



**5th European Solar Thermal Energy Conference
20-21 October 2011, Marseille (France)**

SOLAR THERMAL IN SPAIN

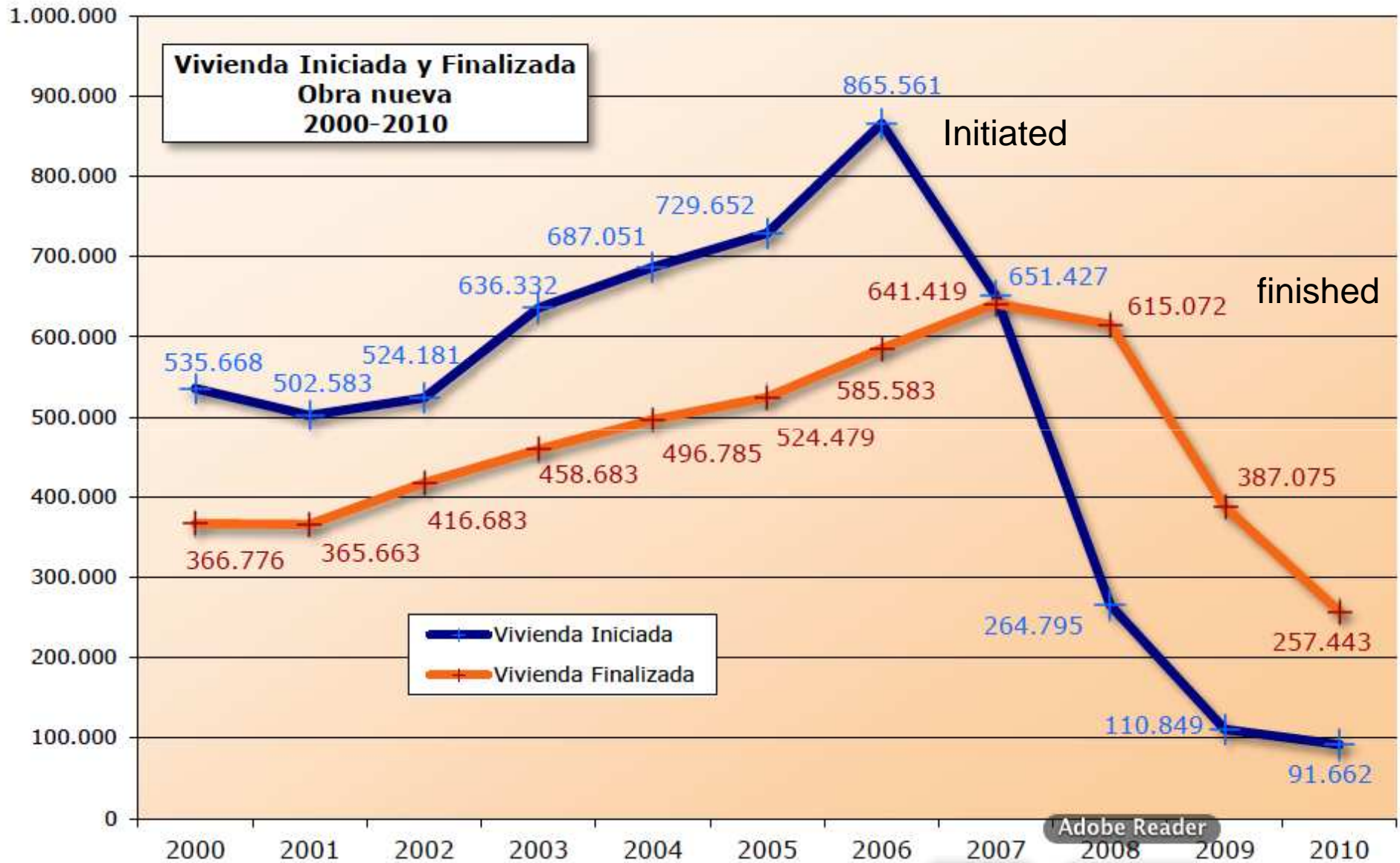
Pascual Polo, Secretary General ASIT

Spanish Solar Thermal market is crossing a critical and decisive moment, a sector *seriously affected by the economic conjuncture* but that still has illusion and the will to be reinvented.

From 2005 to 2008 the Spanish Solar Thermal market has been **multiplied by 5**, and in three years it is going to be **divided by two**.



Why?...ST market focused in new buildings



ASIT 2010

Solar thermal energy sector turnover in Spain: 278 Mill. €

New installed: 243,6 MWth (348.000 M2)

Employment:

Direct: 5.000 Persons

Share of Representation in the market ASIT:

Supply of collectors : 92 %



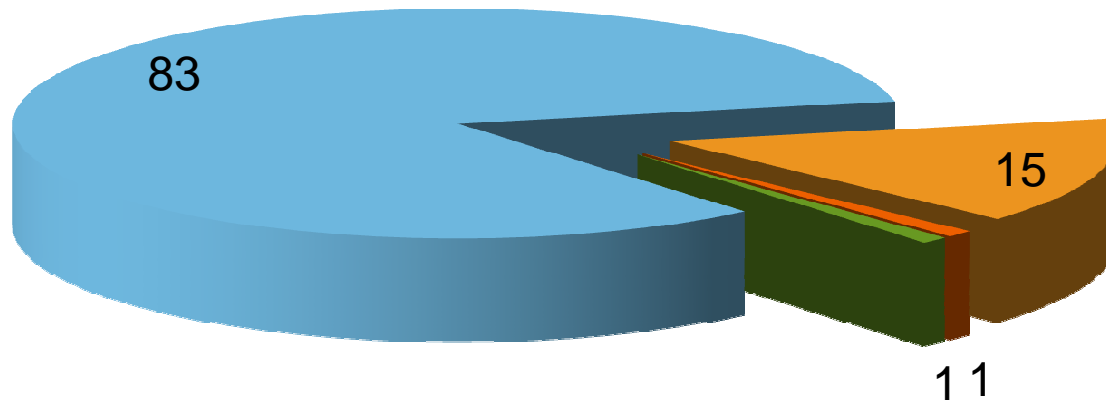
Octubre 2011, 82 members



Spanish Market: New installed 2010



**243,6 MWth
(348.000 M2)**



■ Technical Building Code
83%
202 MWth (289.000 M2)

■ Regional Subsidies 15%
37 MWth (53.000 M2)

