



# Savosolar

Changing the game – field by field

**Annual General Meeting  
Savosolar Oyj**

March 28, 2019

# Income statement

(EUR '000)	2018	2017	Diff. EUR	Diff. %
NET TURNOVER	5 428	831	4 597	553 %
Other operating income	9	24	-15	-63 %
Materials and services	-5 788	-752	-5 036	-670 %
Personnel expenses	-1 932	-1 830	-102	-6 %
Depreciation, amortisation and impairment	-719	-762	43	6 %
Other operating expenses	-2 585	-2 365	-220	-9 %
<b>OPERATING PROFIT/LOSS</b>	<b>-5 586</b>	<b>-4 853</b>	<b>-733</b>	<b>-15 %</b>
Financial income and expenses	-1 049	-810	-239	-30 %
<b>PROFIT/LOSS FOR THE FINANCIAL YEAR</b>	<b>-6 635</b>	<b>-5 664</b>	<b>-971</b>	<b>-17 %</b>

- Turnover increased over five fold, with strong order inflow starting second half of 2018
- Production and project costs were 0.5 million euro higher compared to 2017 due to overrun mainly in project execution costs
- Other operating expenses were 0.2 million euro higher than last year due to claim compensation on earlier projects and increase in Warranty reservation for new projects

# Balance sheet 1

(EUR '000)	2018	2017	Diff. EUR	Diff. %
<b>ASSETS</b>				
<b>NON-CURRENT ASSETS</b>				
Intangible assets	1 348	1 628	-280	-17 %
Property, plant and equipment	854	1 130	-276	-24 %
Investments, shares in group companies	162	162	0	0 %
<b>TOTAL NON-CURRENT ASSETS</b>	<b>2 364</b>	<b>2 920</b>	<b>-556</b>	<b>-19 %</b>
<b>CURRENT ASSETS</b>				
Inventories	982	996	-14	-1 %
Long-term receivables	504	222	282	127 %
Short-term receivables	1 593	128	1 465	1145 %
<b>TOTAL RECEIVABLES</b>	<b>2 097</b>	<b>350</b>	<b>1 747</b>	<b>499 %</b>
Cash and cash equivalents	747	2 212	-1 465	-66 %
<b>TOTAL CURRENT ASSETS</b>	<b>3 826</b>	<b>3 558</b>	<b>268</b>	<b>8 %</b>
<b>TOTAL ASSETS</b>	<b>6 190</b>	<b>6 478</b>	<b>-288</b>	<b>-4 %</b>

- Investment of 0.2 million euro in R&D projects
- Short term receivables increased 1.5 million euro, mostly due to projects partial revenue recognition

# Balance sheet 2

(EUR '000)	2018	2017	Diff. EUR	Diff. %
<b>EQUITY</b>				
Share capital	470	470	0	0 %
Unrestricted equity fund	29 273	24 919	4 354	17 %
Retained earnings	-21 736	-16 072	-5 664	35 %
Net profit (loss)	-6 635	-5 664	-971	17 %
<b>TOTAL SHAREHOLDERS EQUITY</b>	<b>1 372</b>	<b>3 654</b>	<b>-2 282</b>	<b>-62 %</b>
Obligatory reserves	326	172	154	90 %
<b>LIABILITIES</b>				
Long-term liabilities	314	312	2	1 %
Short-term liabilities	4 178	2 340	1 838	79 %
<b>TOTAL LIABILITIES</b>	<b>4 492</b>	<b>2 652</b>	<b>1 840</b>	<b>69 %</b>
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>6 190</b>	<b>6 478</b>	<b>-288</b>	<b>-4 %</b>

- Short term liabilities increased 1.8 million euro, mainly due to higher Accounts payable
- Level of debt is low, repay of capital loans of 1,4 million euro starts on April 2019





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## CEO's review

Savosolar Oyj  
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# The most efficient collector in the world

