

Solar Heat Worldwide

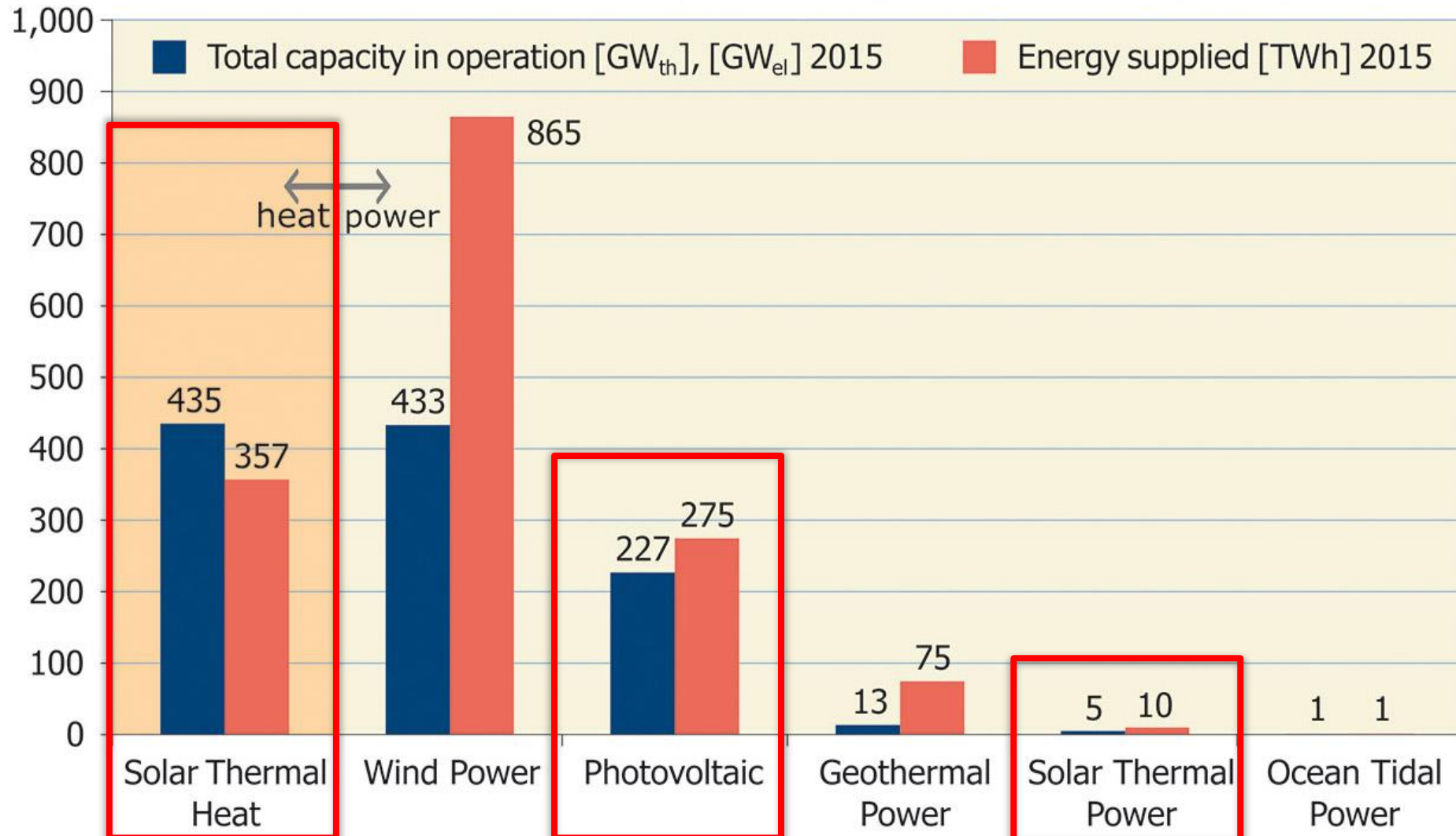
Franz Mauthner, Werner Weiss, Monika Spörk-Dür
AEE INTEC

Results of the 2016 Edition

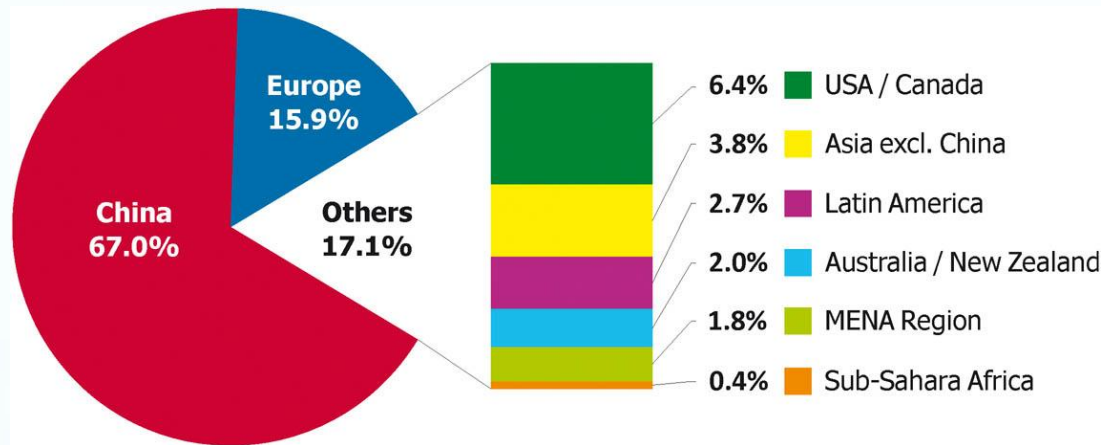


Global Capacity in Operation 2015

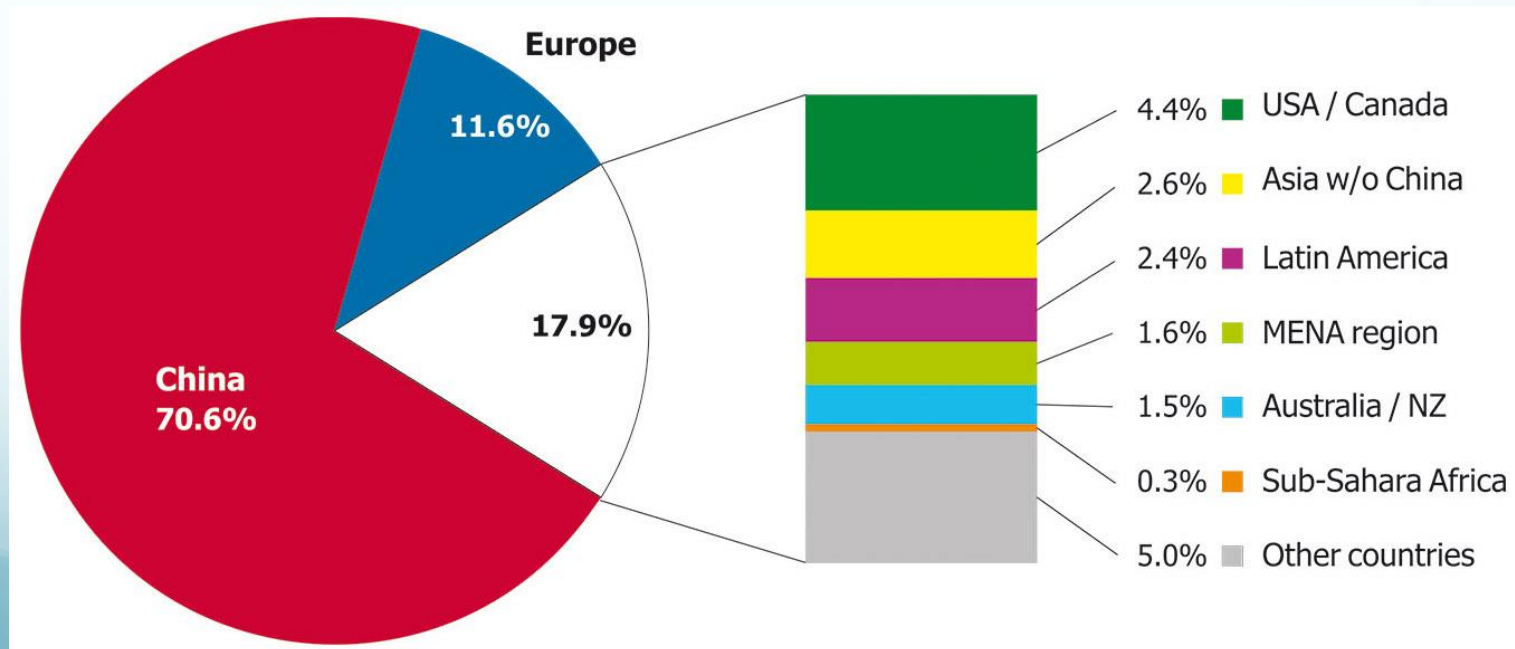
Global capacity in operation [GW_{el}], [GW_{th}], and energy supplied [TWh_{el}], [TWh_{th}], 2015



