

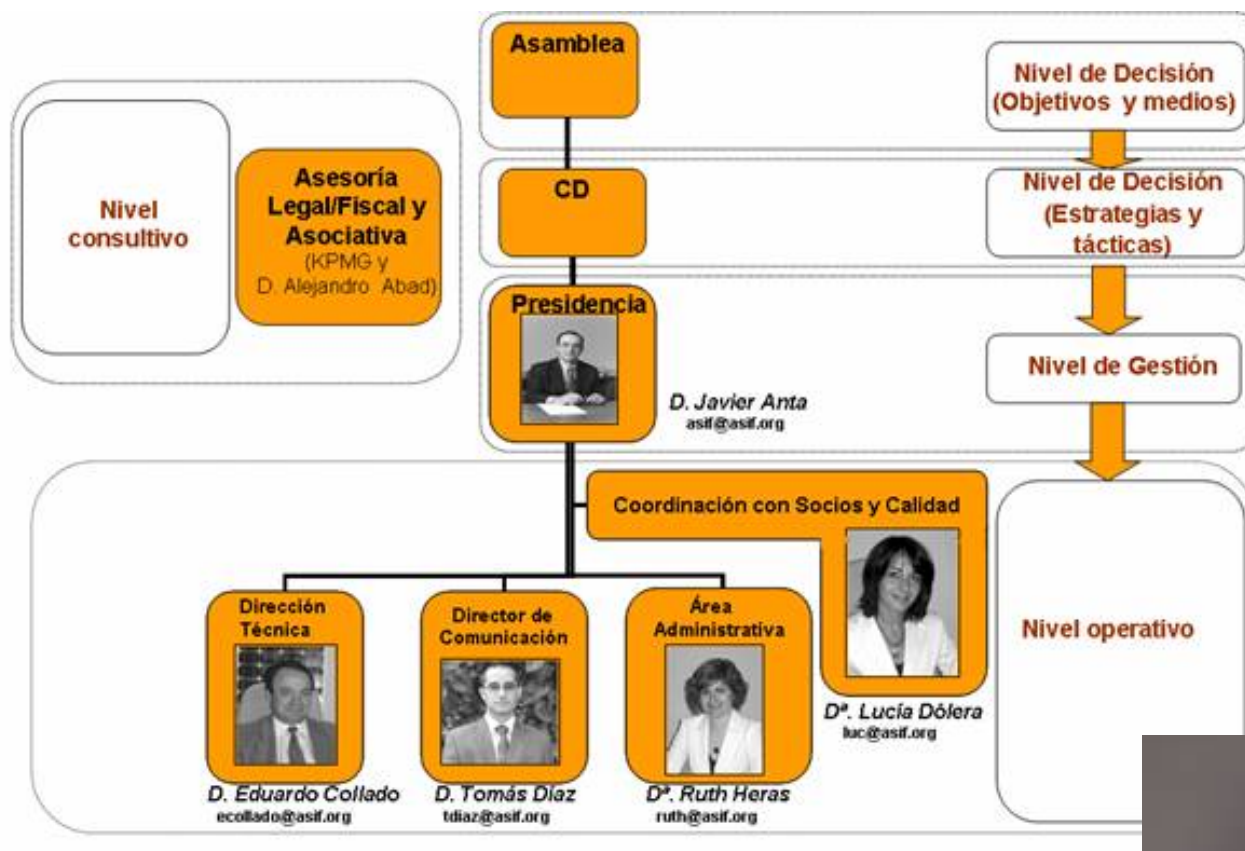
The case of Spain

Mr. Javier Anta (President of ASIF)

