



EU INDUSTRY WEEK 2021

#EUIndustryWeek

CHEAPER THAN ELECTRIFICATION

*How **solar heat** will replace oil and gas in the **EU industrial sector***

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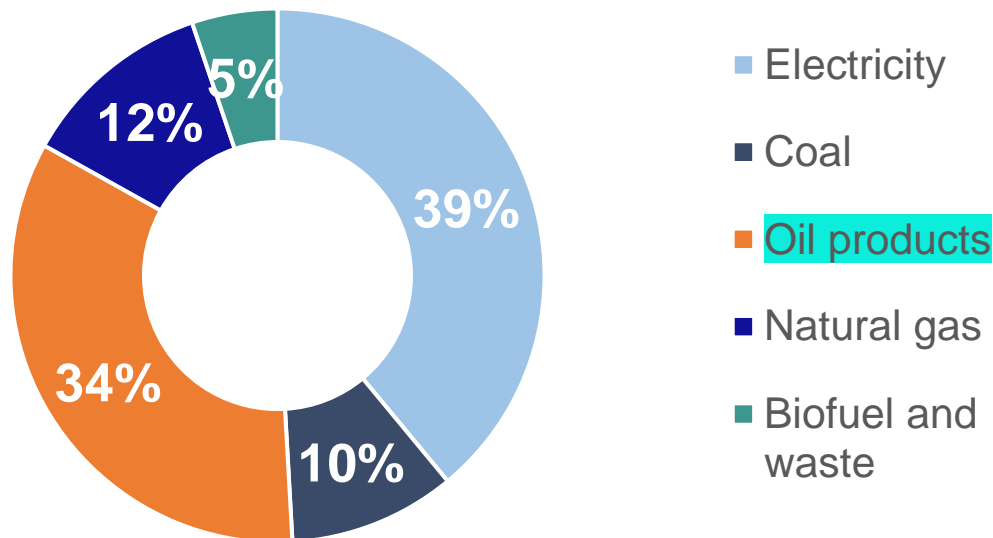
CASE STUDY FOR SHIP IN GREECE

BRISS TAIPE

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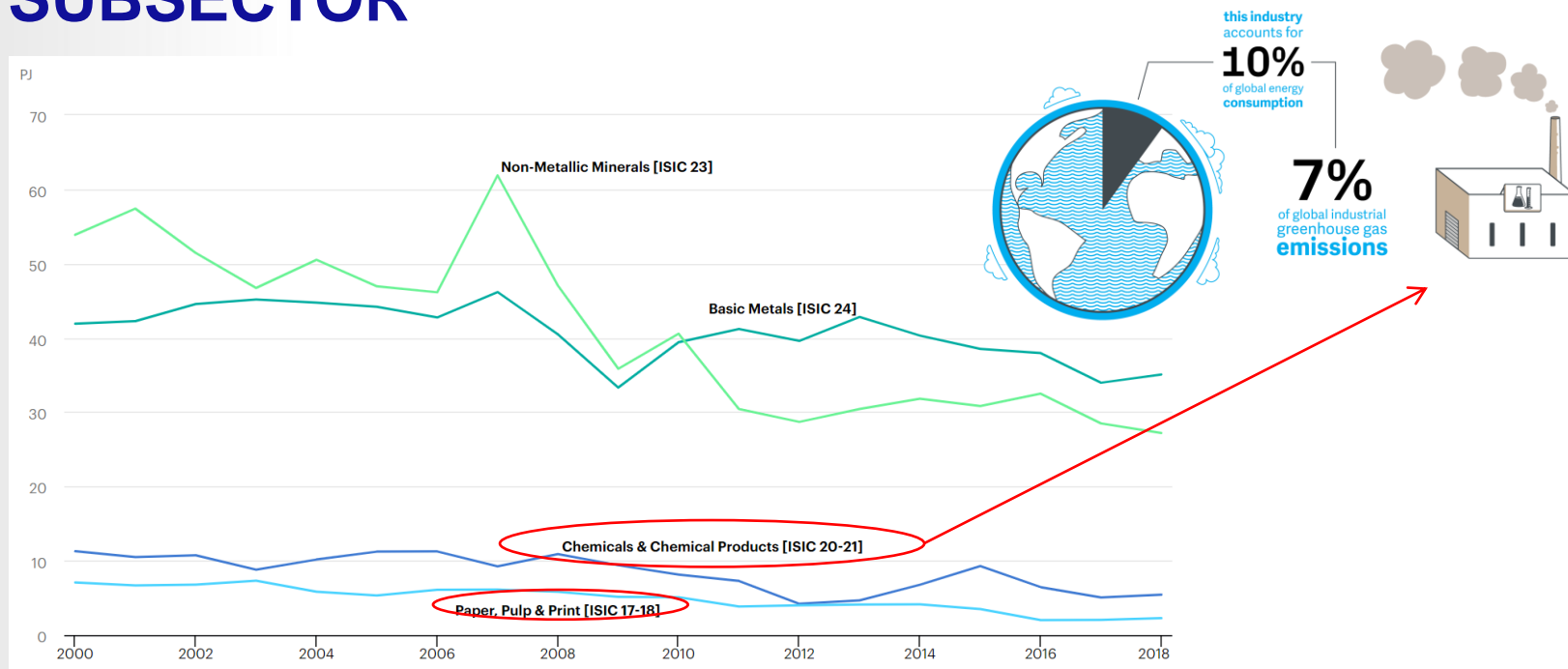
FINAL INDUSTRIAL ENERGY CONSUMPTION BY SOURCE IN GREECE