## Mission

**We fight climate change with leading solar thermal technology to provide competitive and stable energy costs**

## Vision

**Be the global first-choice supplier to high performance solar installations by 2020**





<https://www.youtube.com/watch?v=yRVghS6kEDU> at min 9:08

Véolia - La Ville de Voreppe, France 175 m<sup>2</sup>







Condat, France 4,000 m<sup>2</sup> on tracker

newHeat

 Savosolar






Condat, France 4,000 m<sup>2</sup> on tracker

newHeat

 Savosolar





Extension ready by May 2019

Jelling Varmeværk, Denmark – 15,300 m<sup>2</sup> + 4,835 m<sup>2</sup>





Grenaa, Denmark 20,673 m<sup>2</sup>



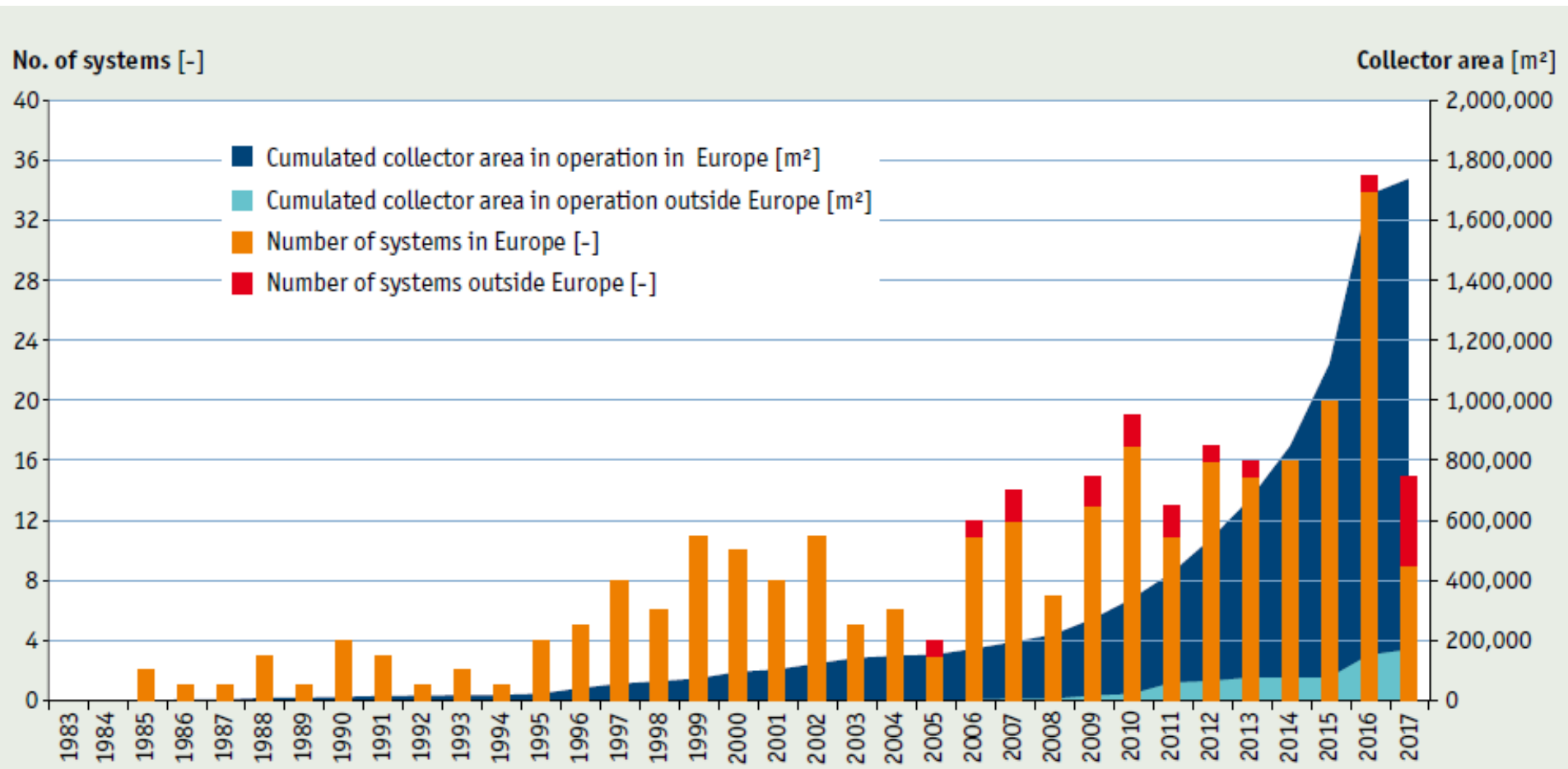
# Summary of year 2018

- Full year turnover 5.4 MEUR, increase from year 2017 over 500%