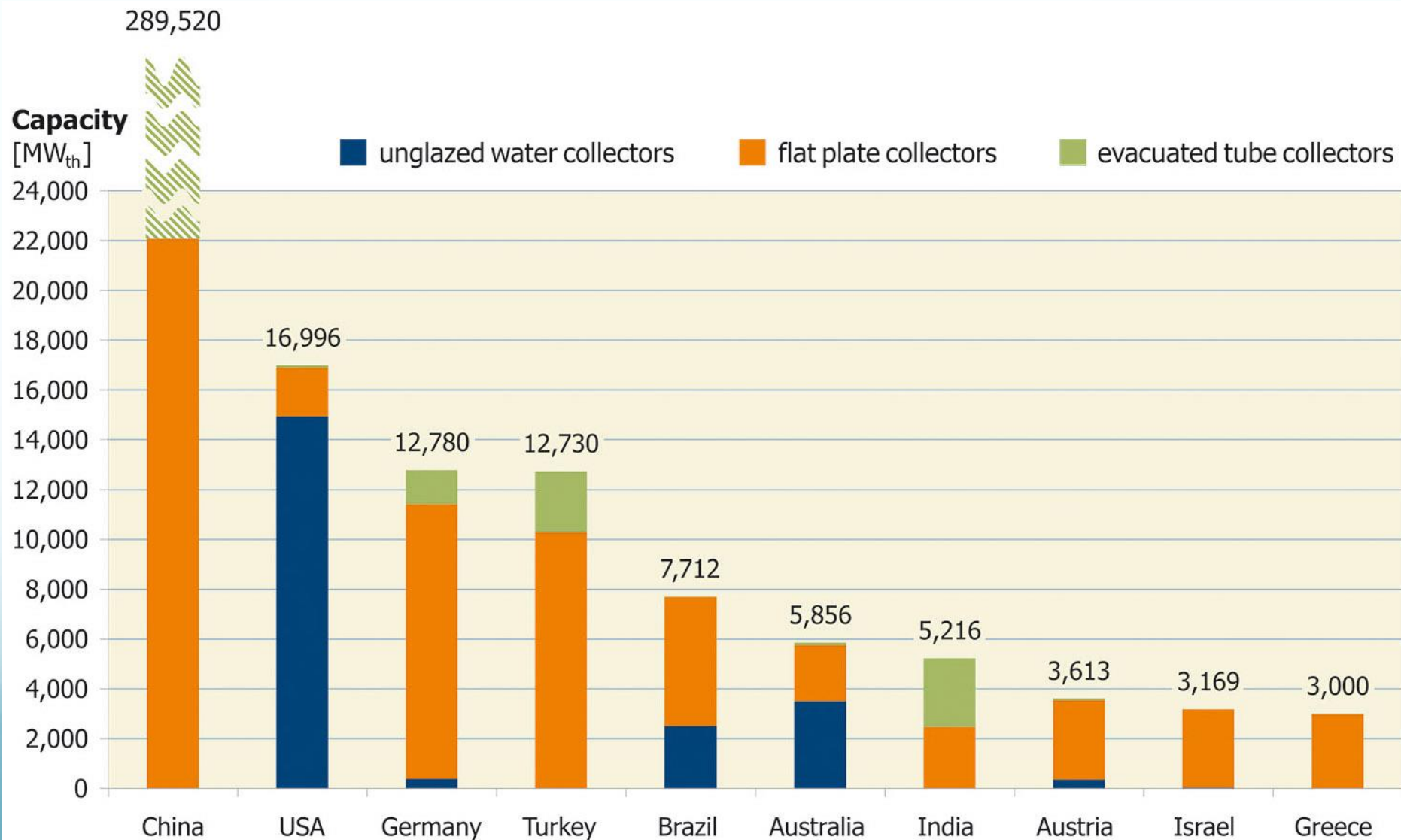
Total installed capacity in operation by economic regions at the end of 2012/2013



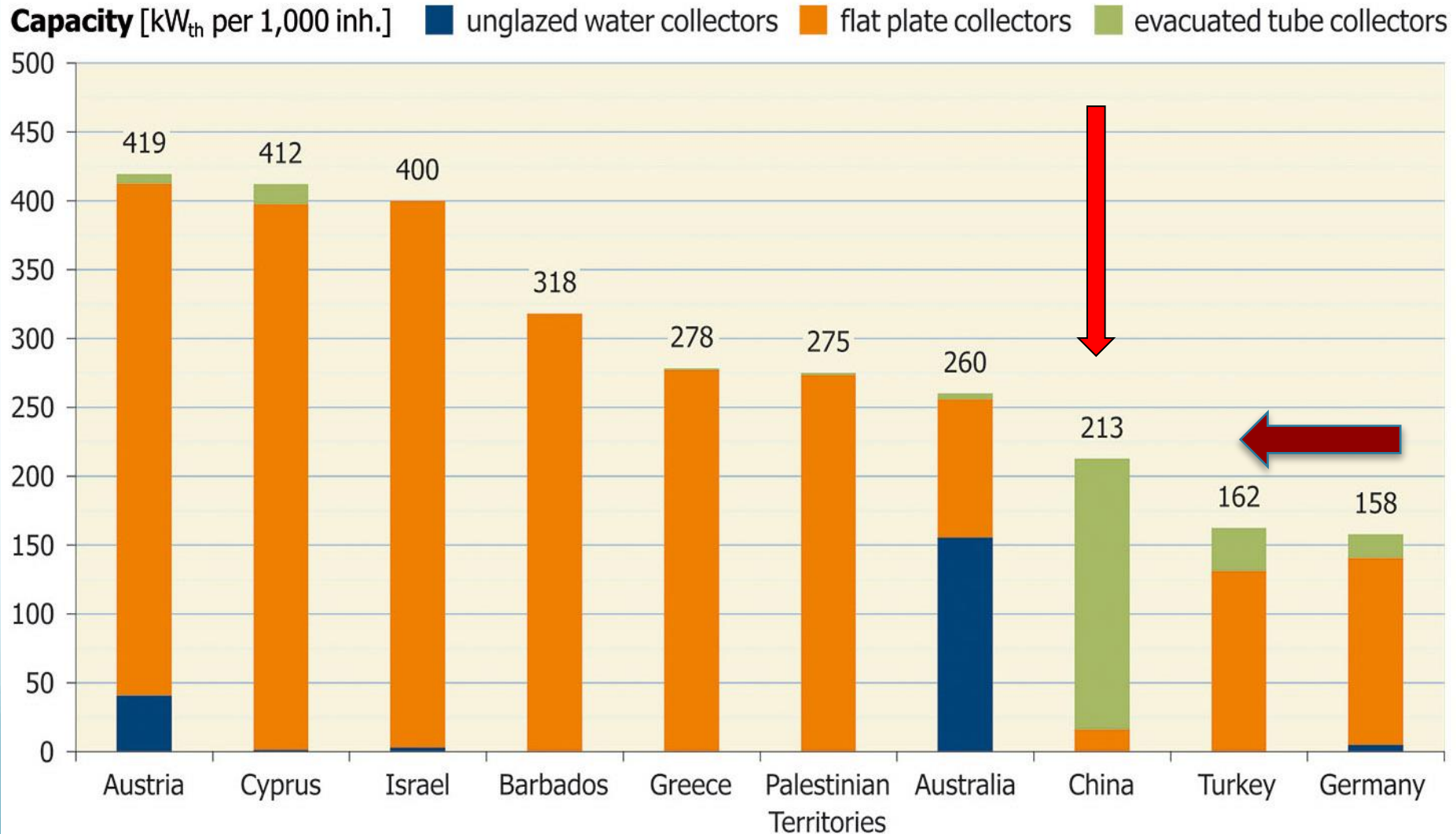
2014



Total installed capacity of unglazed and glazed water collectors in operation in the 10 leading countries by the end of 2014

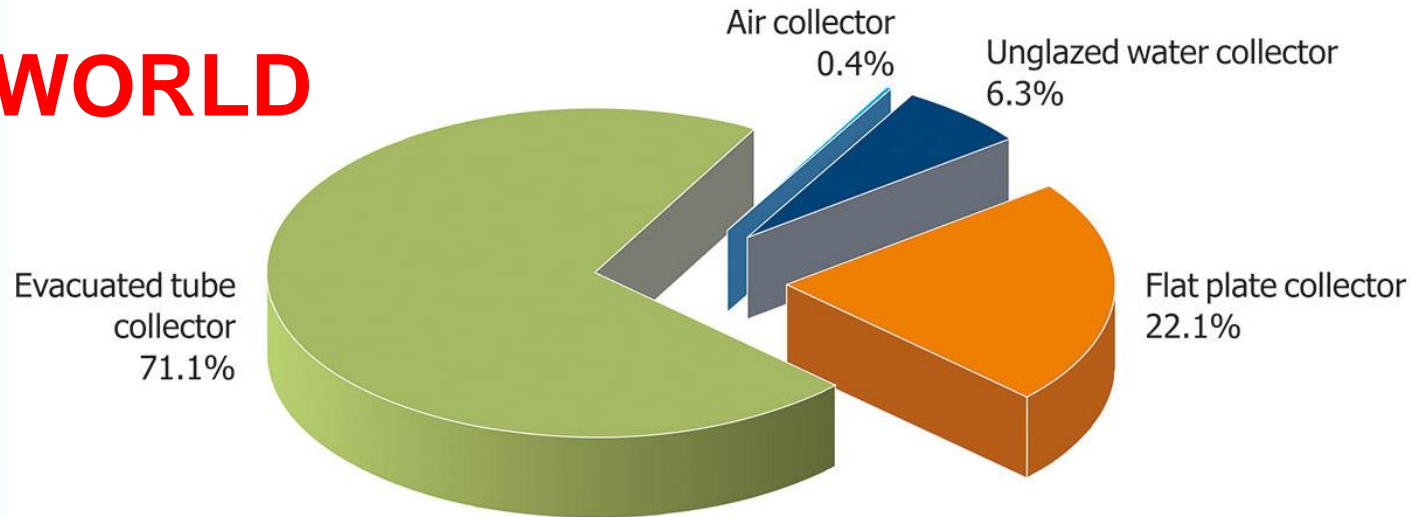


Top 10: Total capacity of glazed flat plate and evacuated tube collectors in operation in kW_{th} per 1,000 inhabitants by the end of 2014