***2nd International Conference on PV Investment
Frankfurt am Main***

February 19th, 2008

The Spanish PV Industry Association



Serving more than 450 PV Spanish Companies



✓ **Past**

✓ **Present**

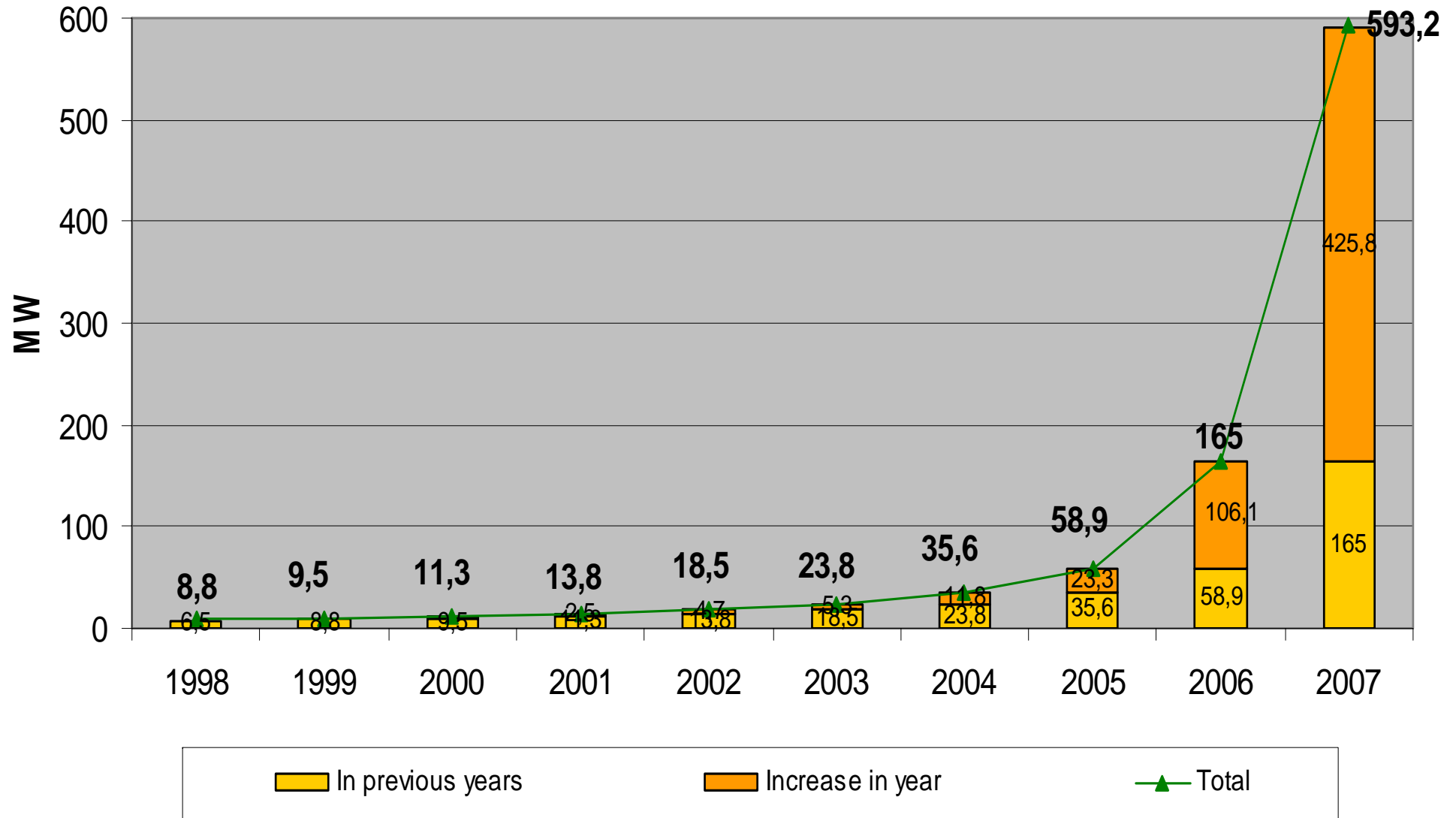
✓ **Future**

✓ **Past**

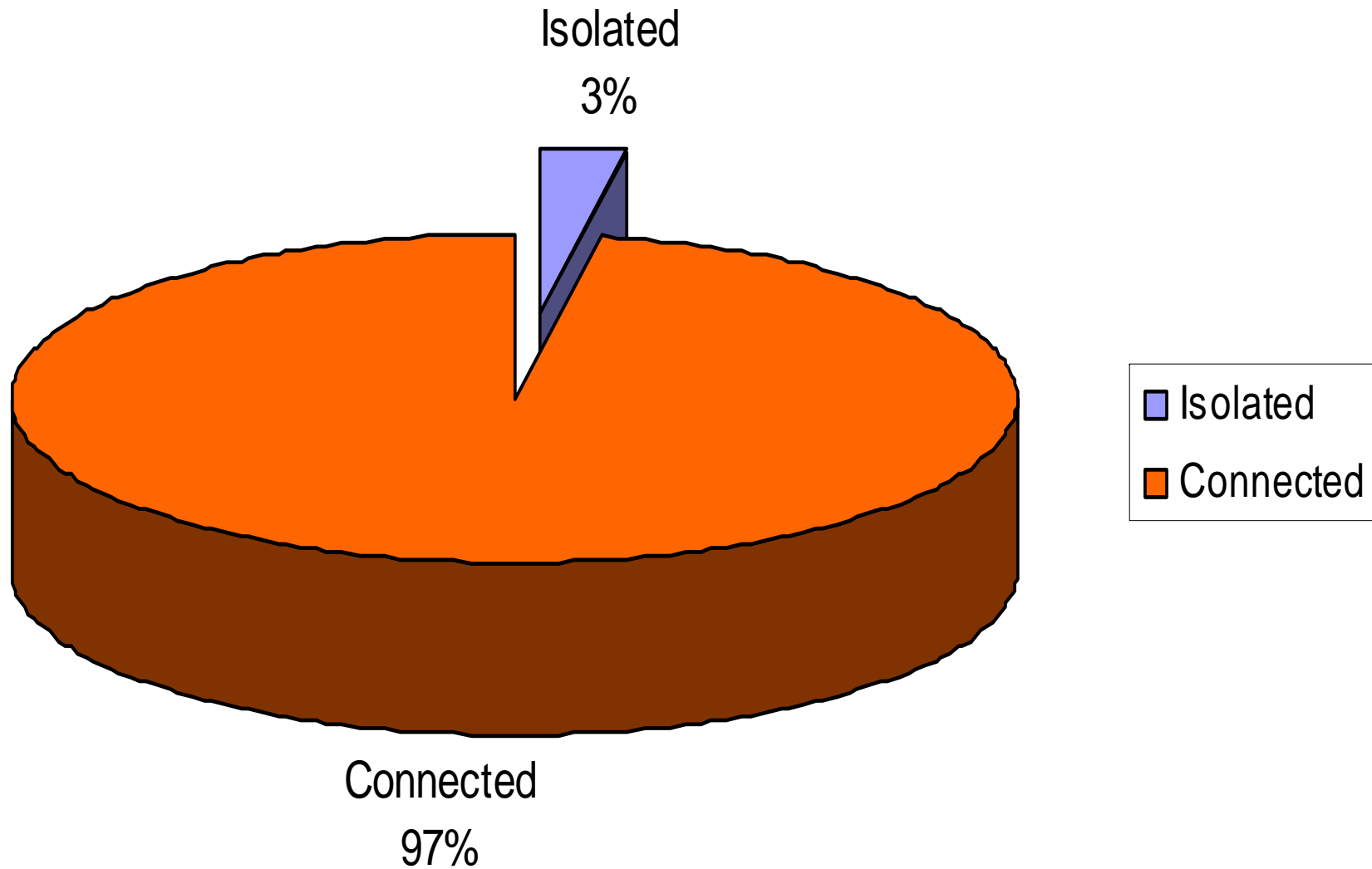
✓ **Present**