  - Second half of the year very high activity
  - Due to workload imbalance, project costs were overrun and liabilities in the deliveries during company starting phase result was poor
  - New top level resource for supply chain development – work is on-going
- Several markets activated, France ramping up fastest
- Significant new references
  - Increased credibility in the eyes of new customers
  - Improve capability to deliver
  - Establish partnering network for new projects
- Strengthening and streamlining the system design and project execution





# Large scale solar thermal systems



**Large-scale systems for solar district heating and large residential, commercial and public buildings world wide – annual achievements and cumulated area in operation in 2017**

(Data source: Jan-Olof Dalenbäck – Chalmers University of Technology, SE and Sabine Putz – IEA SHC Task 55, Bärbel Epp solarthermalworld.org)

# Positive market development – District heating

- The most economical way to distribute green heating energy
- Solar thermal will be important part of it - in EU and elsewhere
- Hybrid systems – system design/optimization importance

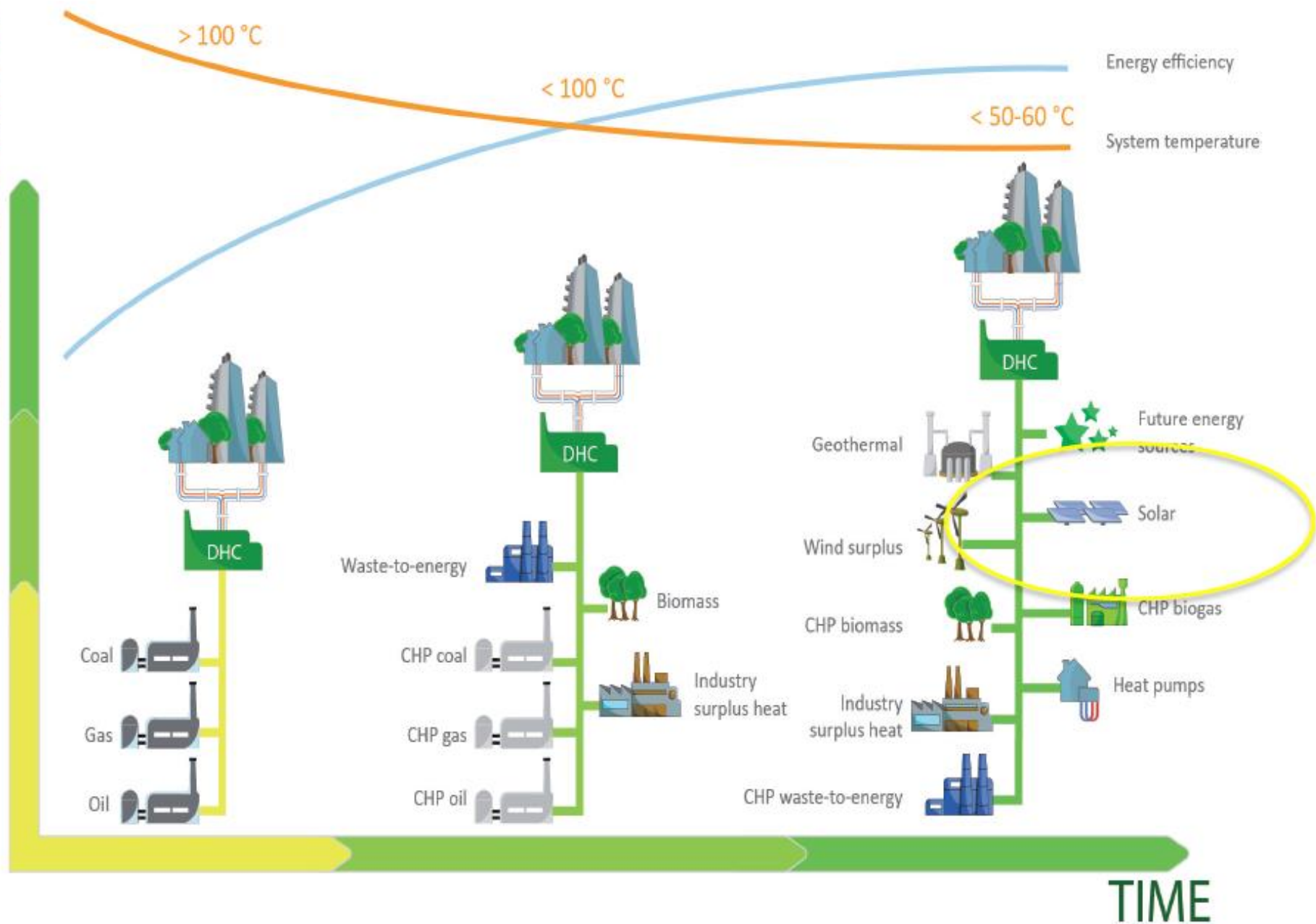
- *“In 2018, solar district heating will generate over 1 TWh (= 1 billion kilowatt-hours) of district heating in Europe for the first time.*
- *Also, according to market analyses, the solar district heating capacity is expected to increase to 240 terawatt-hours by 2050.”*