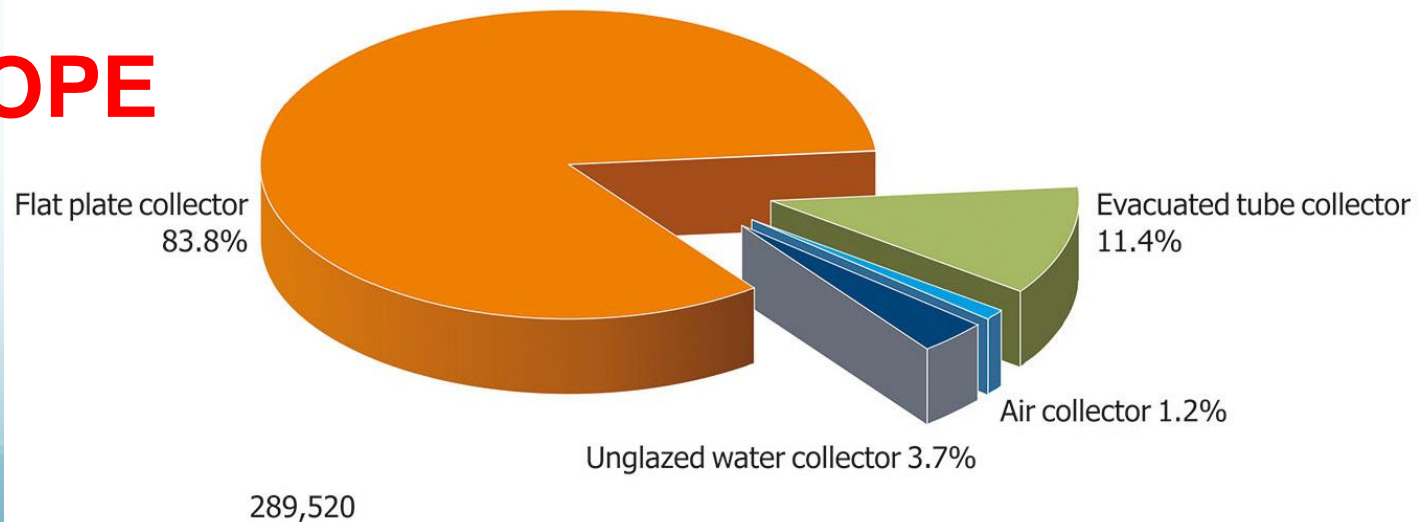


Distribution of the total installed capacity in operation by collector type in 2014

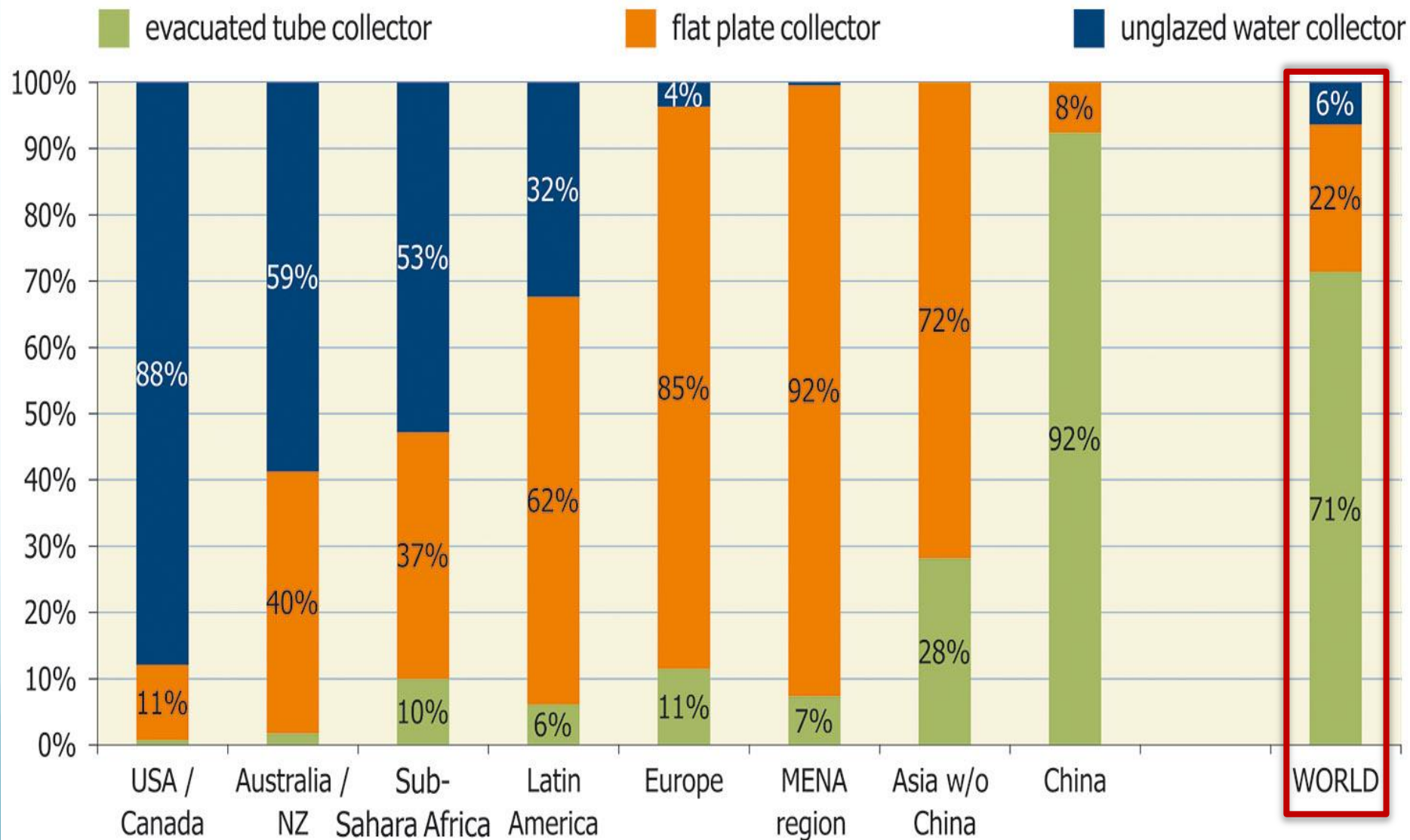
WORLD



EUROPE

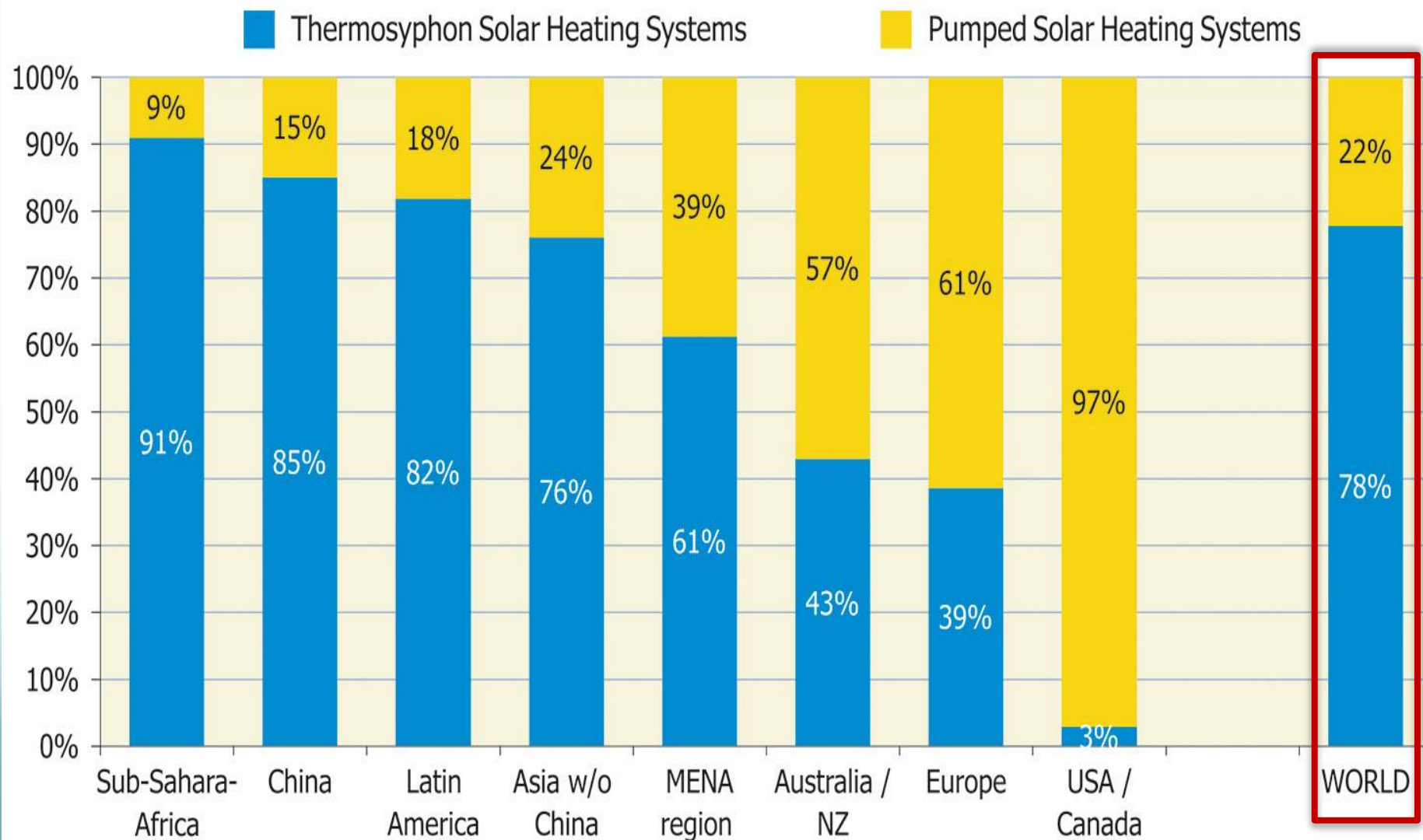


Distribution by type of solar thermal collector for the total installed glazed water collector capacity in operation by the end of 2014



