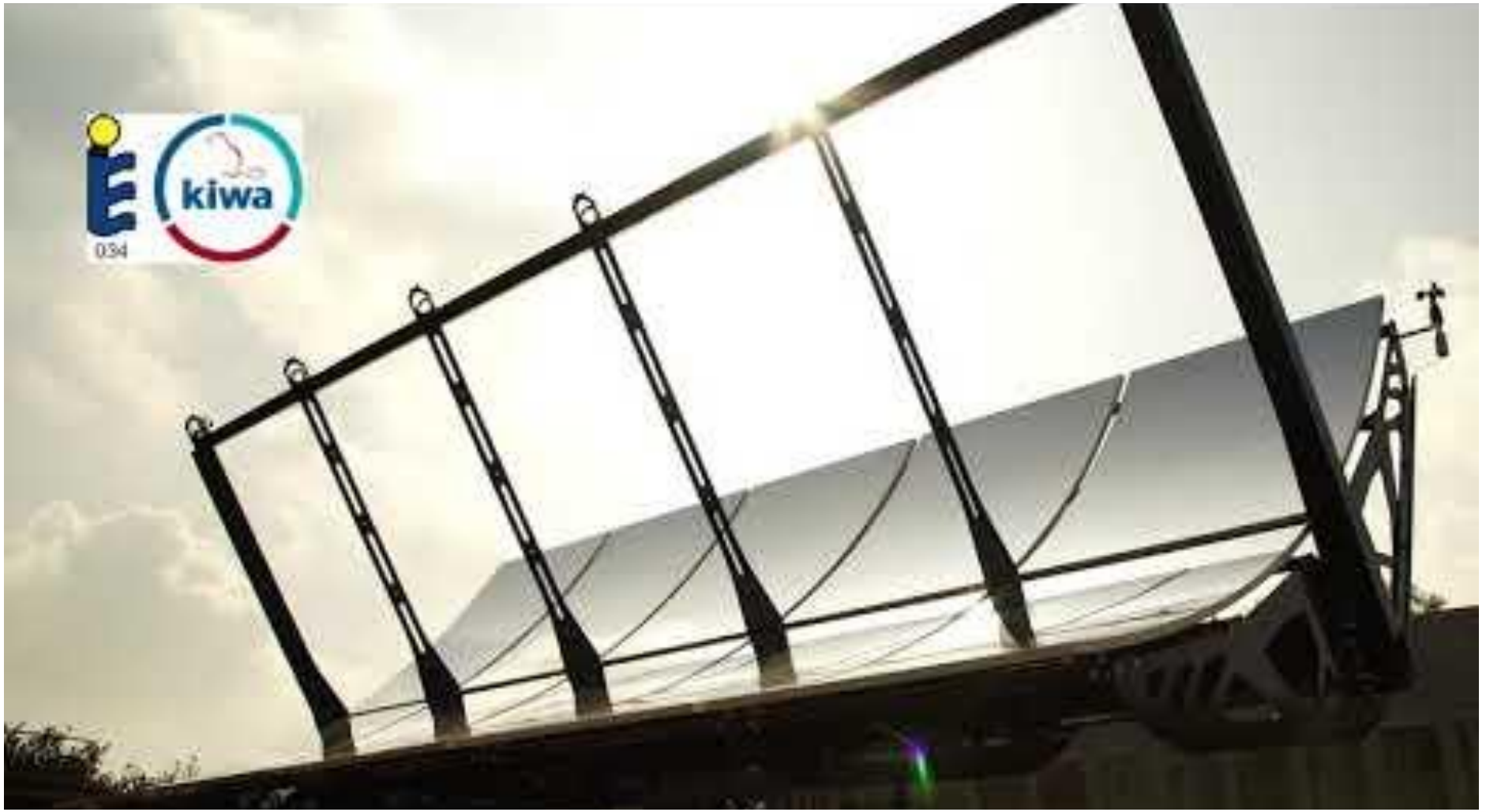
GREENETICA, THE WORLD'S BEST SOLAR CATCHERS

eOS TH®, a solar concentrator that finally matches the needs of SMEs

greenetica™

THE SOLAR CONCENTRATOR

Born as a solution to today's problems for a better future



GLOBAL POLLUTION

23.6% * Heating

31% * Food Chain

Estimated global market
4,000 KWt / year
(x10 on 2019)

Internationally patented

Sources:
* : *FOOD RESEARCH CLIMATE NETWORK*

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3 MODELS

Adaptable to multiple needs

eos_{TH}

Temperature: <100 ° C
Standard Model: 10 Mirrors (19.3 m2)
Custom: from 2 to 14 mirrors
OUTPUT (thermal kWh / year) **: 30,000

LCOE (€ / kwh) ***: from 0.03

eos_{HT} (START DELIVERIES 2023)

Temperature:> 100 ° C
Standard Model: 10 Mirrors (19.3 m2)
Custom: from 2 to 14 mirrors
OUTPUT (thermal kWh / year) **: 24,000

LCOE (€ / kwh) ***: from 0.04

eos_{PVT} (START DELIVERIES END 2024)

Thermo-photovoltaic co-generator

Features being defined
Possibility of retrofitting on installed EOS machines

Comparison with fossil fuel power plant.