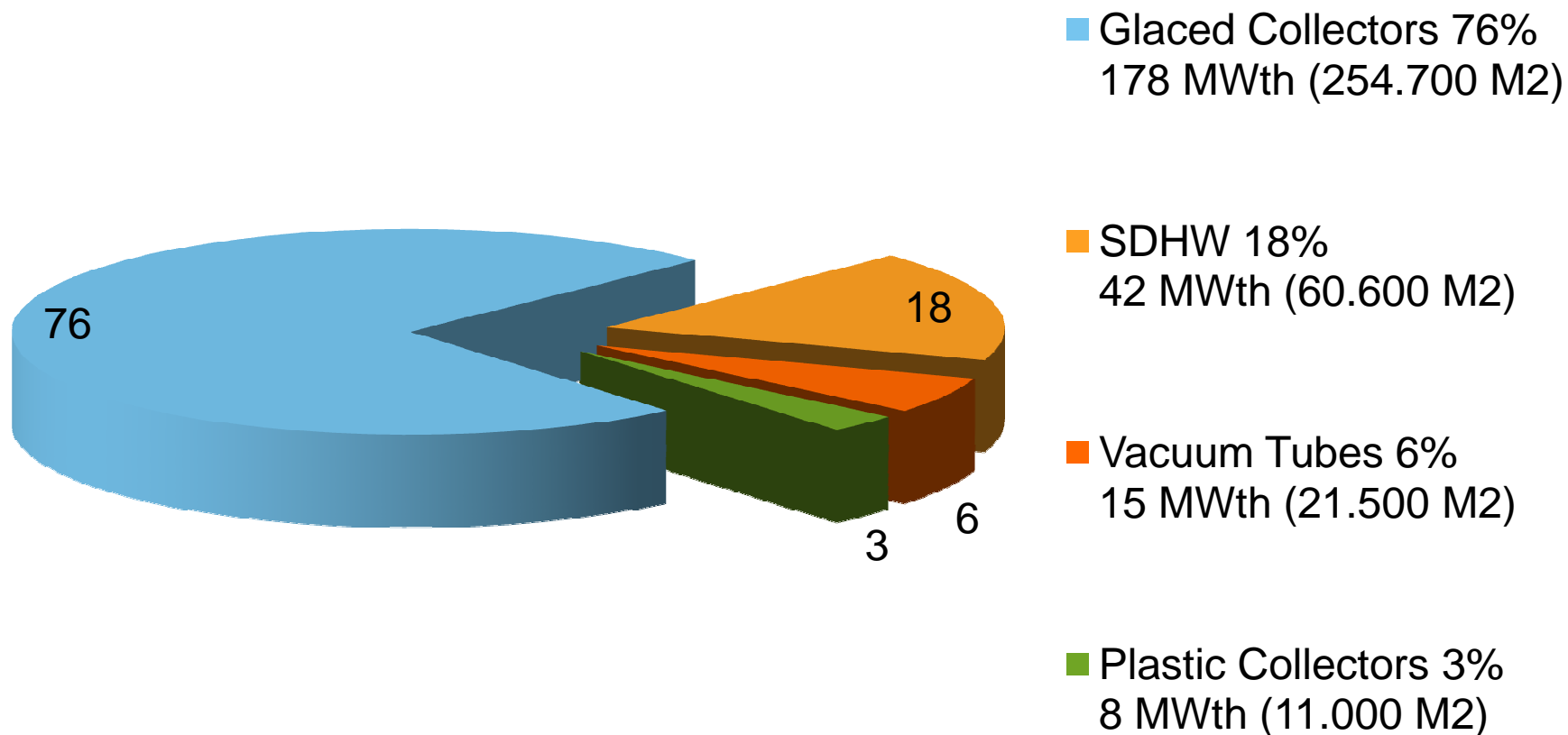
■ Industrial 1%
2,3 MWth (3.500 M2)

■ Other 1%
2,3 MWth (3.500 M2)

Source: ASIT

Spanish market 2010: % Kind of collector and system

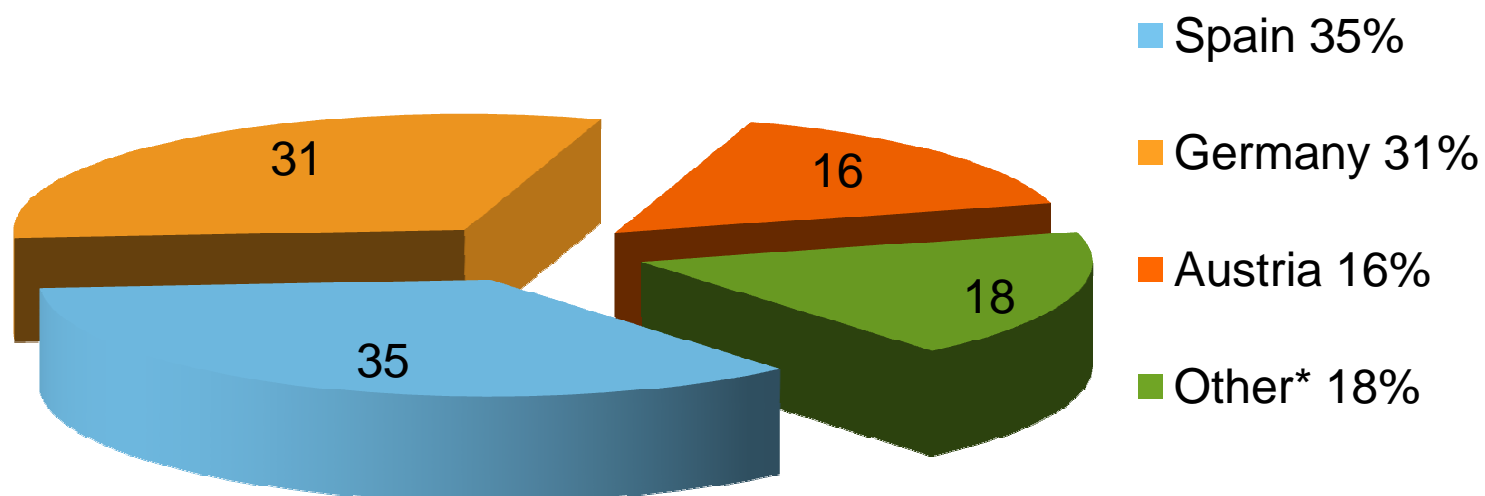
243,6 MWth
(348.000 M2)



Source: ASIT

Spanish Market 2010: % National vs. Importation

243,6 MWth
(348.000 M2)