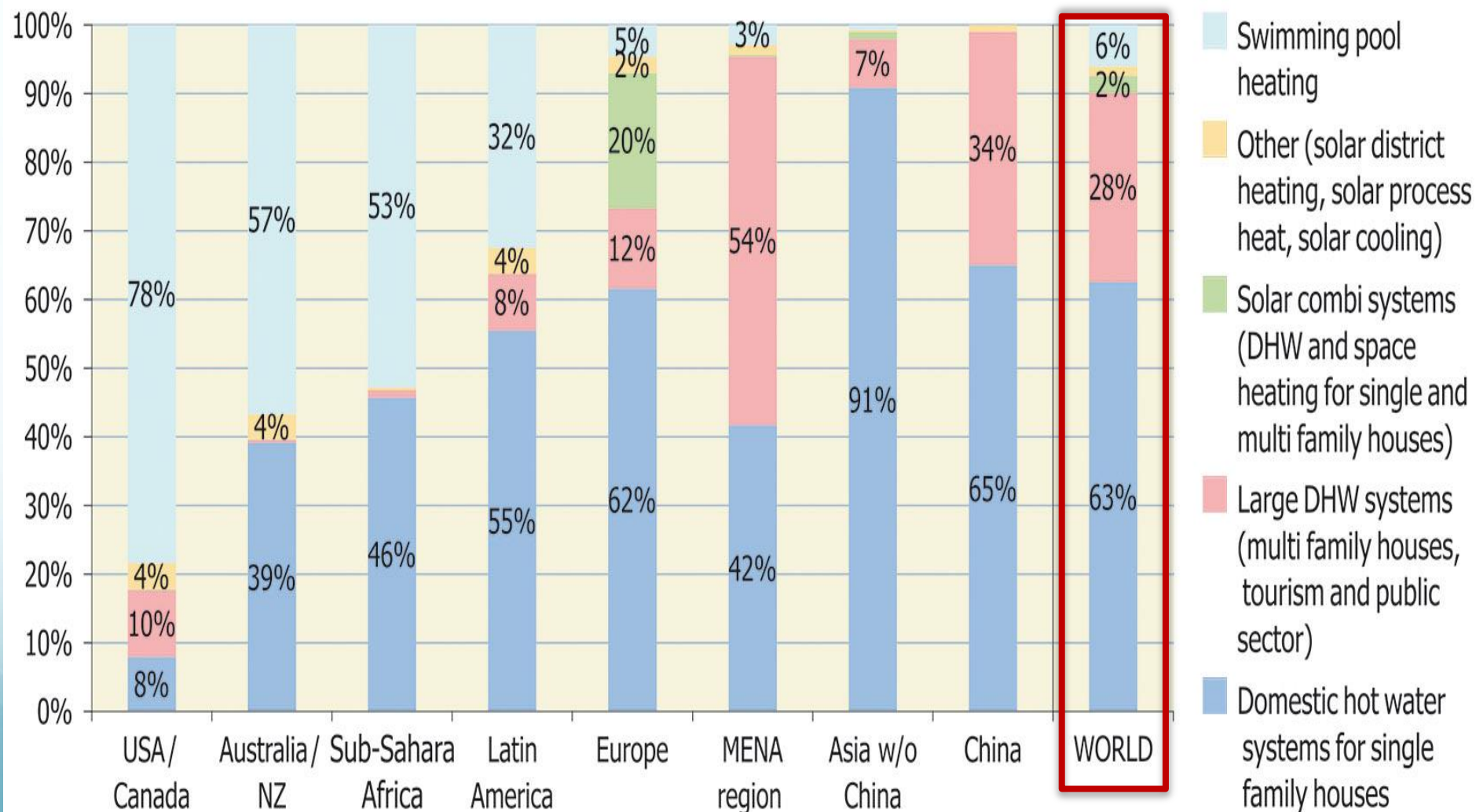
Distribution by type of system

for the total installed glazed water collector capacity in operation by the end of 2014



Distribution by application

for the total installed water collector capacity
by economic region in operation by the end of 2014



Decrease of Global Market



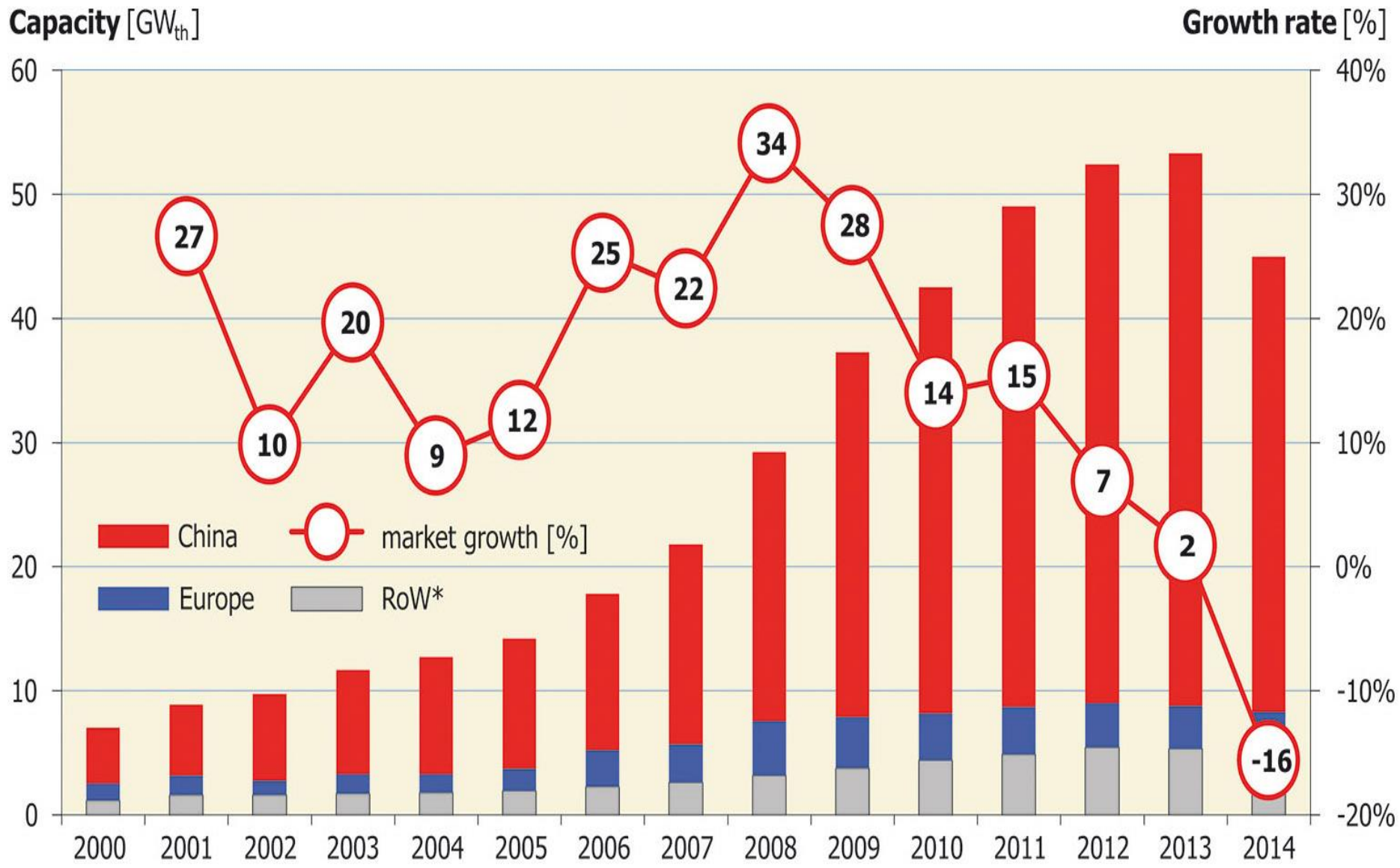
Compared to the year 2013 the new collector installations worldwide decreased by 15%

This indicates a trend change

This is the first time a shrinking world market has been observed

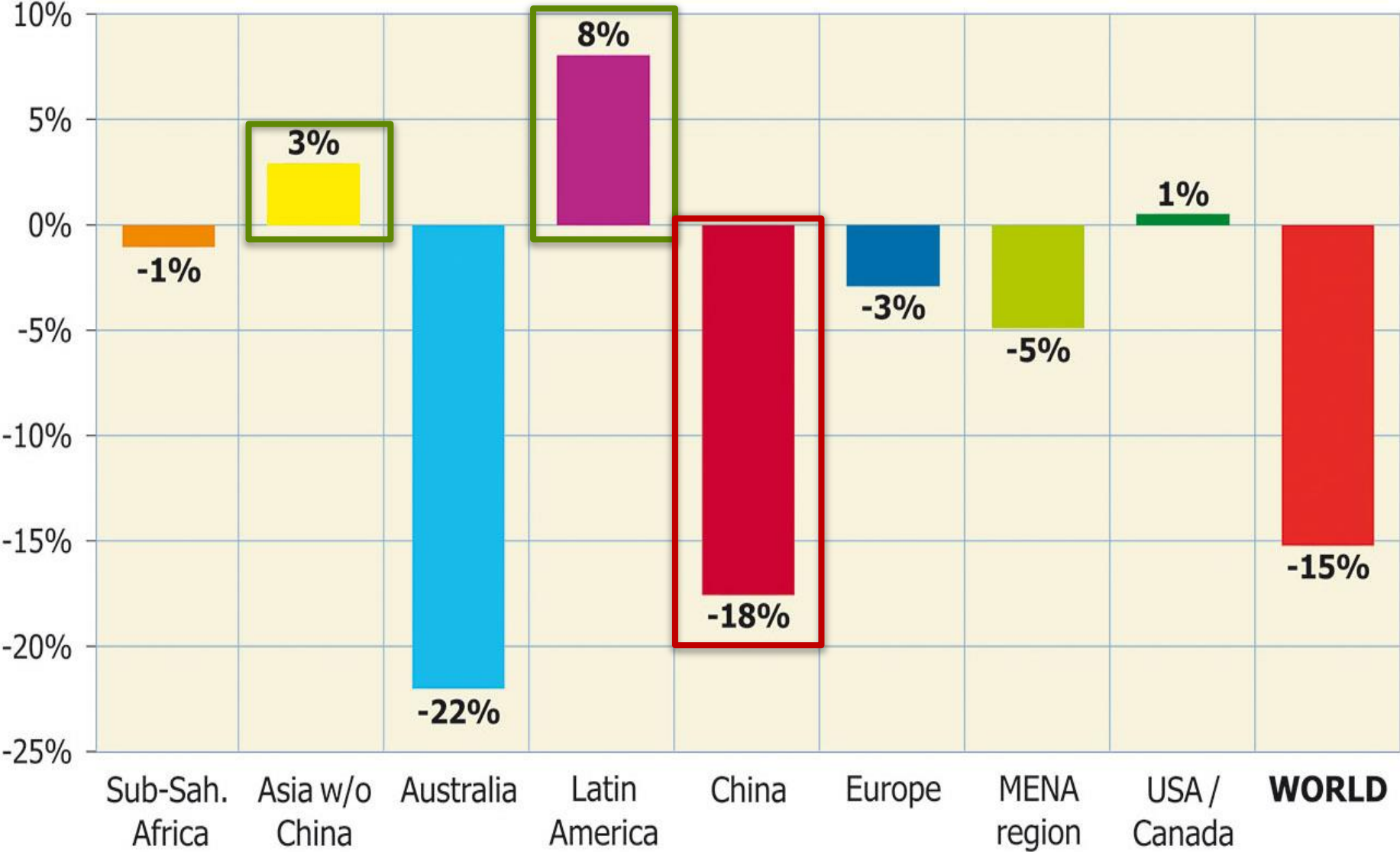
Based on data already available for 2015 this trend seems to continue

