# Greek Solar Thermal Market TRANSOLAR – SOFIA

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**Executive Secretary GSIA** 



### **Greek Solar Thermal Market**

One the most successful countries worldwide in Solar System applications



### **Greek Solar Industry Association**



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### **GSIA** Members

Est.1979



























**MALTEZOS** 























### Products in Greece

- Solar water heater Thermosiphonic 95%
  - Private customers
- Central pump systems
  - Mainly professional customers
  - Hot water for hotels (95%), hospitals, etc
  - Process hot water
  - Solar cooling

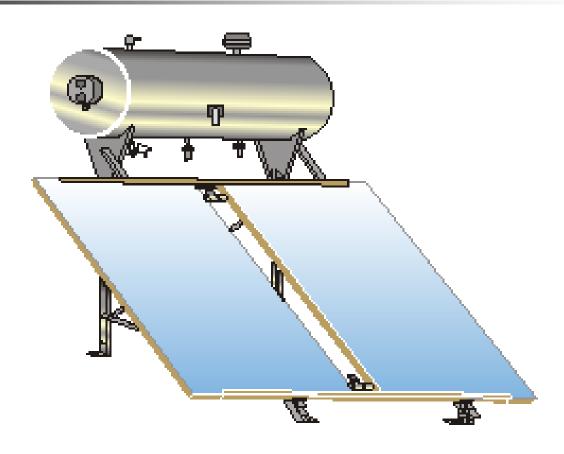


## Domestic Pump System





## Thermosiphonic Water Heater



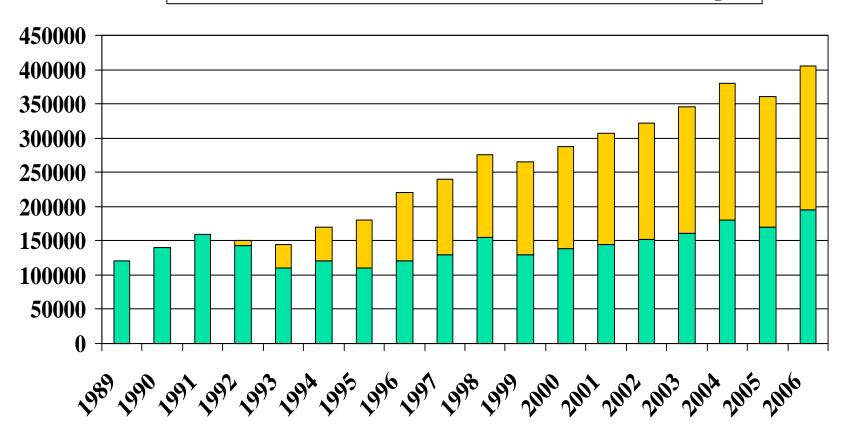


### Thermosiphonic Water Heater

- Requires flat roof or integration on roof or acceptance by customer
- Inexpensive installation
- Simple installation
  - No mistakes by installers
  - No negative influence on customers by installers



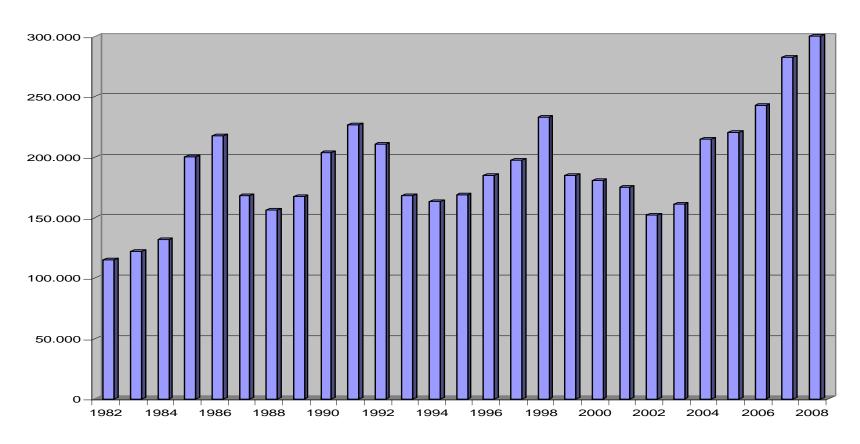
#### ■ Sales of solar collectors (m²) in the Greek Market ■ Export