Fossil Fuel	Consumption	CO_2 Emission (Kg)
Methane	m^3 3.146	6.300
LPG	Lt 4.603	7.200
Diesel	Lt 3.272	8.400
Wood (25%)	Kg 7.819	1.500

Note
*: i.e. “simple” installation category on pre-existing system
**: On average northern Italy
***: When fully operational on production of n. 1,000 EOS / year

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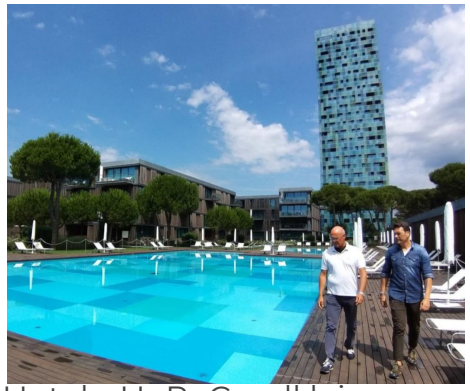
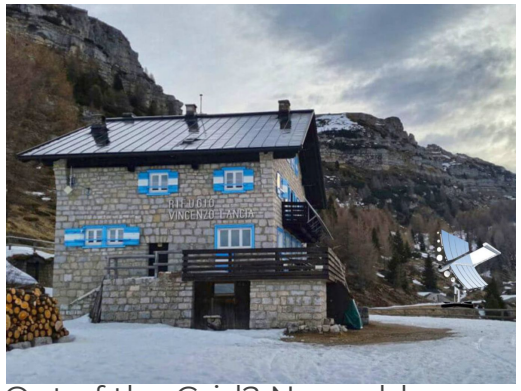
WHERE CAN I USE IT?

Main targets: SMEs and agri-food



Hotels, HoReCa, all leisure and Sports facilities



Out of the Grid? No problem for Greenetica!

Food Chain, Cooking, Pasteurization, Drying, Treatments

Agriculture, Greenhouses, pre-washed and pre-cooked products

Services, Dry Cleaners, Laundries

District heating

Communities, Sanitation, Schools and Public Administration

Industry, Heating, Drying, Treatments

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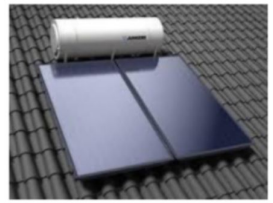
COMPARISON WITH TRADITIONAL SYSTEMS

Main differences

	GREENETICA eos_{TH}	VACUUM TUBES	SOLAR THERMAL PANELS
			
ή THERMAL	100% **CONSTANT**	75% HOURS 12	45% HOURS 12
IDEAL USE	CONTINUOUS / CIVIL - INDUSTRIAL	DOMESTIC / CIVIL	DOMESTIC
DURATION	THEORETICALLY UNLIMITED	ca. 10 years	ca. 15 YEARS
OPERATING TEMPERATURE	UP TO 100 °	AROUND 60-70 °	AROUND 40-50 °
SURFACE FOR EQUAL OUTPUTS / YEAR	20 sqm	52 sqm	88 sqm
RELIABILITY	HIGH, EASY MAINTENANCE	FRAGILITY DEPENDENT ON COMPONENT QUALITY, COMPLEX MAINTENANCE	FRAGILITY DEPENDENT ON COMPONENT QUALITY, COMPLEX MAINTENANCE
LIFE CYCLE SUSTAINABILITY	COMPONENTS EASY TO DISASSEMBLE, RECYCLE OR REUSE	COMPLEX AND SUBJECT to REGULATION	COMPLEX AND SUBJECT to REGULATION
INSTALLATION	ON THE GROUND IN ANY SUNNY AREA	ON SOUTH EXPOSED ROOFS	ON SOUTH EXPOSED ROOFS

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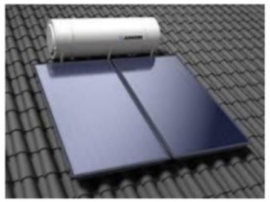
COMPARISON WITH TRADITIONAL SYSTEMS