Market development - 2000 to 2014

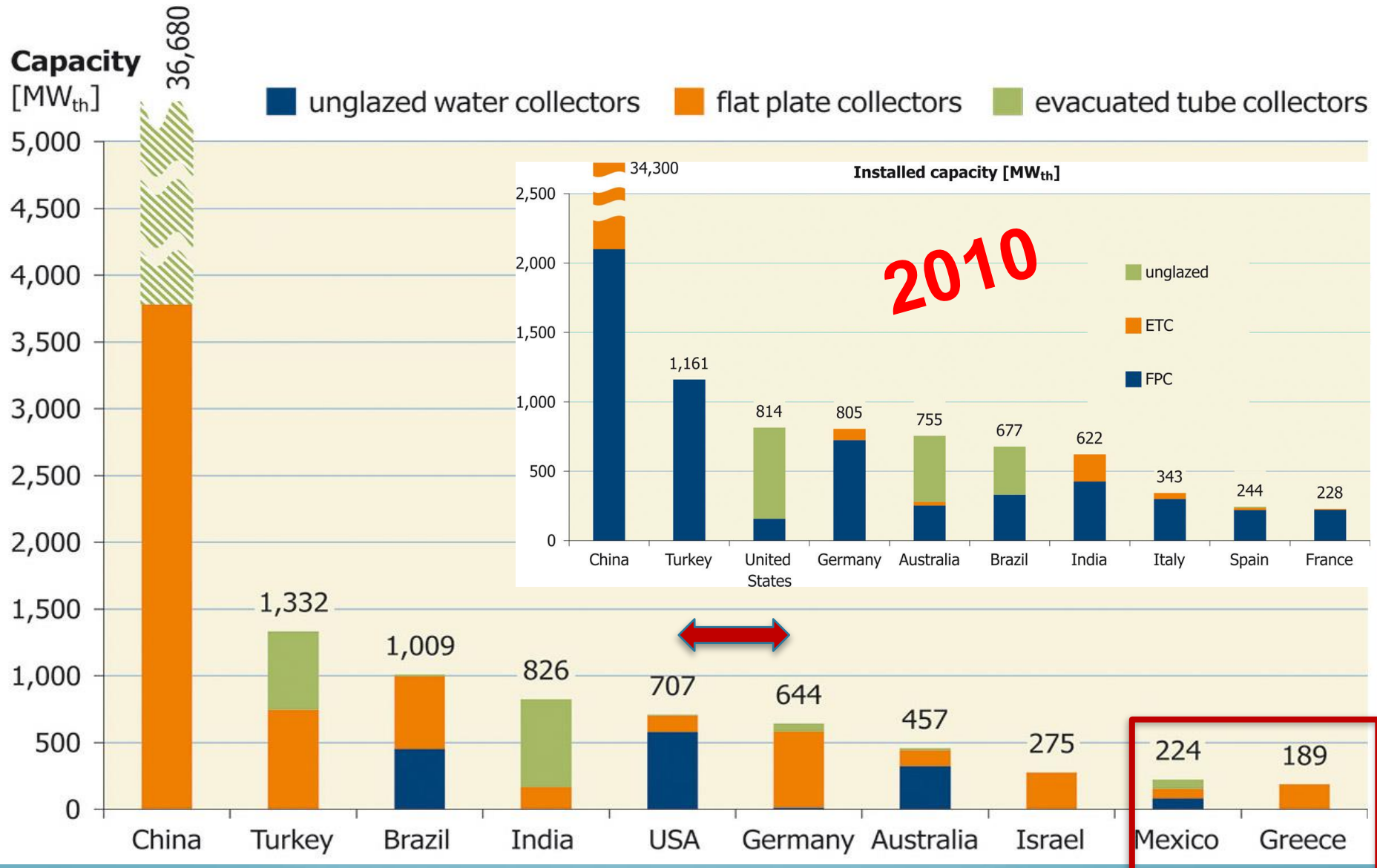


Market growth 2013 / 2014

Market growth 2013 / 2014



Top 10 markets for glazed flat plate and evacuated tube collectors in 2014



Top 10 markets for glazed flat plate and evacuated tube collectors in 2014

per 1,000 inhabitants

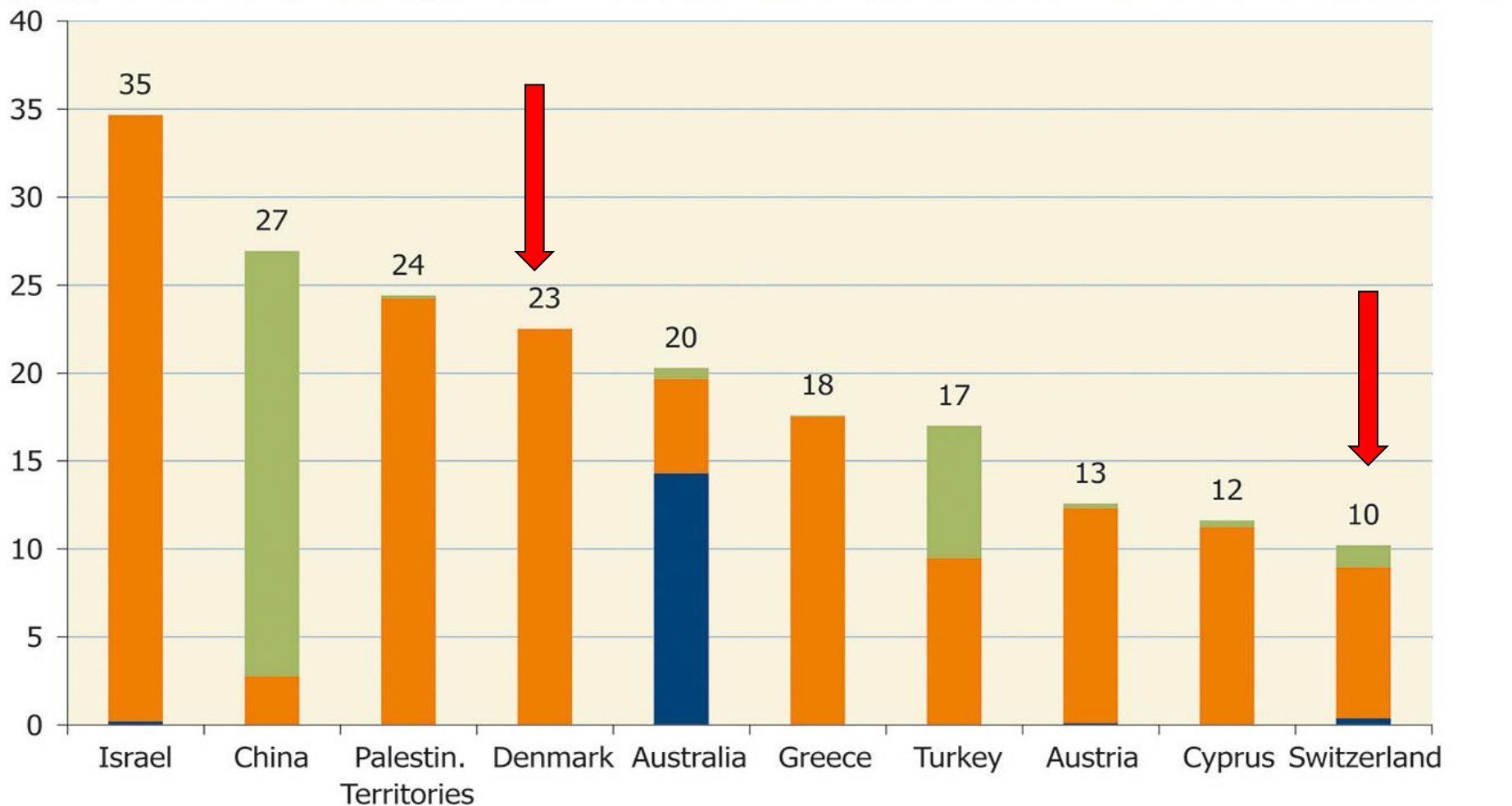
Capacity

[kW_{th} per 1,000 inh.]