**Other countries below 10% (IS, GRE, TUR, CHI)*

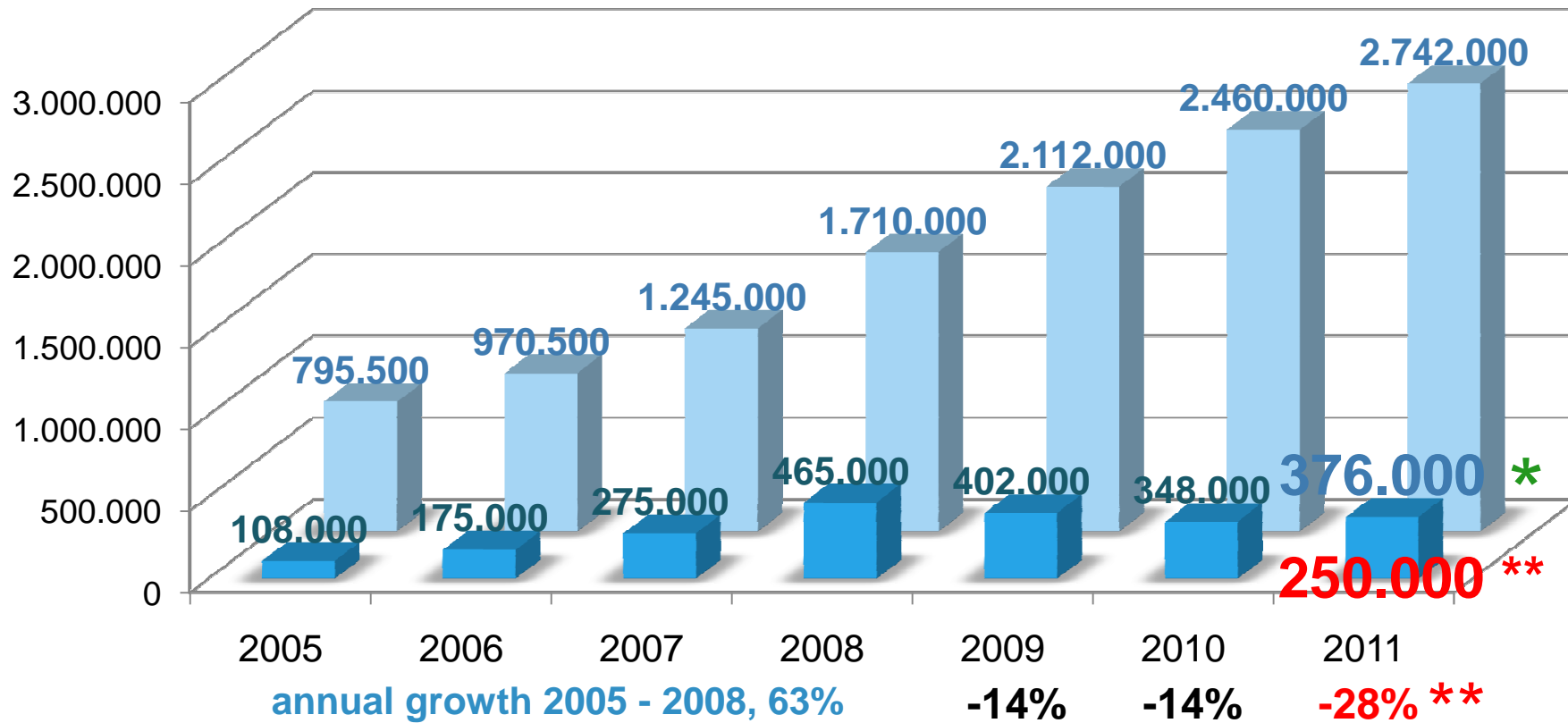
Source: ASIT



Development Market Estimation 2005 – 2010

And forecast for 2011 according to PER 2011- 2020*

■ M2 instalados / año ■ M2 acumulados



Forecast ASIT**



From ASIT we are working to change this trend and to return to the path **towards a sustainable market.**

To change this dramatic trend it is necessary:

- To **consolidate the TBC**, beyond the obligatory nature, opening its application for the heating & cooling and betting really for the old buildings restoration
- It is necessary **"effective" subsidies programs**
- And about all it is necessary to **open new markets** where the solar thermal energy can contribute **providing energy**, related to the big consumptions of heat

To develop a sustainable sector from **subsidies** or from **obligations** is **unviable**:

- On the one hand it just helps to the **initial investment** but the **efficiency** of the installation is **not** stimulated
- On the other hand the **user can be dammed** if the one who is forced to do the installation is not worried about its efficiency either.

For this reason, from ASIT we are trying to make real something that we are raising since 2005:

- ***To change subsidies philosophy***: subsidies not to the square meter, but to the energetic production in order to stimulate the efficiency of the installation.

It is necessary an Special Framework for ST, a feed in tariff as the other renewable that produce electricity, to obtain reasonable profitability up to reaching the competitiveness.

It is why **the new PER 2011-2020** will establish the above mentioned juridical frame that promotes the private initiative since it should be more important than the public subsidies, a **regulation that supports a sustainable sector.**



Strategic lines

Improvement of the social image



- We are a mature technology
- We produce **ENERGY**
- We Add value and contribute notably to the **creation of stable employment** and to the overcoming of the **energetic challenges** of Spain and Europe

Perspectives of development of the Solar Thermal market in the frame of the new Spanish Plan of Renewable Energies,

PER 2011-2020:

- 1 Technical Building Code's market
- 2 Subsidies Programs from autonomous regions' market
- 3 ICAREN's market, incentives for large systems, ESCO model
- 4 Global Market

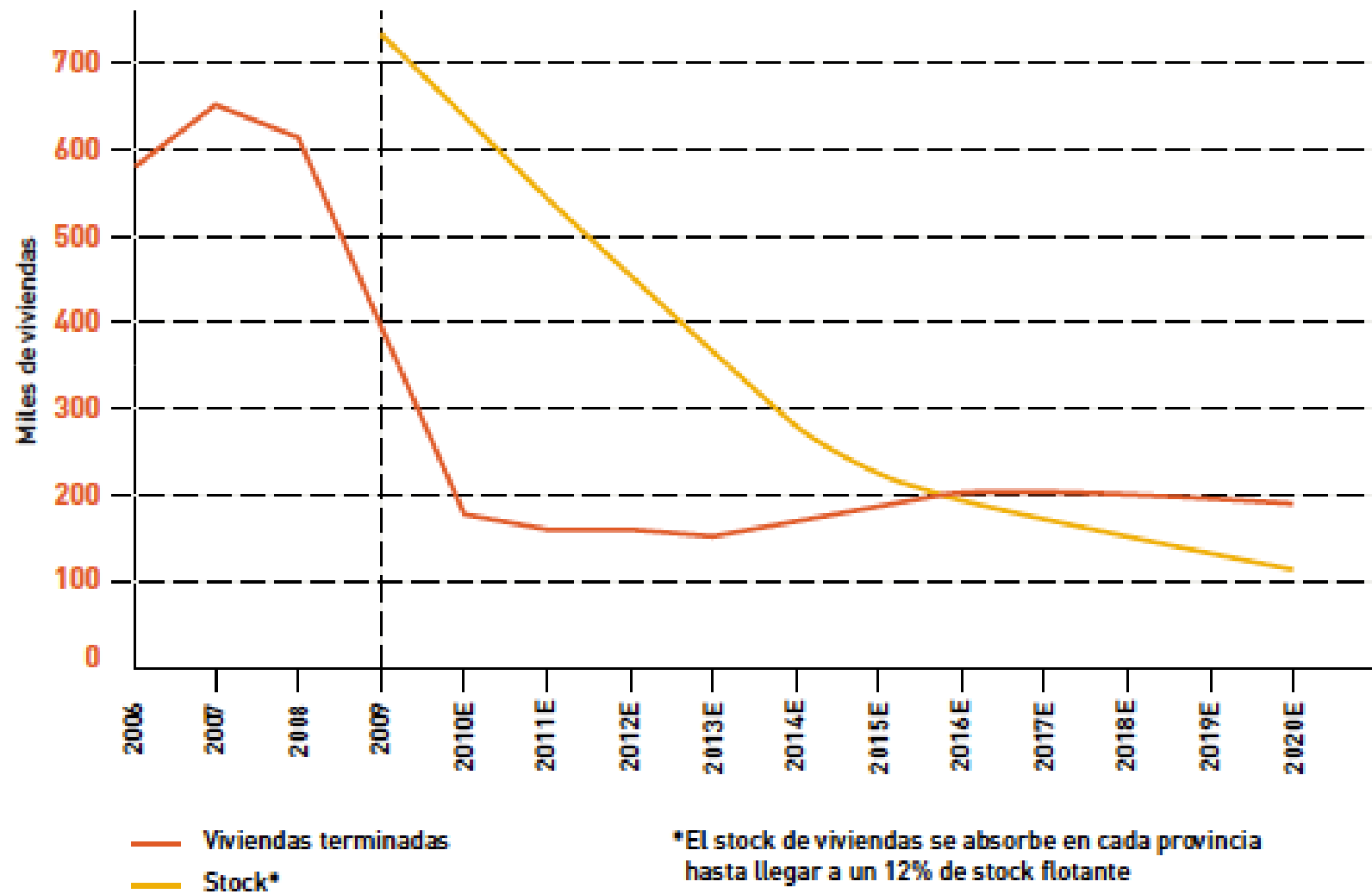


Perspectives of development of the Solar Thermal market in the frame of the new PER:

1 Technical Code of the Building's market

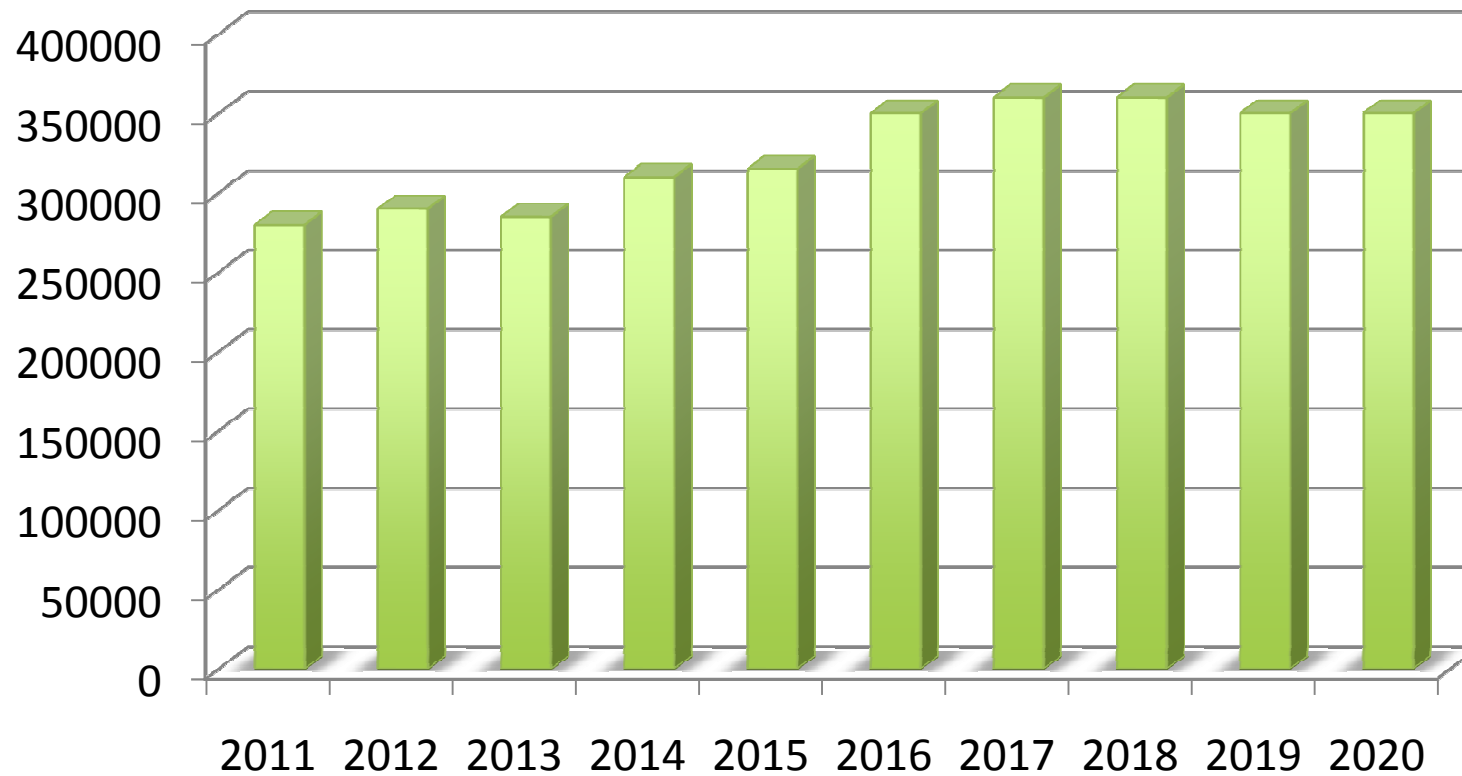


Ilustración 5. Comparación de viviendas terminadas y de la demanda de viviendas calculada con el método de las tasas de jefe de hogar



Fuente: 2006-2009: Colegio de aparejadores;
2010-2020: cálculos de Eclareon

Market PER 2011-2020: Technical Building Code



Multi-Family Housing: 1,25 M2
Individual Housing: 3,78 M2

Regulation in new PER

- Establishment of inspection and control of the fulfillment of the CTE systems in the different stages of the solar thermal installations.

- Control of the fulfillment of the CTE as for measured (programme of validation recognized) CHEQ4
- Establishing a system of inspection and control
- Obligation to incorporate tele-control systems of the installations, in visible places for all the users.



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y Ahorro de la Energía



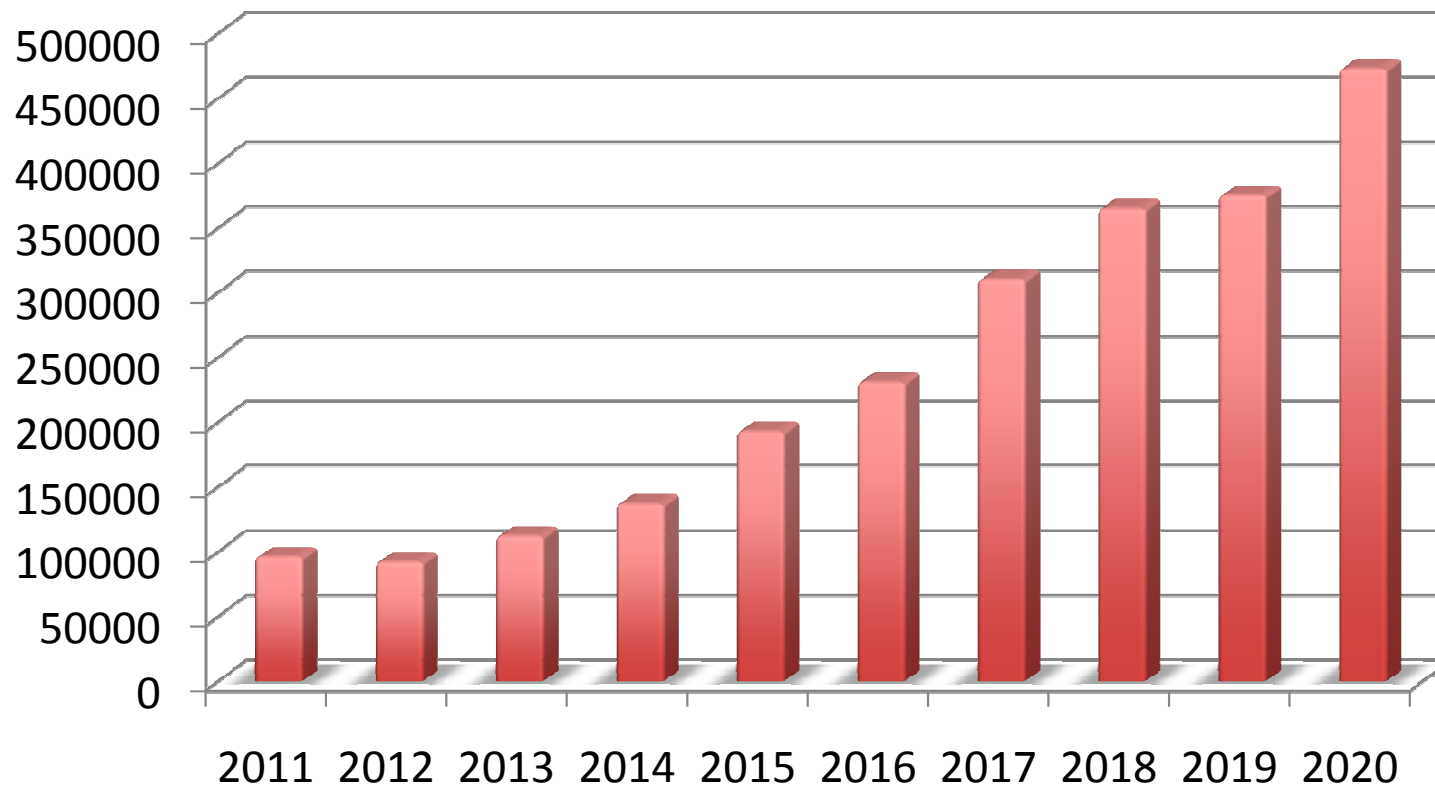
ASIT
ASOCIACIÓN SOLAR
de la INDUSTRIA TÉRMICA

