
  - Application: heat for Electrowinning process
  - 39.300 m² (27,5 MW_{th})

Solar thermal plant for the Göss brewery

Solar thermal plant for Prestage foods

Pampa Elvira Solar, Solar thermal plant for Codelco

To go further

- **SHIP 2015**: the event fully dedicated to Solar Heat for Industrial Processes (in the frame of IEA SHC program / Task49). September 15, Montpellier.
  Program and registrations on www.sunti.fr

SOLAR HEATING & COOLING PROGRAMME
INTERNATIONAL ENERGY AGENCY

- **Contact us**:

km@sunti.fr
T. :+33 (0)4 99 52 27 64
M. : +33 (0)6 35 98 00 28
215, rue Samuel Morse - Le Triade II
34000 Montpelier - France
www.sunti.fr

sunti

Thanks

Sunny times for industry

Kevin Mozas - Head of Business Development
km@sunti.fr - +33 6 35 98 00 28
www.sunti.fr

sunti