- *The president of the European district heating association, Euroheat & Power, Werner Lutsch, April 2018*

- 240 terawatt-hours = 400 - 500 million m<sup>2</sup> of collector fields
- **During next 30 years means over 100 billion euros investments for solar district heating – in Europe**

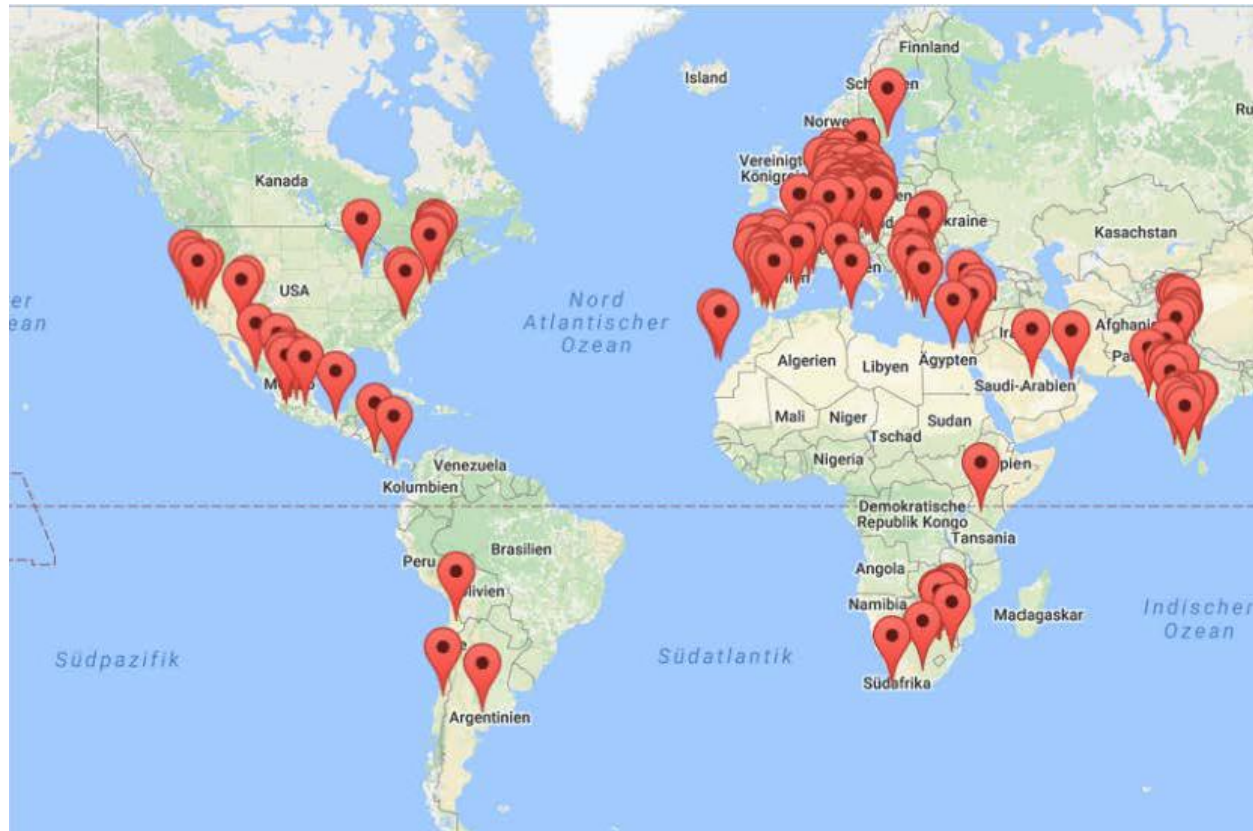


DEVELOPMENT



## Positive market development – Process heating

- Several industries use heat in their processes and are interested in having solar thermal as part of their energy portfolio



Worldwide database shows  
298 realized plants by 2018  
for SHIP (Solar Heat for  
Industrial Processes)

According to IAE's Task 49 / IV, Solar Heat Integration in Industrial Processes, the potential for SHIP is 2,3 billion m<sup>2</sup> of solar collectors > 500 billion euro



# Positive market development – Market drivers

- Emission reduction & decreasing the air pollution
- Subsidies – most important in Europe, e.g.
  - France clean heating max 65% investment subsidy
  - Germany clean heating max 55% investment subsidy
- Energy price and availability outside Europe, e.g.

## Australia



## Peru

Solar, 25 years, 5%	28 USD/MWh
Solar, 15 years, 8%	45 USD/MWh
Solar, 10 years, 8%	57 USD/MWh
Diésel	105 USD/MWh

## Zambia

Electricity price up May 1<sup>st</sup> 100 – 200%

# Year 2019 outlook

- Target is to continue the growth, and markets are offering a chance for it – also with higher margins than in Denmark
- More project inquiries than we have ever seen
  - Projects in quotation or design phase approximately 57 MEUR, known projects approximately 135 MEUR
  - Big variety of countries from where projects are
  - Highly competent partners in different markets bring new project requests
  - Projects in new markets take long time before realizing
  - Industrial process heat is growing in importance in the pipeline
  - The HPA (Heat Purchase Agreement, or ESCO) inquiries are increasing
- Detailed plans on material and project cost reduction
- Partner management and support key for growth