Perspectives of development of the Solar Thermal market in the frame of the new PER:

2 Subsidies Programs from autonomous regions' market



Market PER 2011-2020: Subsidies



Perspectives of development of the Solar Thermal market in the frame of the new PER:

3 ICAREN's market, incentives for large systems, ESCO model





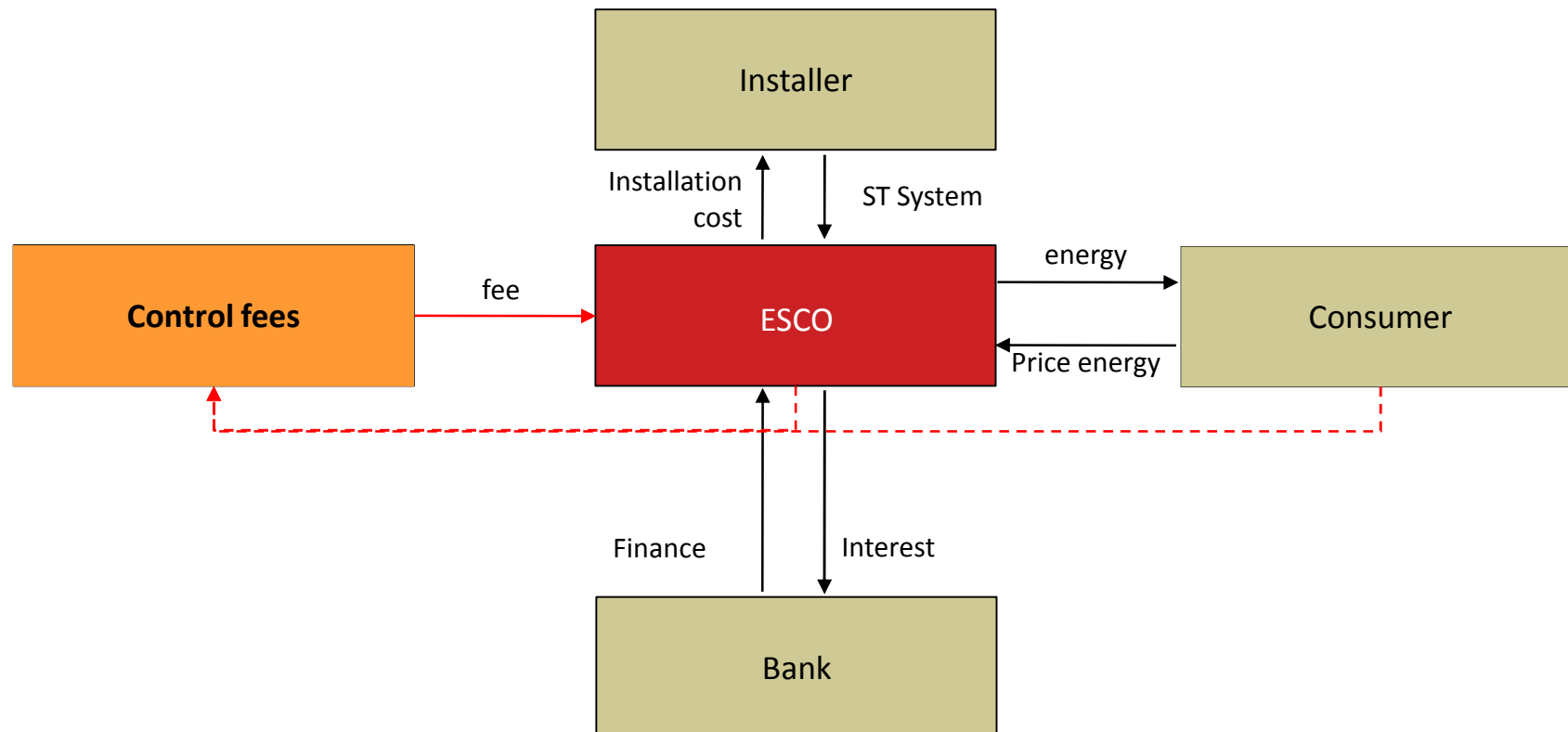
Perspectives of development of the Solar Thermal market in the frame of the new PER:

3 ICAREN's market, ESCO model

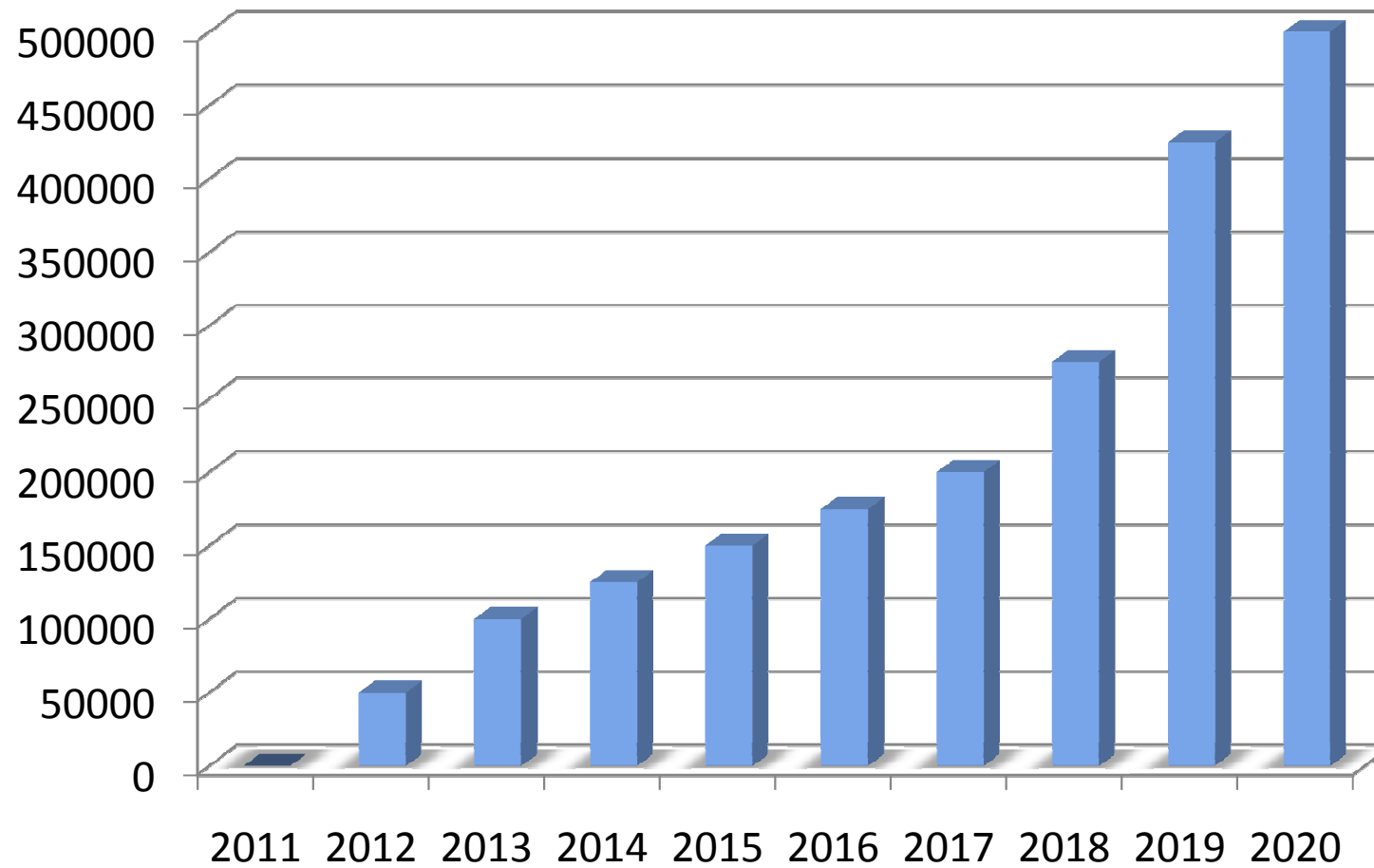
- Concept: The ESCO receives a certain fee per kilowatt-hour by the administration and by the client. The level of the granted fees must be fixed in a way, that the ESCOs receive a good return of investment within a minimum of 10 years.
- The ESCO earns good money, if the solar thermal system works well. This guaranties high quality of the installed commercial solar thermal systems
- Typical clients are hospitals, hotels or industrial producers.
- The feed-in tariff is eligible for solar, geothermal and biomass heat