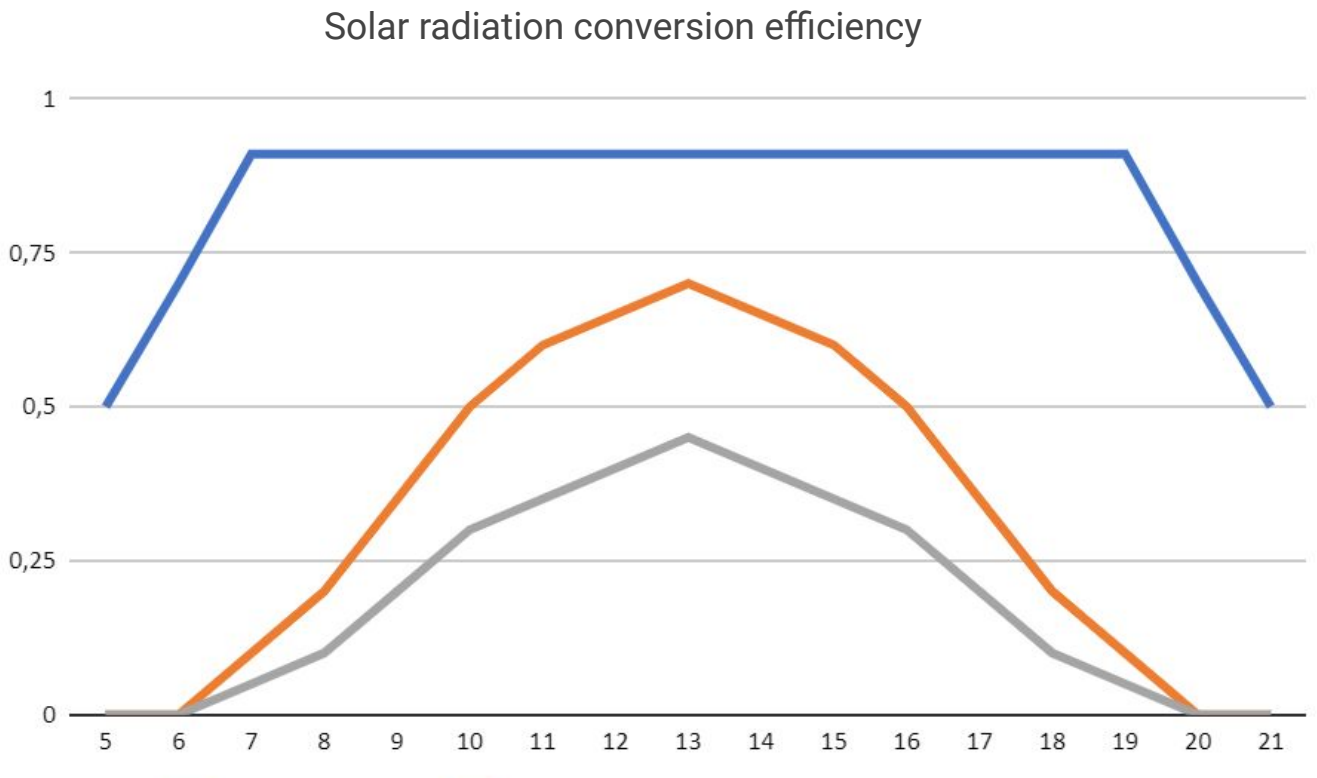
Efficiency throughout the day

GREENETICA eos_{TH}

VACUUM TUBES

SOLAR THERMAL PANELS





EOS$_{TH}$ thanks to the concentration combined with the solar tracking system, it produces more heat and constantly throughout the day.

EOS$_{TH}$ is able to use all the available irradiation.

EOS$_{TH}$ finally, it allows a negligible dependence on external temperatures.

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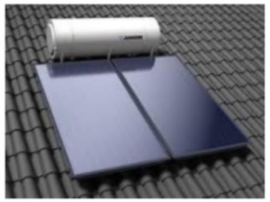
COMPARISON WITH TRADITIONAL SYSTEMS