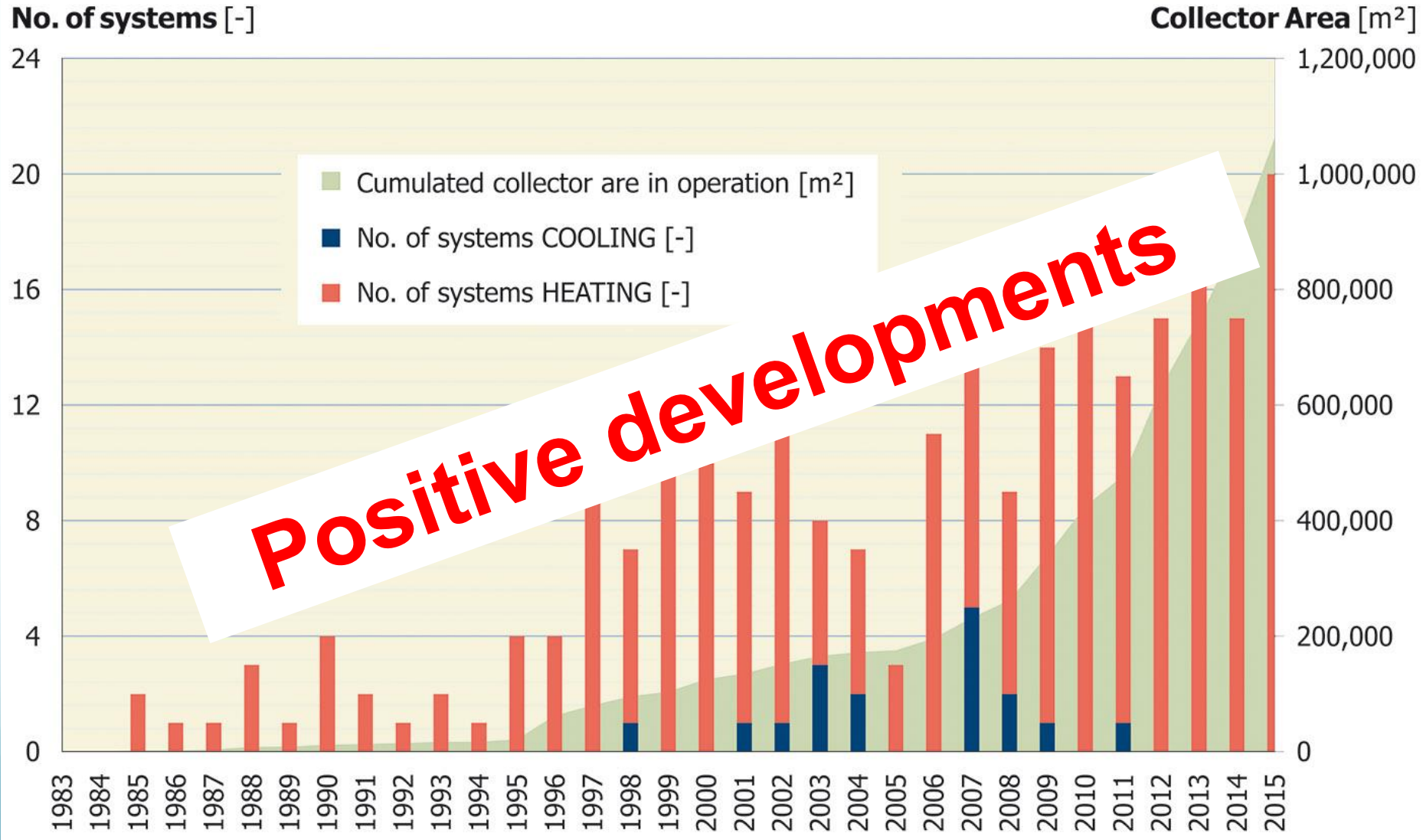
■ unglazed water collectors

■ flat plate collectors

■ evacuated tube collectors

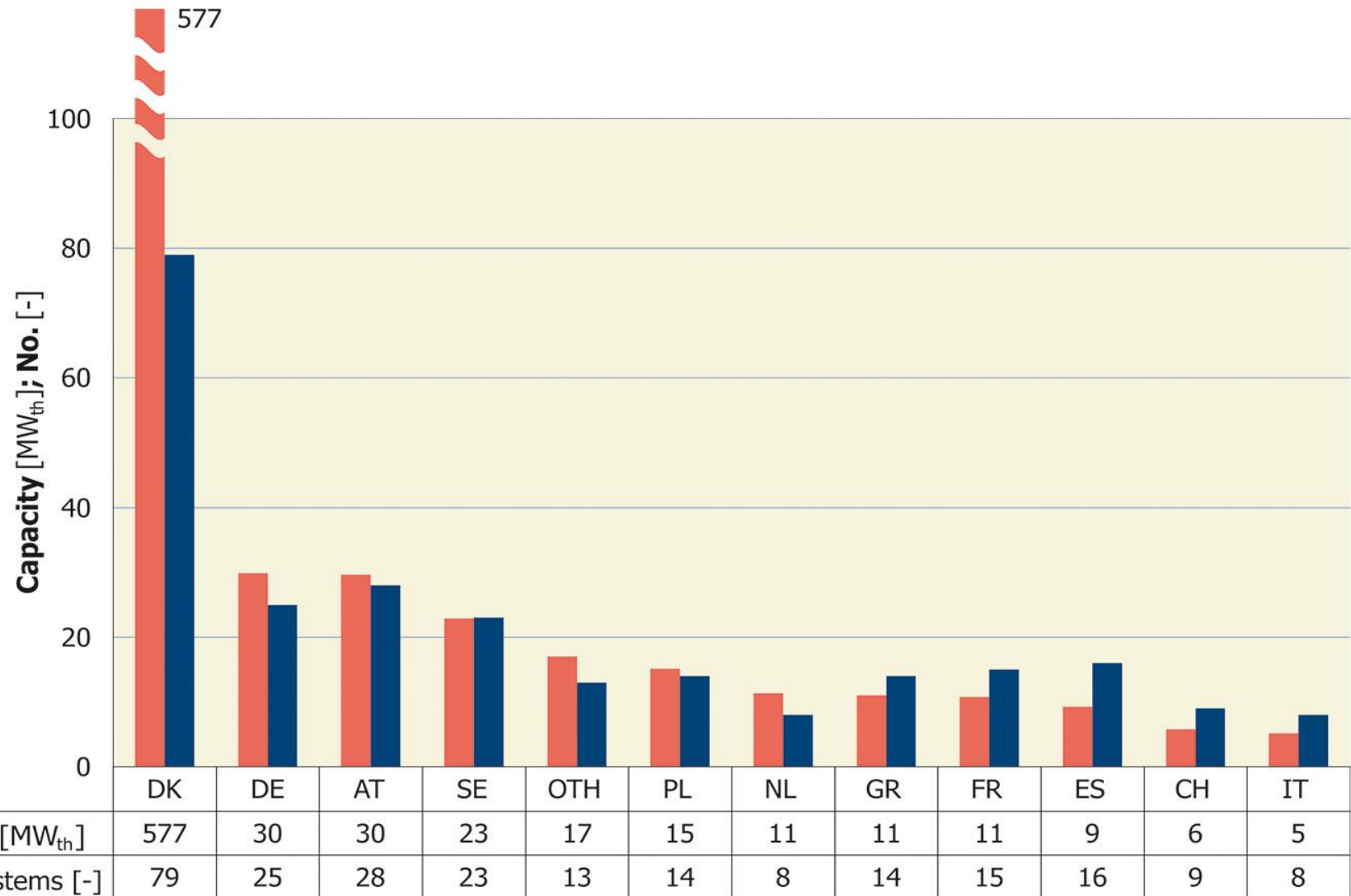


Large-Scale District Heating and Cooling Applications in Europe by 2015



Source: Jan-Olof Dalenbäck, Chalmers University of Technology, DK

Large-Scale District Heating and Cooling Applications in Europe by the end of 2014



Source: Jan-Olof Dalenbäck, Chalmers University of Technology, DK

Vojens Solar District Heating Plant

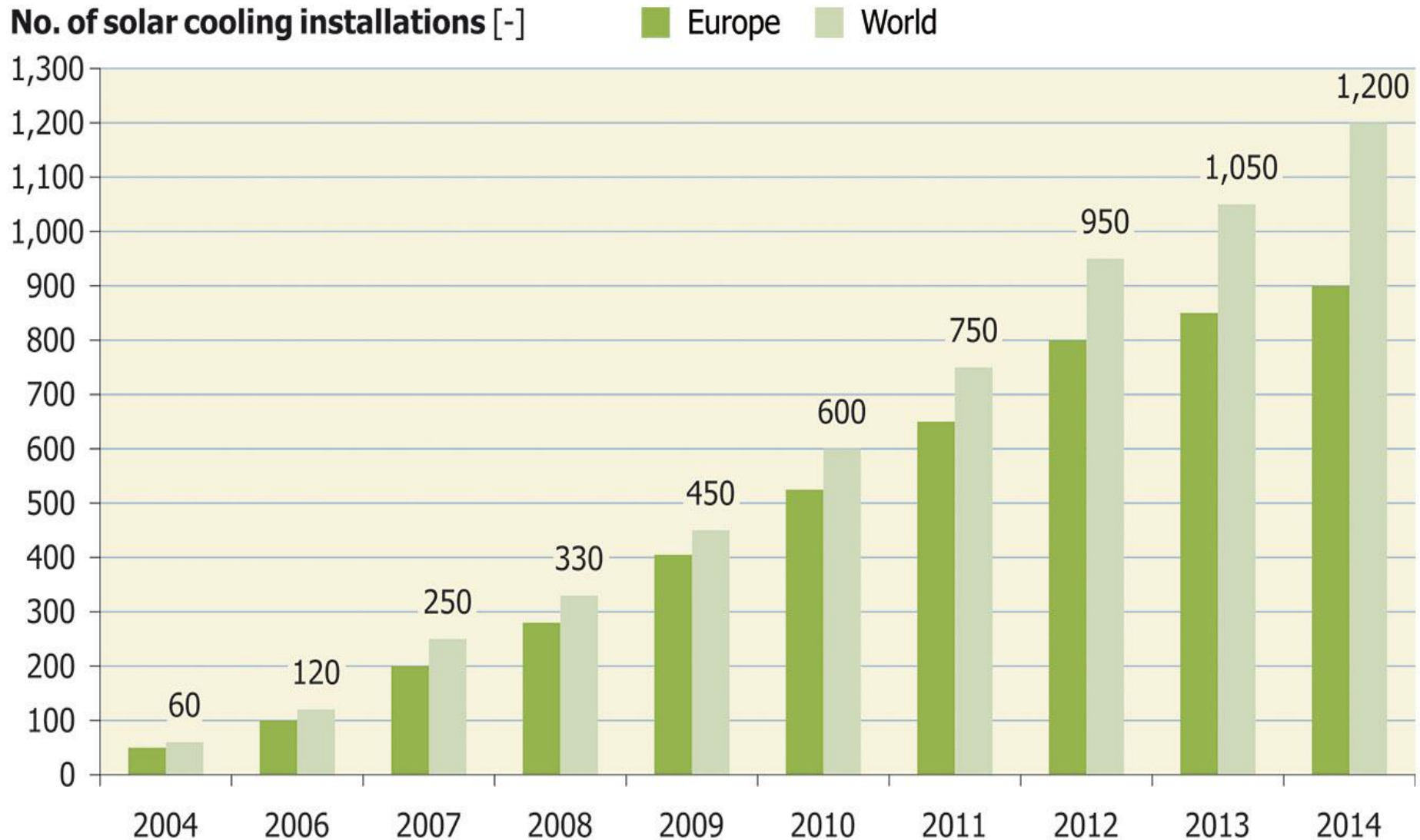


Collector Capacity: 37 MW_{th} (52,491 m²)
203,000 m³ Seasonal pit heat storage.