Source: Energy balance 2018, IEA

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TOTAL ENERGY CONSUMPTION BY INDUSTRIAL SUBSECTOR



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HIGH-EFFICIENT SOLAR INDUSTRIAL INTEGRATION USING ABSOLICON SOLAR COLLECTORS

- **Industry** - Multinational Chemical Company
- **Process integration** – Heating of recovered hot water to process temperature
- **Installation** - First solar field installed in 2018.
- **Type of mounting** - Roof mounted, steel structure.
- **Confidential project**



Hemab, Sweden



OVERALL PROJECT PERFORMANCE

Fuel Savings – Process operating with zero fuel consumption during sunny daytime hours

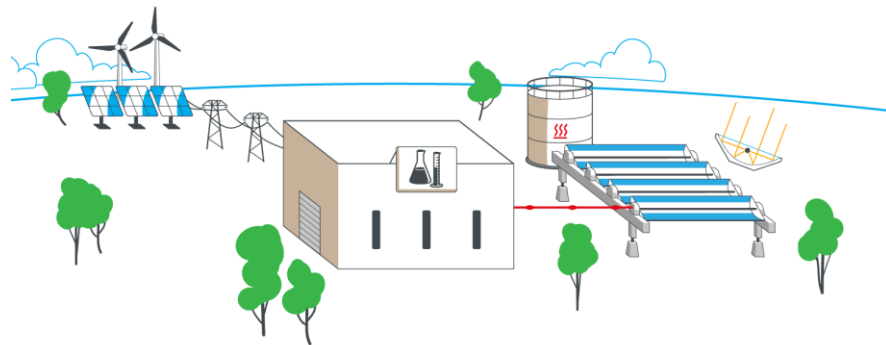
Climate impact – Diversion of produced hot water to other processes allows net CO2 emissions from the system process

Reliable operation - Heat storage buffer keeps a steady temperature output from the solar collectors, even under heavily fluctuating demands



Project Expansion

- Customer ordered second installation.
- Covers the remaining roof area.
- Expansion of process integration.



FIELD SIMULATOR

Case study assumptions

- Location: Athens
- Ground area: 2000m²
- Current fuel: Oil
- Cost of current fuel: 50€/MWh
- Operational temperature: 100°C