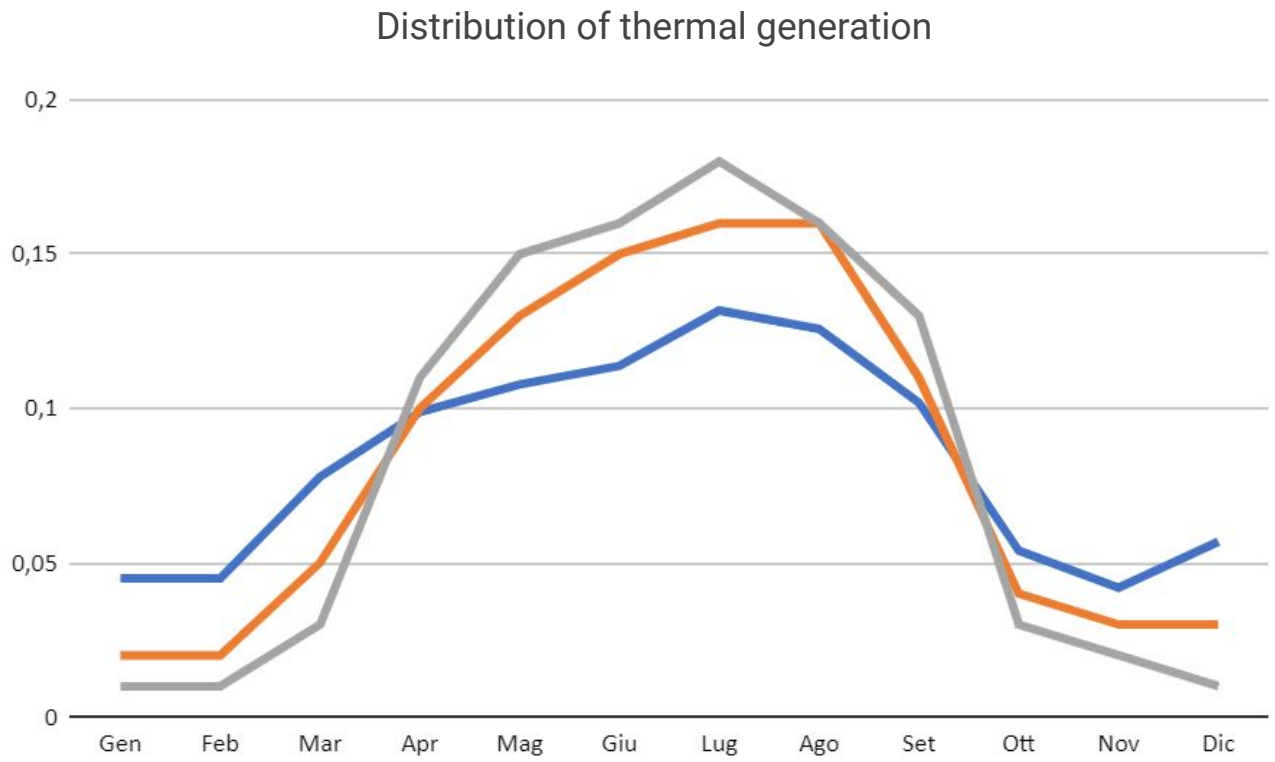
Consistency of performance throughout the year

GREENETICA eos_{TH}

EVACUATED TUBES

SOLAR THERMAL PANELS





Eos_{TH} system achieves a much higher consistency of performance over the course of the year.

This feature favors continuous and professional requirements.

Eos_{TH} combined with heating is much more effective if compared to other systems, and especially during the months when there is greater need.

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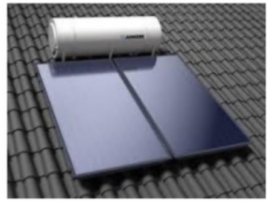
COMPARISON WITH TRADITIONAL SYSTEMS

Summary

GREENETICA eos_{TH}

VACUUM TUBES

SOLAR THERMAL PANELS



Eos_{TH} system compared to other methods for solar source thermal energy generation is:

- more efficient
- more constant
- longer lasting
- more suitable for professional use
- less bulky
- easier to install
- more sustainable throughout its life cycle

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CASE STUDY

An industrial dairy

A study was conducted to evaluate and quantify the short and long-term benefits for a small industrial dairy, with a special focus on eos_{TH} environmental impact and energy savings.

The Economics are of course very important. By taking a very conservative hypotesis of costs based on today's commodity prices, these are our findings: this **Eosth** customer will gain an excellent financial advantage quickly with an accumulating benefit that after 30 years is estimaed at € 210K net of all plant installations and maintenance costs and incentives.

1. A single eos_{TH} system generates on average **more than 30,000 thermal kWh per year** on the case study site.
2. Thermal production is equivalent to the **combustion of 4,200 Lt of LPG** (current fuel used)
3. **The annual carbon dioxide emissions avoided are 7.2 Tons**.

3 EOSTH in 30 years equals:

30,000 x 3 x 30 = 2,700,000 thermal KWh
4,200 x 3 x 30 = 378,000 Lt of LPG saved
7.2 x 3 x 30 = 648 tons of CO2 avoided

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VALIDATION

Partnerships, Certifications, Awards

ENEA
Nationale Agentur für neue Technologien, Energie und nachhaltige wirtschaftliche Entwicklung

GSE
Gestore Servizi Energetici

kiwa
034

Commissione europea

Heliopolis University for Sustainable Development

JOANNEUM RESEARCH

N. 4
Brevetti
di invenzione

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Università degli Studi di Padova

BOND STREET AWARDS

PARADIGMA
RESTART FUTURE

HOLOTRANSFER
Customize your world

IDROCALOR
TORMENE 1907
INDUSTRIAL OVENS

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