✓ **Future**

Spanish PV Market Growth



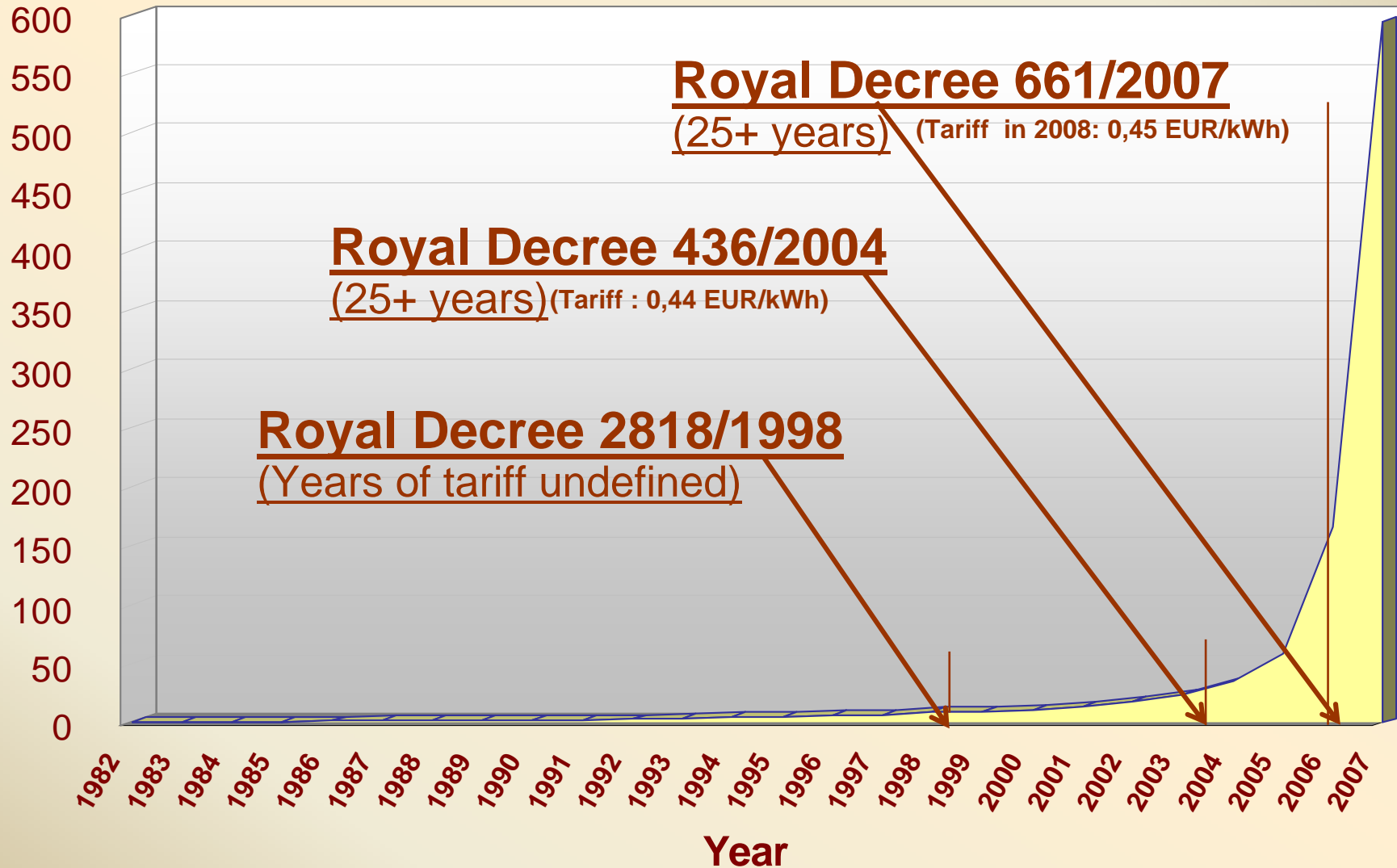
Spanish PV Market



Spanish PV Market Growth



PV installed in Spain (cumulative MW)