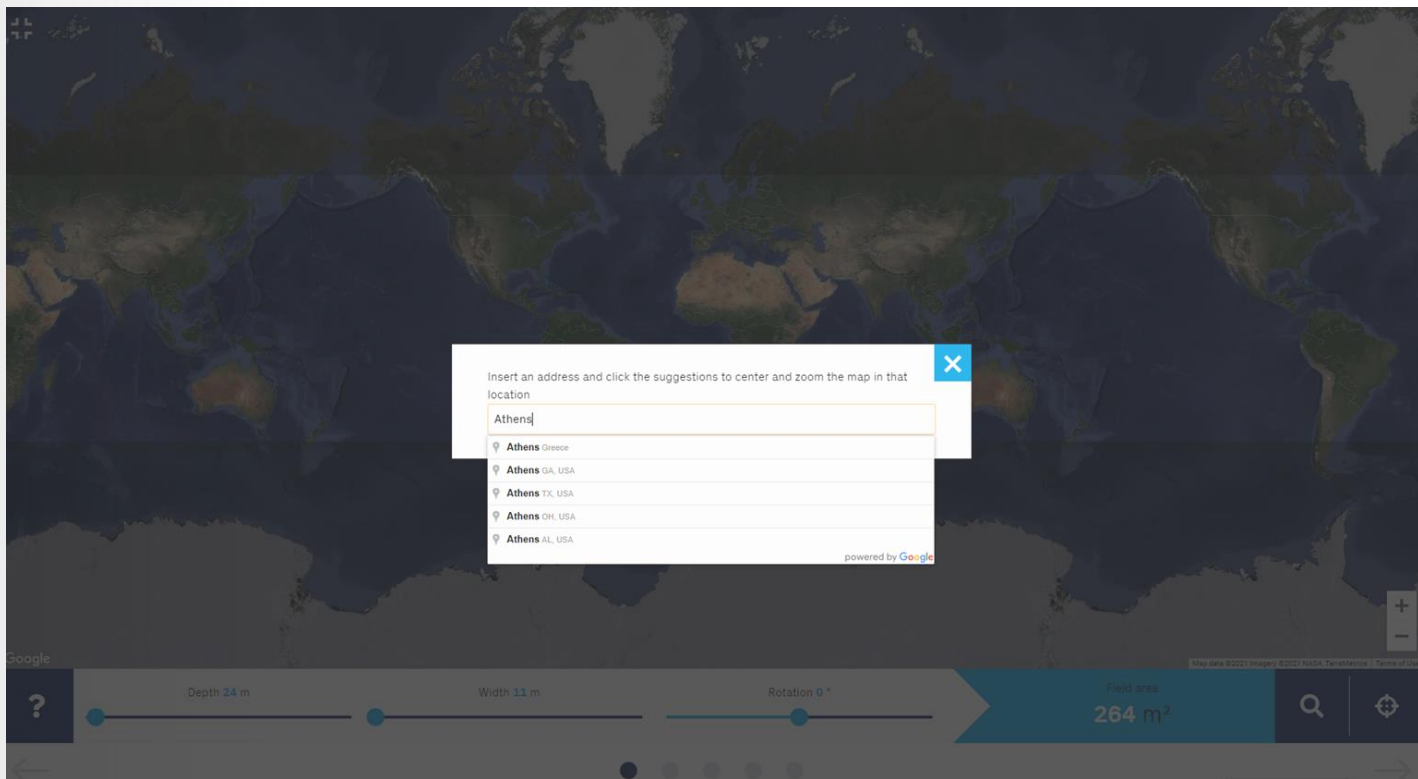
Results

<https://www.absolicon.com/fs/>



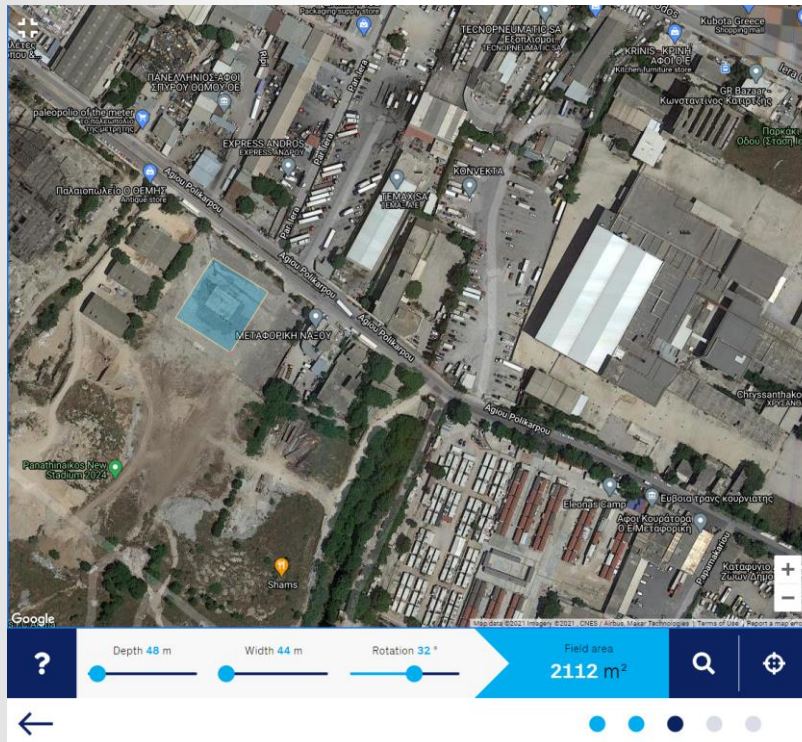
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Energy results