Once the Renewable Energy Plan is approved and, therefore, the framework for the feed-in tariff is set, the detailed work will start. Then we need a regulation – Royal Decree – that specifies the details about the feed-in tariff.

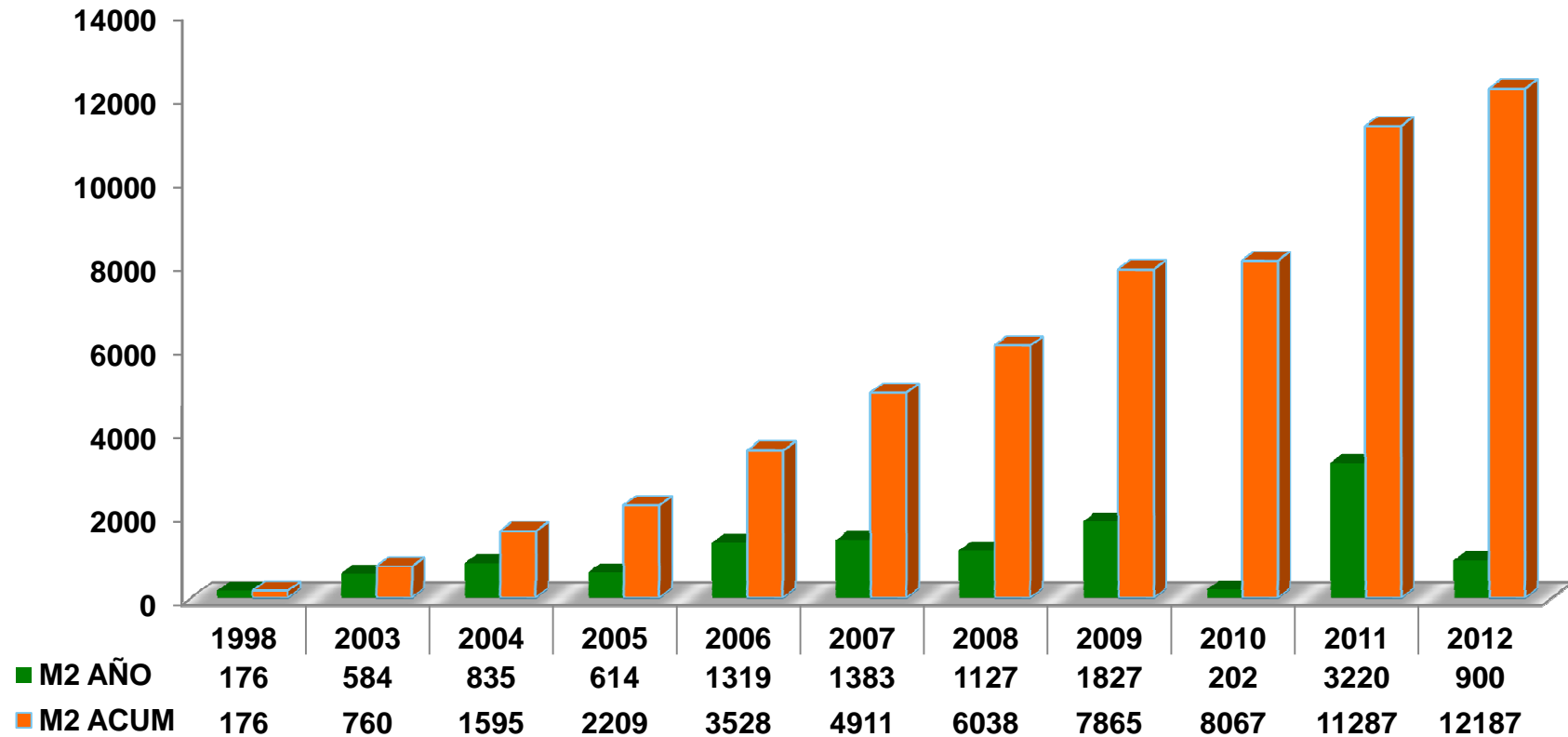
ICAREN: ESCO model



Market PER 2011-2020: ICAREN program



RESEARCH OF THE EVOLUTION OF THE ESCO SOLAR THERMAL ENERGY*



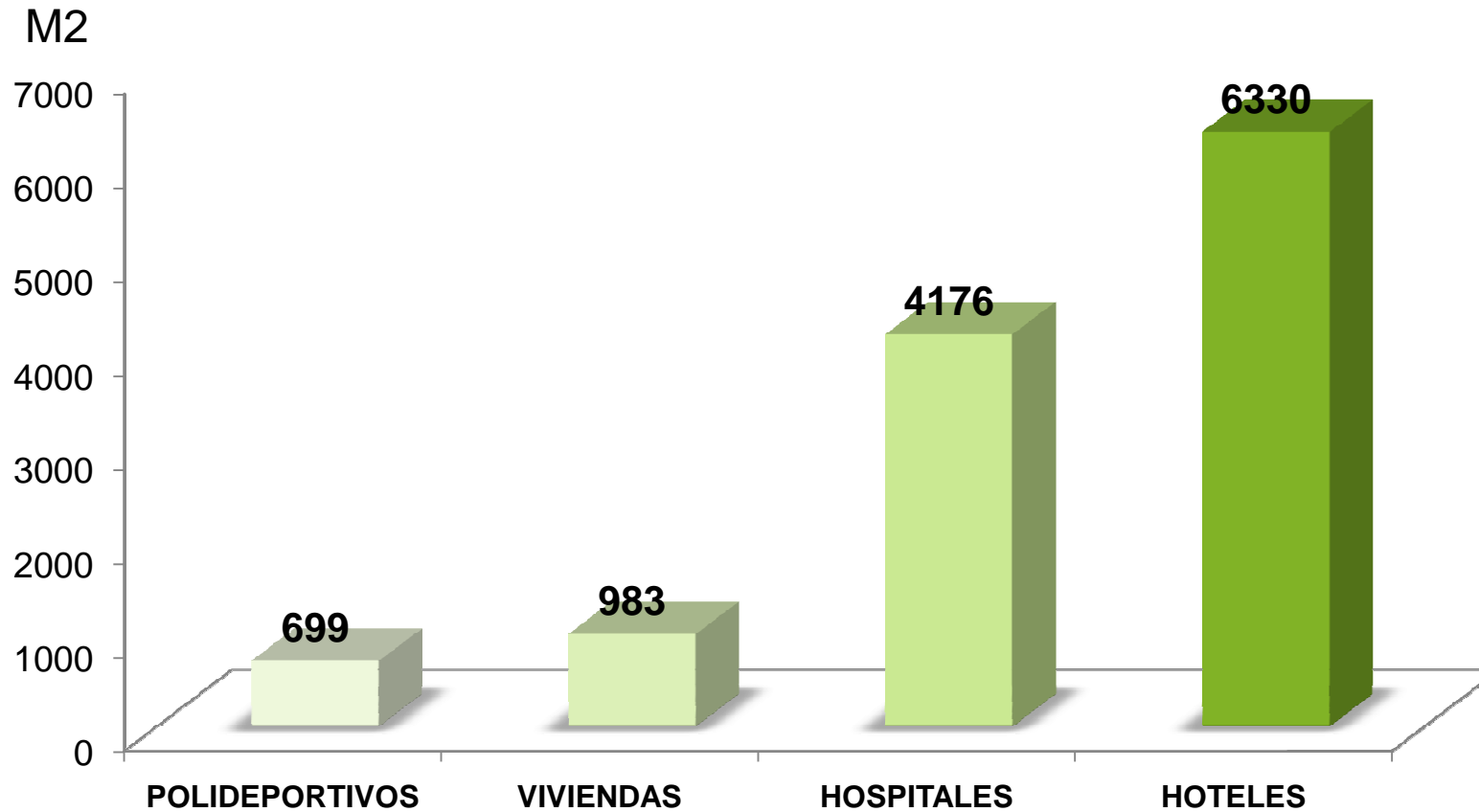