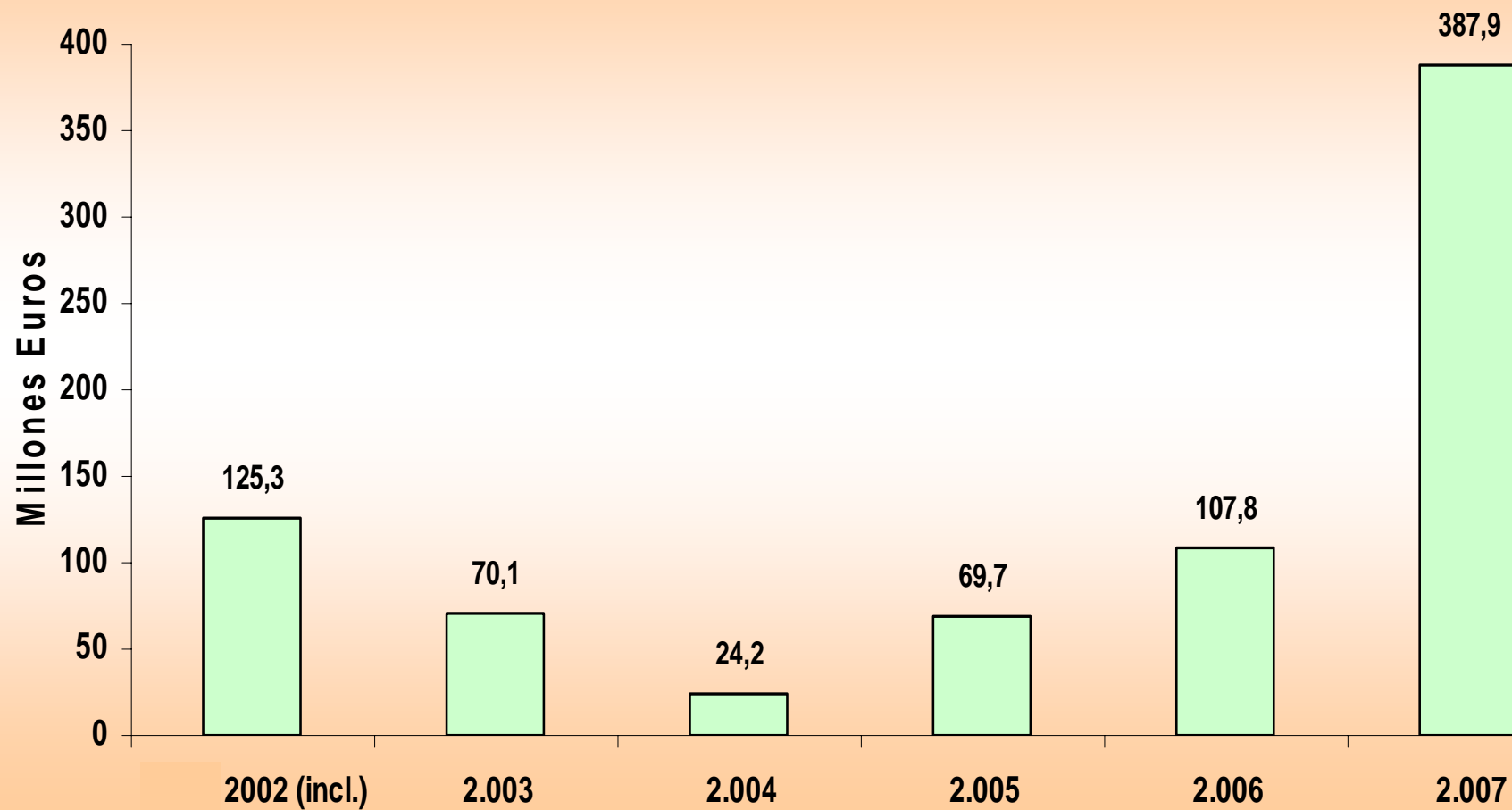


PV Power Installed & Growth Rates

Cumulative	1990	2,2 MW		
	1998	8,8 MW		20%
	2004	35,6 MW		30%
	2006	165,0 MW		120%
	2007	593,2 MW		250%