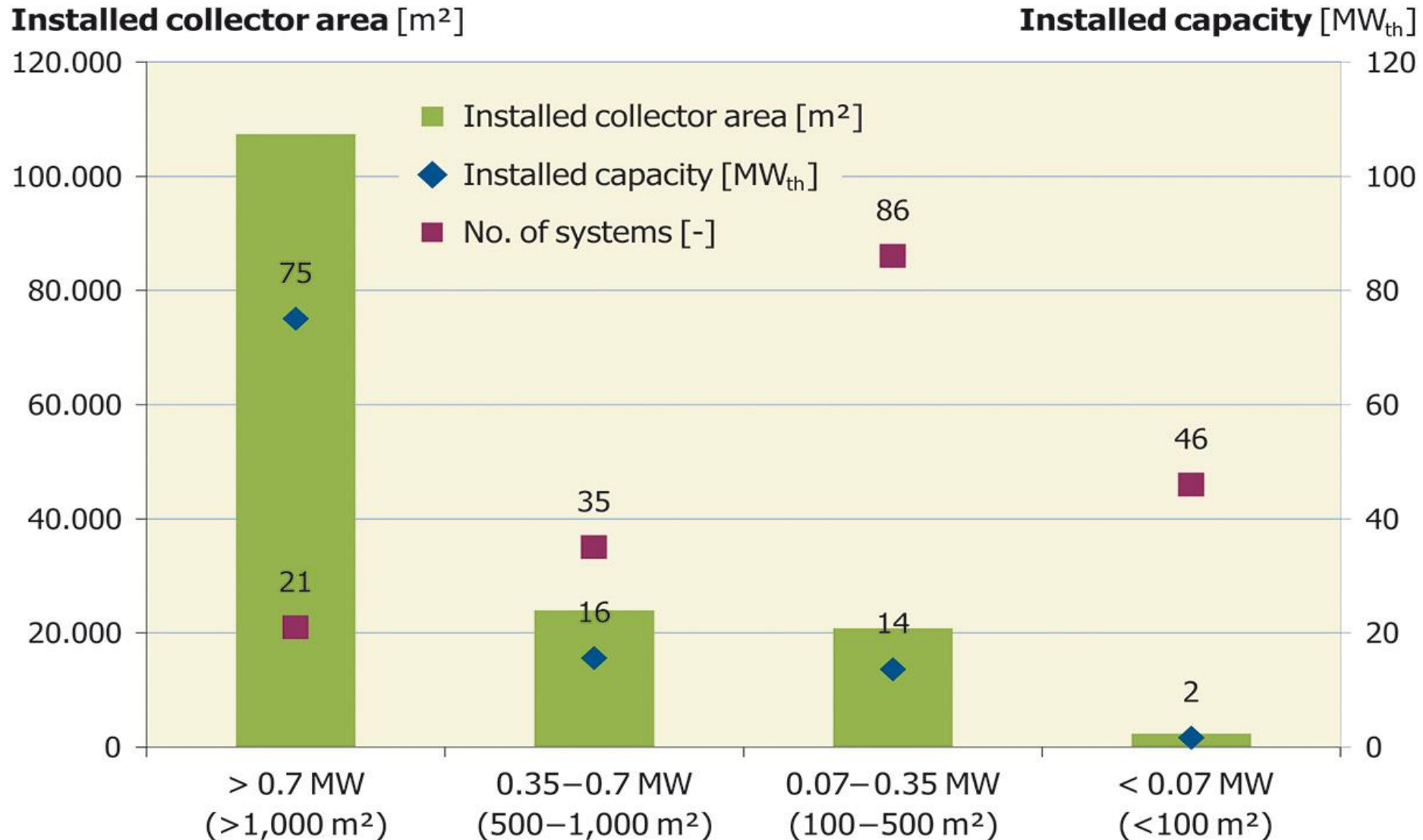


(Source: ARCON-SUNMARK)

Solar Cooling Systems in Operation



Global Solar Process Heat Applications in Operation



Copper Mine “Gabriela Mistral”, Chile

26MWth (39,300 m²)



Source: ARCON-SUNMARK

Number of jobs

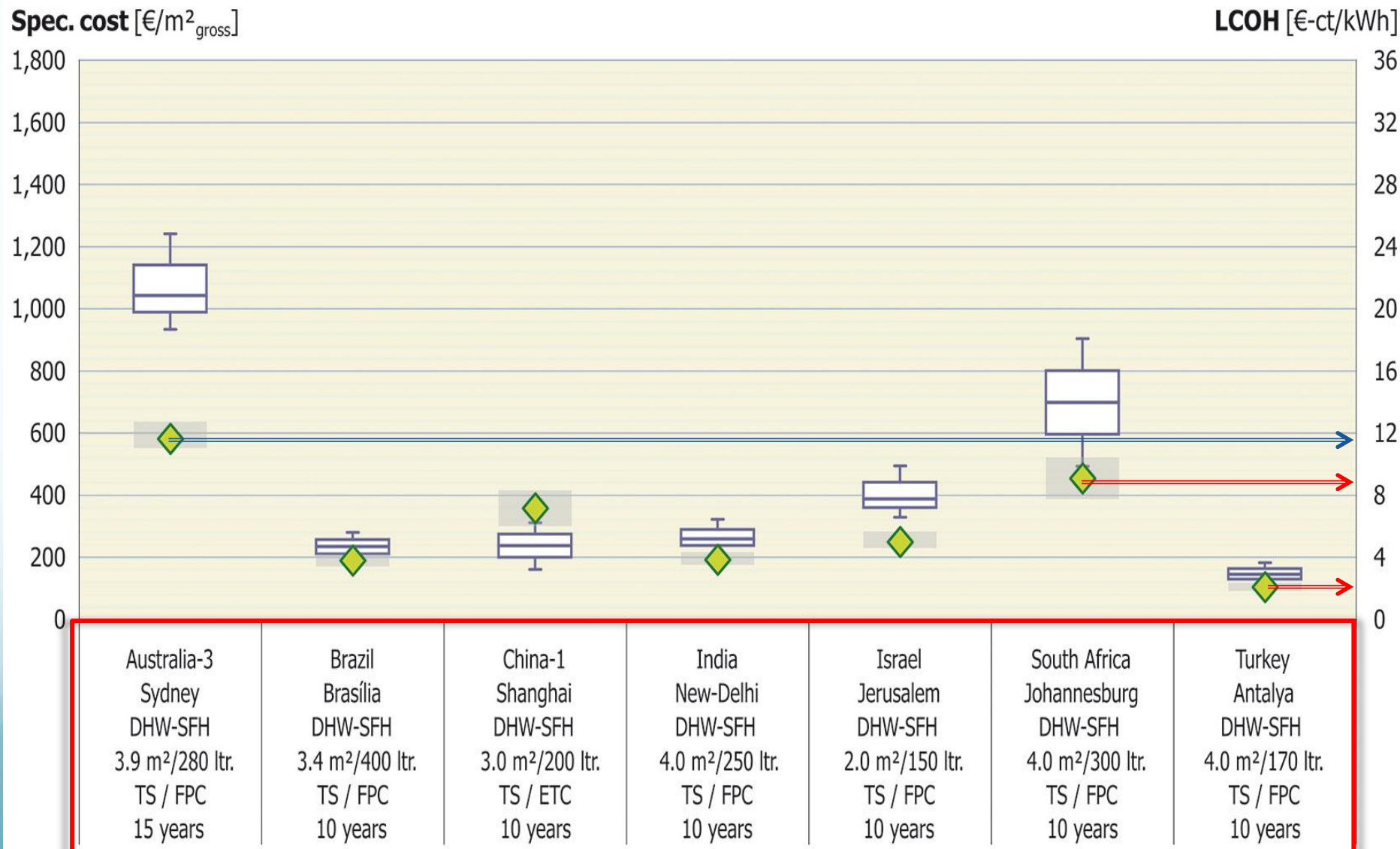
in the fields of production, installation
and maintenance of solar thermal
systems is estimated to be
730,000 worldwide
in 2014