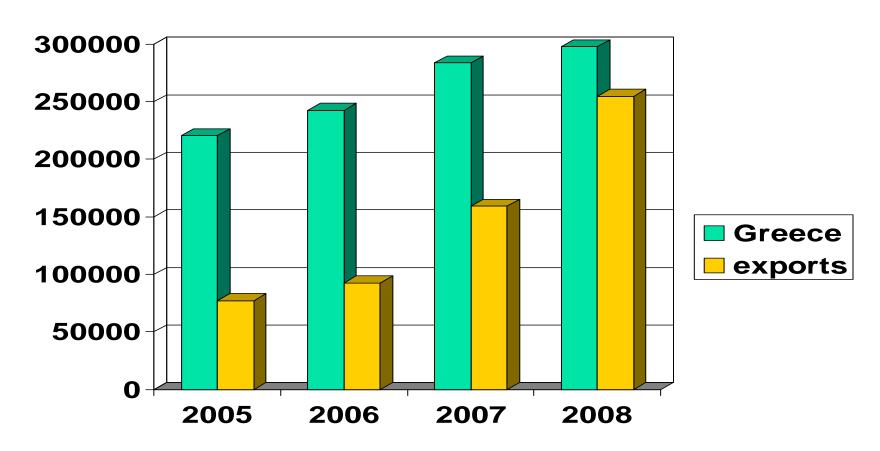


## GREEK SOLAR MARKET SALES

#### **Greek Solar Market**

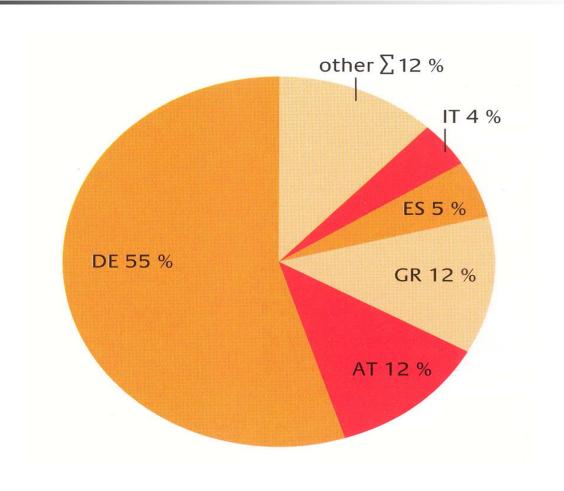




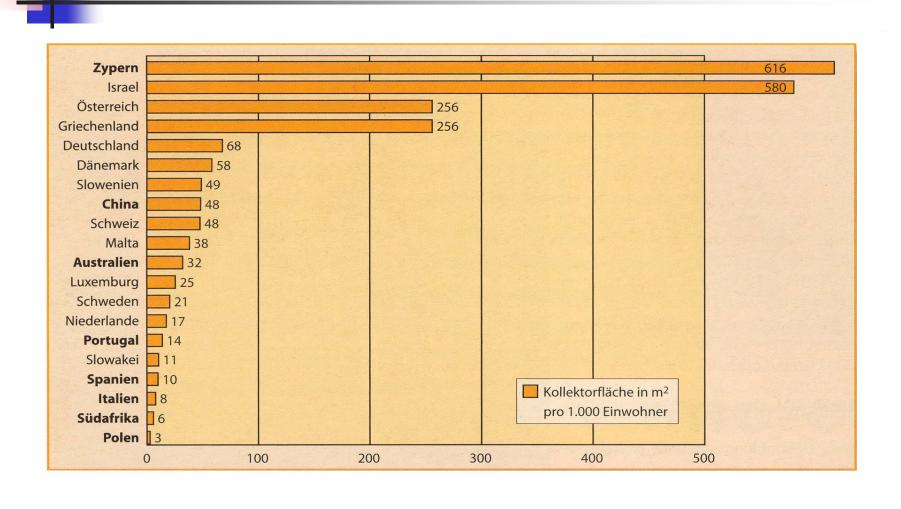




# EUROPEAN SOLAR THERMAL MARKET



# WORLD SOLAR THERMAL MARKET IN M2





### GREEK FIGURES - 2008

### Installed collector area

- 3.550.000 m<sup>2</sup> or 2.485.000 kW
- Yearly savings
- 1.952.500 MWh
- **2.000.000** tn CO<sub>2</sub>
- **3.300** jobs
- **250.000.000 Euro**



## COMPARISON BETWEEN GREEK SOLAR MARKET & THE REST OF EUROPE -2006

<u>GREECE</u>

**EUROPE** 

3 mil.

16 mil.

 SOLAR COLLECTOR IN USE (m2)

265 thous

1400 thous

OIL CONSERVATION (TONS/YEARS)

 DIMINATION OF POLLUTION (TONS/YEARS)

800 thous

4000 thous

INSTALLED POWER (MW)

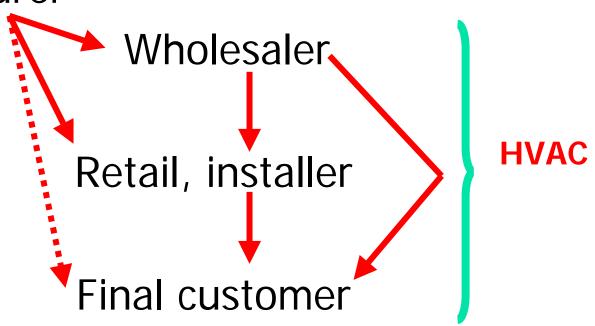
2000

11700



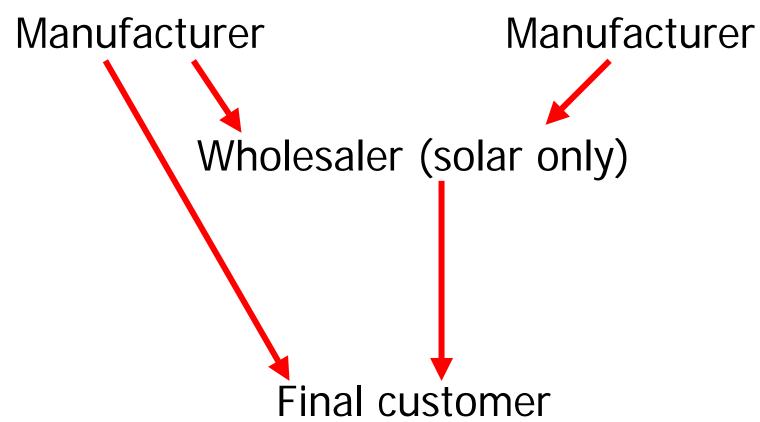
### Market Structure Now

### Manufacturer





### **Initial Market Structure**





## Advertising/Awareness Campaigns

 1979-1981 Industry, State (benefits of solar energy)

1984-1985 Industry, State (economy)

1995 Public Power Corporation

# Awareness for Solar

- Hot water : Complete
- Process heat : not satisfactory
- Space heating : only 'futuristic'
- Solar cooling : 'startup phase'
- Other in project level (drying, etc.)



### International Trade

### **Positive**

- European safety requirements CE mark
- European standards
- Solar Keymark



### Negative

National & regional requirements



### **Exported Products**

- Solar water heaters (Mediterranean, 37 countries all over)
- Solar collectors (Europe, mainly central)
- Small solar tanks suitable for thermosiphonic systems- (Mediterranean)
- Absorbers, etc.- (Eastern Europe)

# 4

### Key to Enlarge Solar Market

Simple and long term rules for subsidies



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