Insert the wanted operating temperature for your solar field with footprint area **2112 m²** and aperture area **1056 m²**:

100 °C

Power

653 kW

0.84 tons steam/h

Energy

815 MWh/year

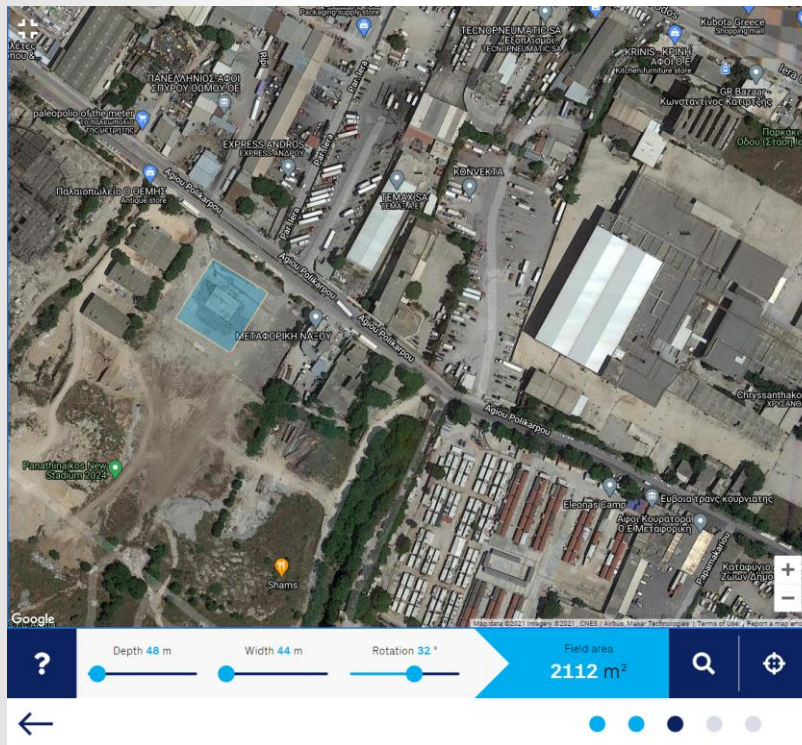
0.77 MWh/(year m²)

Simulation results based on solar resource data from Solargis and a north to south tracking axis configuration

Your current configuration is estimated to save **82.4 tons/year of oil equivalents** and avoid **6495 tons of CO₂-emission during its lifetime of 25 years**, compared to burning oil.

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Current cost of heat

Fill in the following informations:

Source:

Oil

Cost:

Custom

50

€/MWh

Efficiency:

85

%

Carbon Tax:

30

€/t CO₂

Your current cost of heat is 68.39 €/MWh

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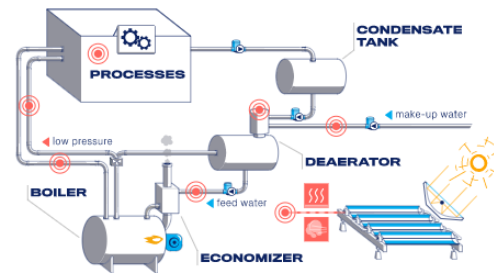
FIELD SIMULATOR



Future cost of heat powered by solar

With Absolicon T160 Solar Collectors you can be competitive and lower CO2 emissions at the same time. There are several ways to integrate solar to your industry:

EASY SOLAR HEAT INTEGRATION To existing heating systems



Your heat cost powered by solar will be **35.8 €/MWh** for the next 15 years

Your heat cost powered by solar will be **25.53 €/MWh** for the next 25 years

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Thank you!

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