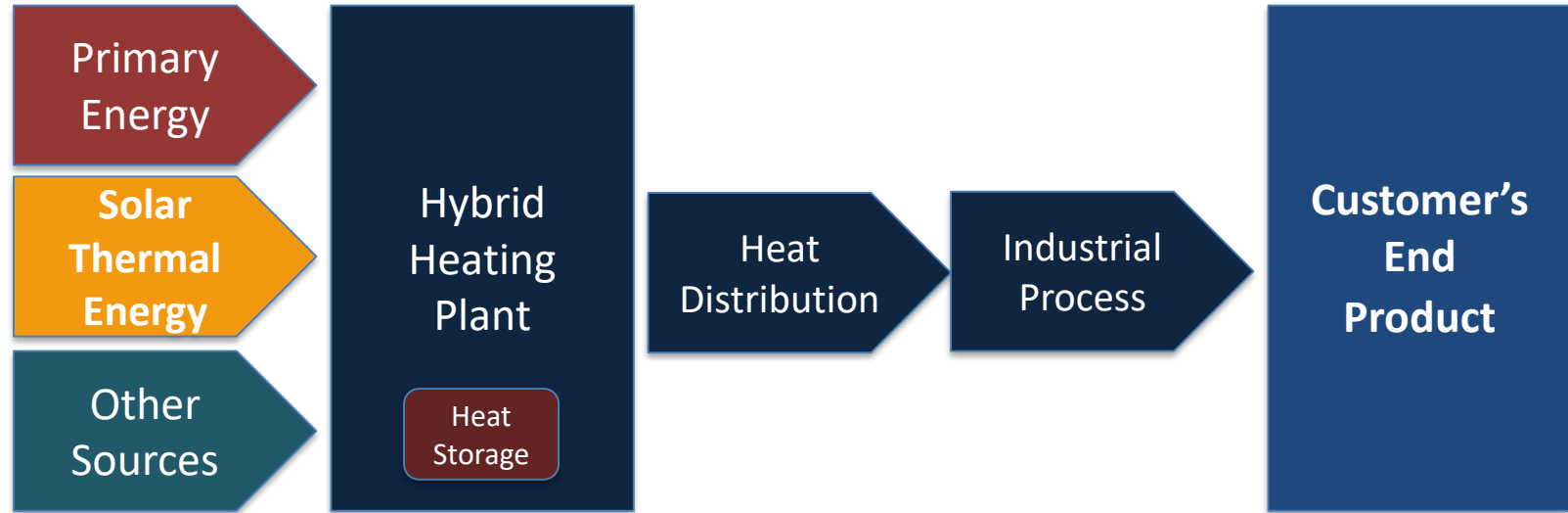




# Savosolar winning market concept



# Thermal Power Production - Overview



## Key questions in starting phase:

Who sells energy?

Who invests in the system?

Who makes the overall hybrid system design?

In which parts is the system planned to be delivered (e.g. different tenders)?



# Strategy of Partnering locally

- Established markets: Denmark, France
- Main new target markets: Germany, Africa, Australia, Latin America and China
- Partners:
  - Experienced system suppliers, system integrators
  - Construction or real estate service companies
  - Solar thermal heating system experts
  - Energy selling investor companies (ESCo)
  - Project developers/financiers
  - Strategic partners