THANKS TO:

Companies: 9REN, ASSYCE, SUMERSOL, WAGNER SOLAR

Institutions: ARGEM, GOBIERNO CANARIAS, EREN

* Provisional results waiting to receive more information of companies and institutions

RESEARCH OF THE EVOLUTION OF THE ESCO SOLAR THERMAL ENERGY SALE ACCORDING TO THE USE



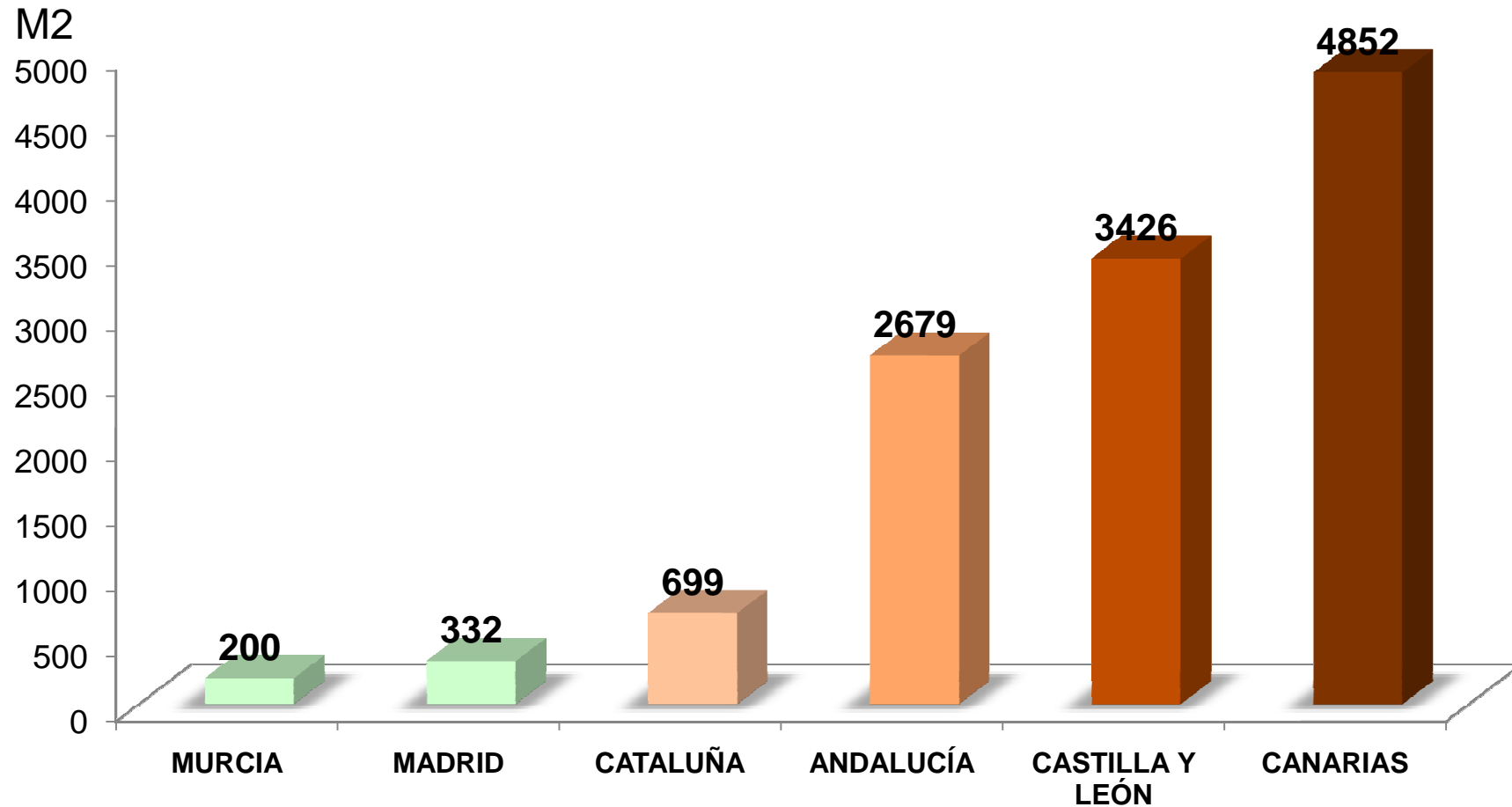
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RESEARCH OF THE EVOLUTION OF THE ESCO SOLAR THERMAL ENERGY SALE *