Annually Installed	2004	11,8 MW		
	2006	106,1 MW		200 %
	2007	425,8 MW		300 %

PV Industrial investments in Spain



✓ Past

✓ Present

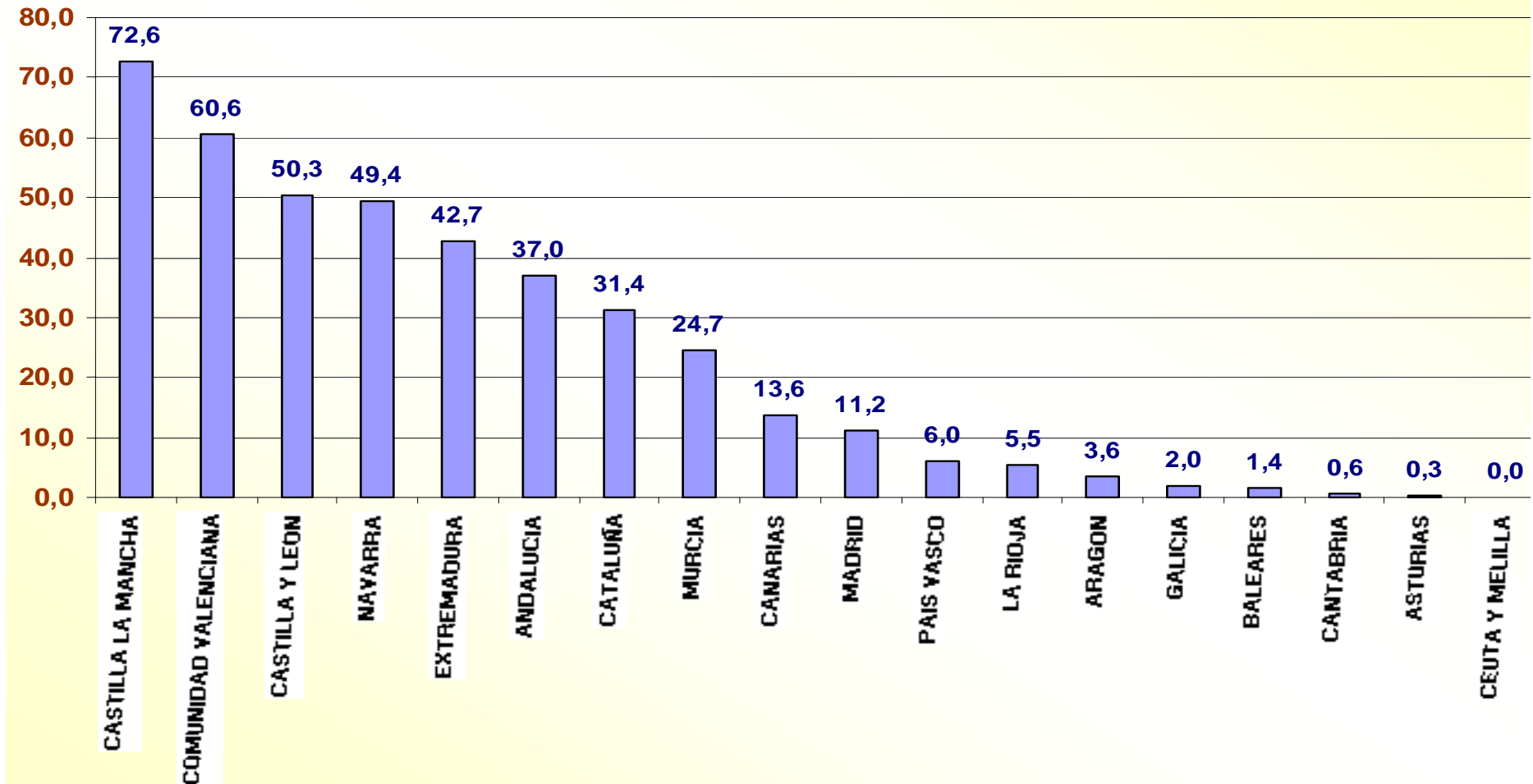
✓ Future

PV Power connected to the network by Region (End of 2007)

Total : 575 MW



PV Power Installed per Region (MW) (Comunidad Autónoma)