# China – potential worth pursuing

- *China will promote **clean heating** in the northern region.*



-- raised by Chairman *Xi Jinping*

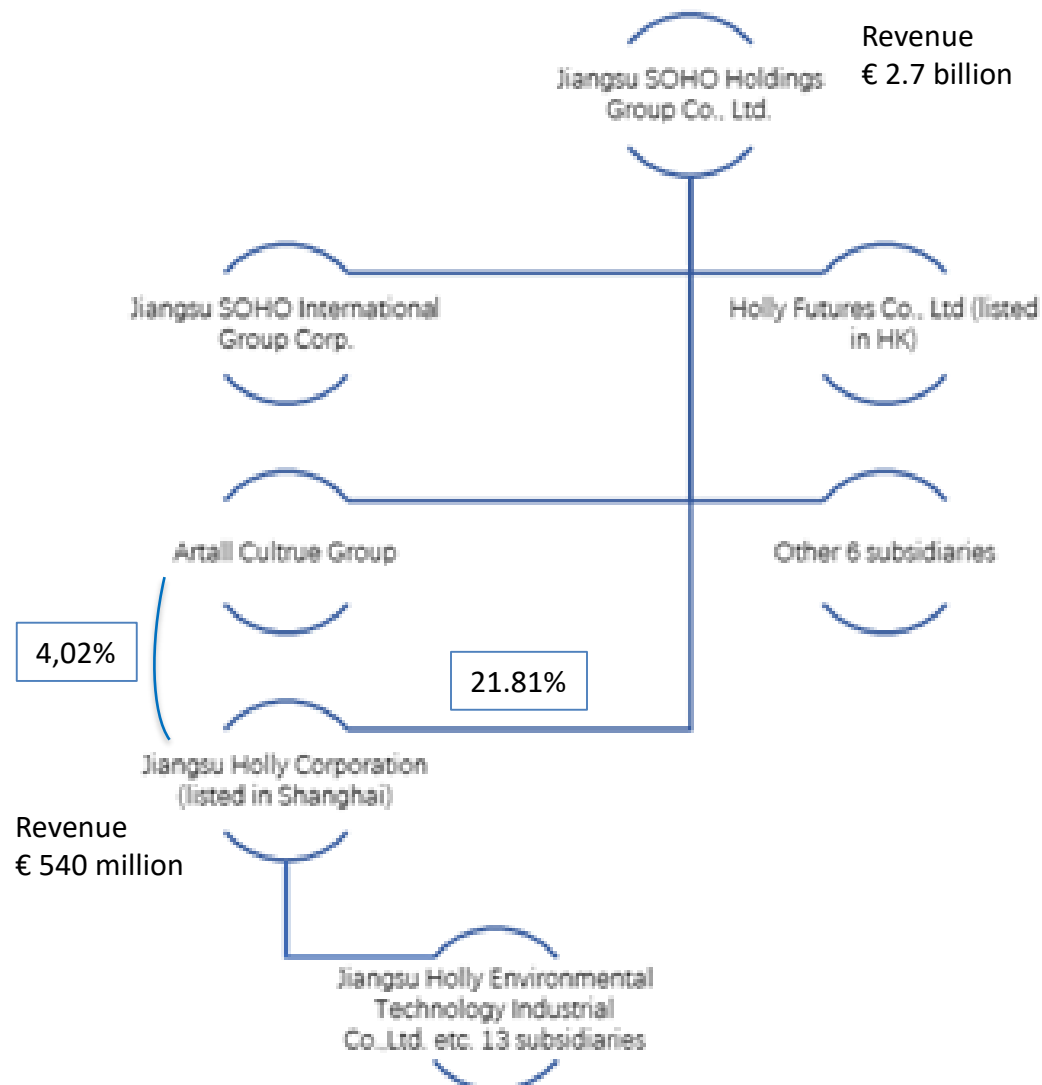
Dec 21, 2016

Almost EUR 10 billion support in 2018-2020 from government for building **clean heating**

- Savosolar enters China market and partners with Jiangsu Holly Environmental Technology Industrial – very strong network in China
- Jiangsu Holly will sell large solar thermal systems with Savosolar technology, with Savosolar's support – team already established, first pilots identified
- Savosolar physical presence in China – current CFO taking the lead



# Jiangsu Holly ownership structure



# Summary of the company and markets

1



## Market Development

- Solar heating to generate over 1 TWh in 2018 => 240 TWh by 2050
- Carbon-neutral European Union 2050
- Governmental incentives & energy prices driving growth

2



## Technological Advantage

- Unique know-how and patented nano-coating technology
- Strong value proposition & brand
- Competitive in the most developed markets

3



## Orderbook & New projects

- In 2018 confirmed orders worth over 6 MEUR
- Largest solar thermal order in the Company's history in H1 2018
- Largest solar thermal project in France installed

4



## Sales Strategy

- Strong pipeline growth
- Proven sales strategy through project developers and integrators
- Growth via partnering locally

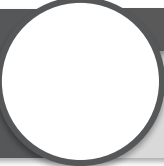
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## Research & Development

- Continued investments in R&D
- Included in the Finnish government's spearhead projects
- Engaged in international research project

6



## Positioning

- Capacity to scale
- Strategic market presence
- Differentiating against competitors



**Leading solar thermal energy company with sustainable competitive advantage**



*The sun rises in the North!*

**SAVOSOLAR – Changing the game – field by field**

Contact:

*Jari Varjotie*

*[jari.varjotie@savosolar.com](mailto:jari.varjotie@savosolar.com)*

*+358 400 419 734*

**Thank you!**