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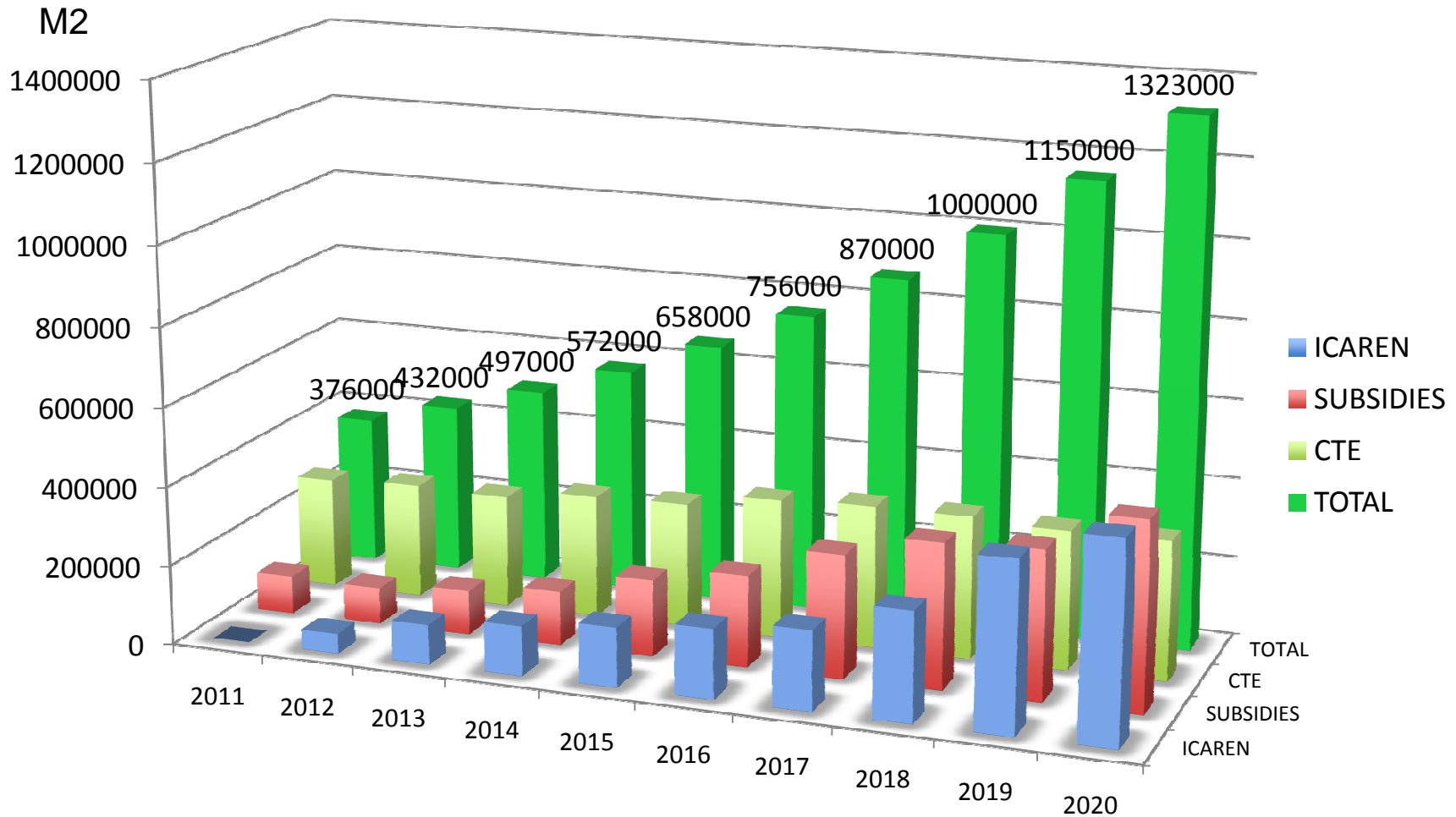
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Perspectives of development of the Solar Thermal market
in the frame of the new PER:

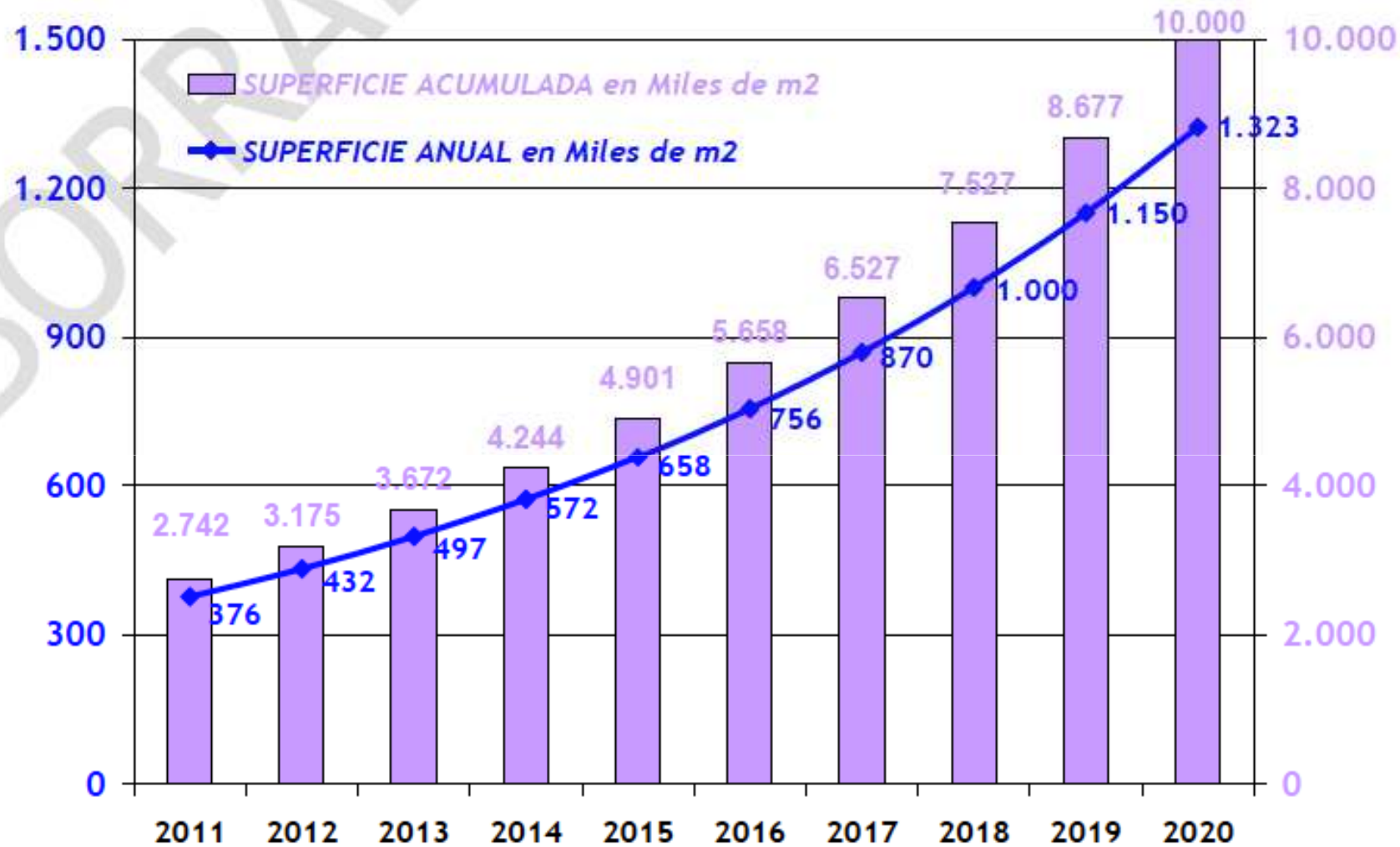
4 Global Market



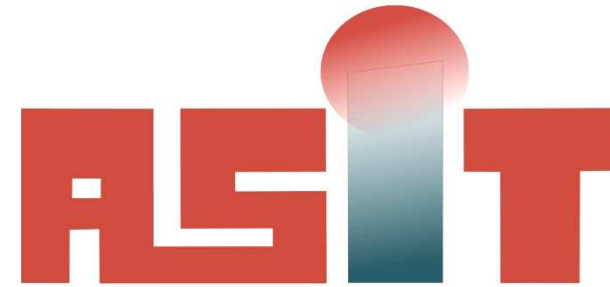
Perspectives of development of the Solar Thermal market in the frame of the new PER: new installed per year



Perspectives of development of the Solar Thermal market in the frame of the new PER: new installed per year & accumulated



FUENTE: IDAE



Gracias por su atención

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