Turnover

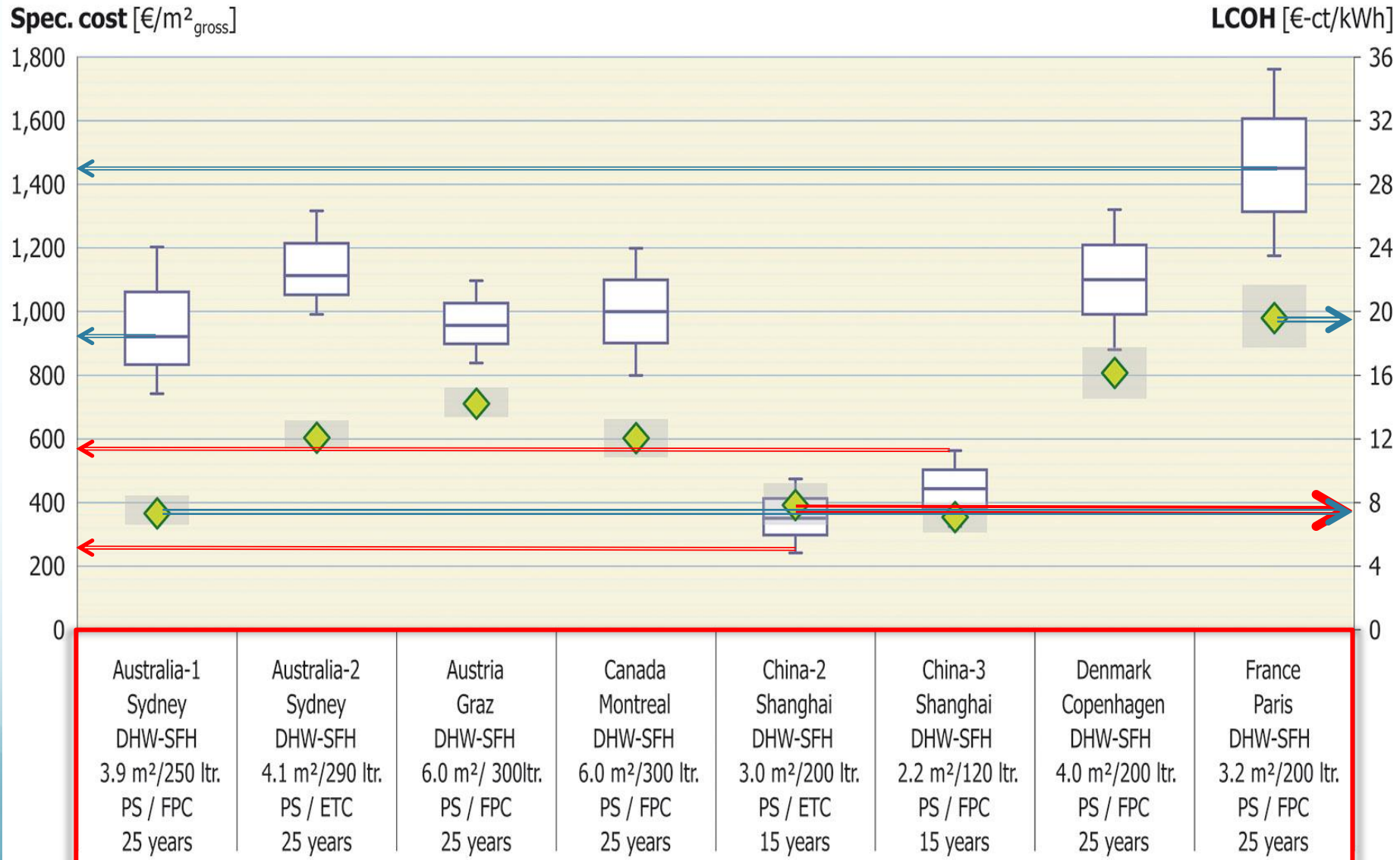
The worldwide turnover of the solar thermal industry in 2014 is estimated at **€ 21 billion (US\$ 24 billion)**

Solar thermal system cost and levelised costs of heat

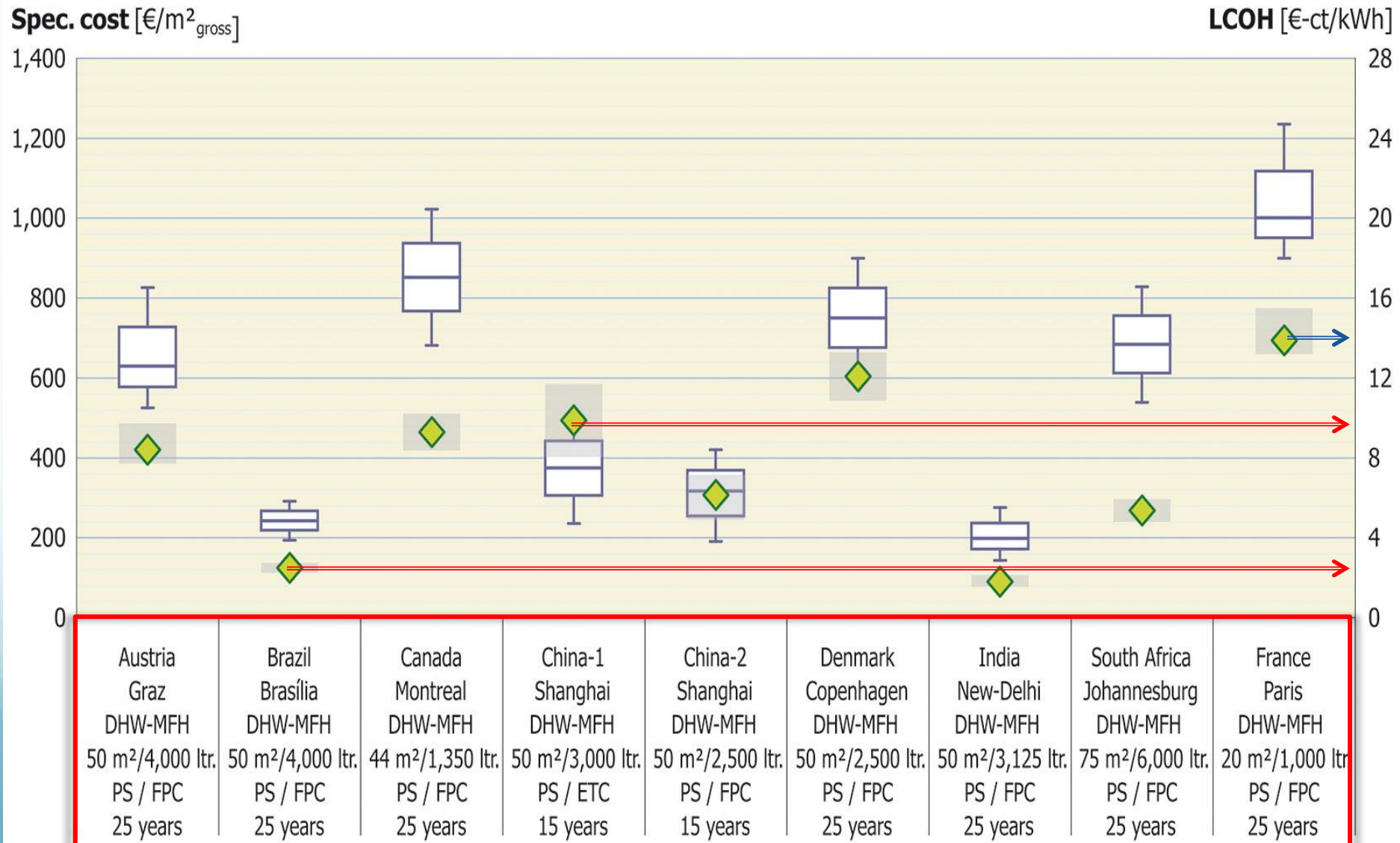
Specific Investment costs and LCOH for small thermosiphon domestic hot water systems



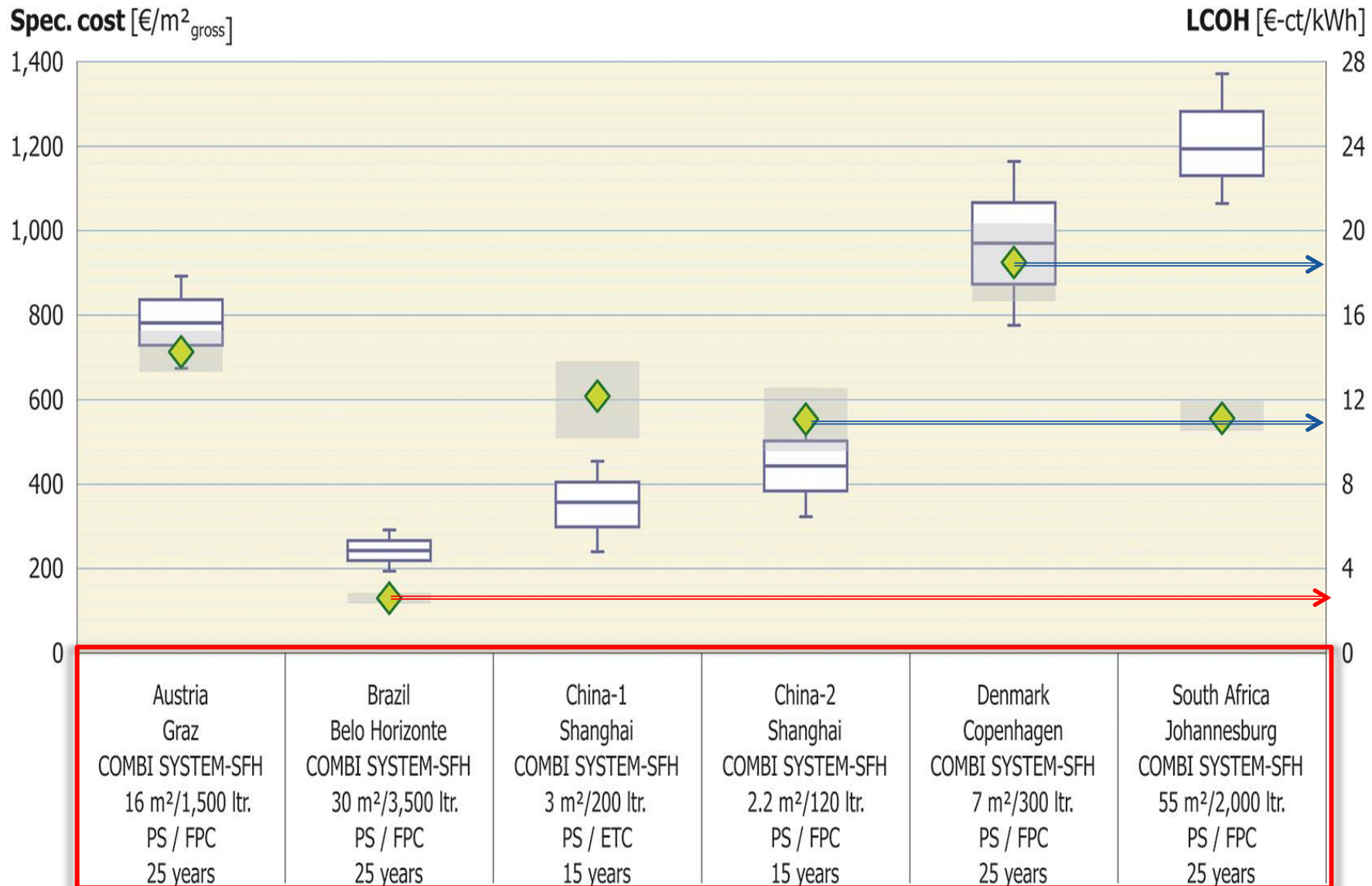
Specific Investment costs and LCOH for small pumped domestic hot water systems



Specific Investment costs and LCOH for large pumped domestic hot water systems



Specific Investment costs and LCOH for small combi systems



Thank you for your attention



IDEA to ACTION