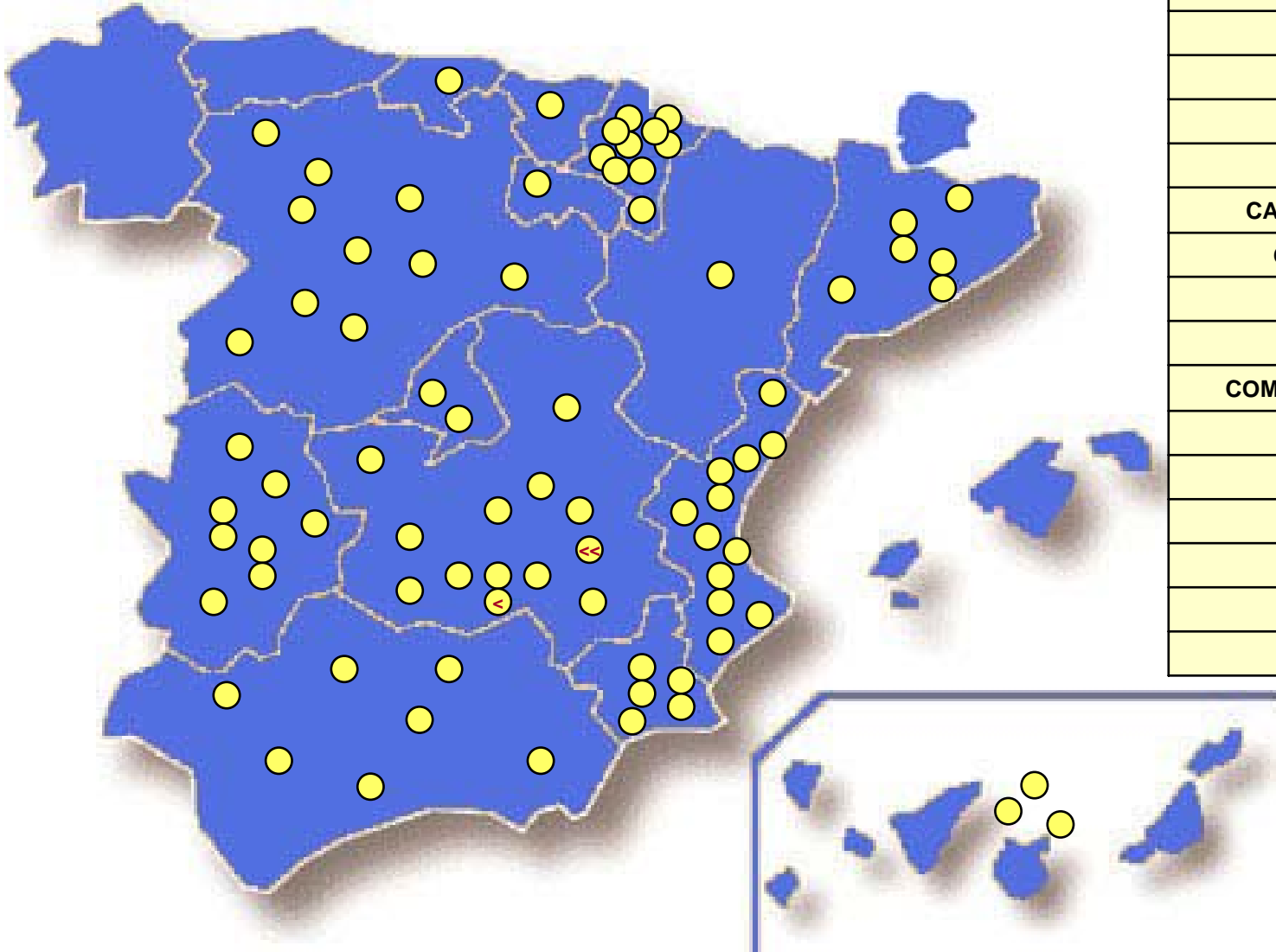


PV Power connected to the network by Region (End of 2007)

Total : 575 MW

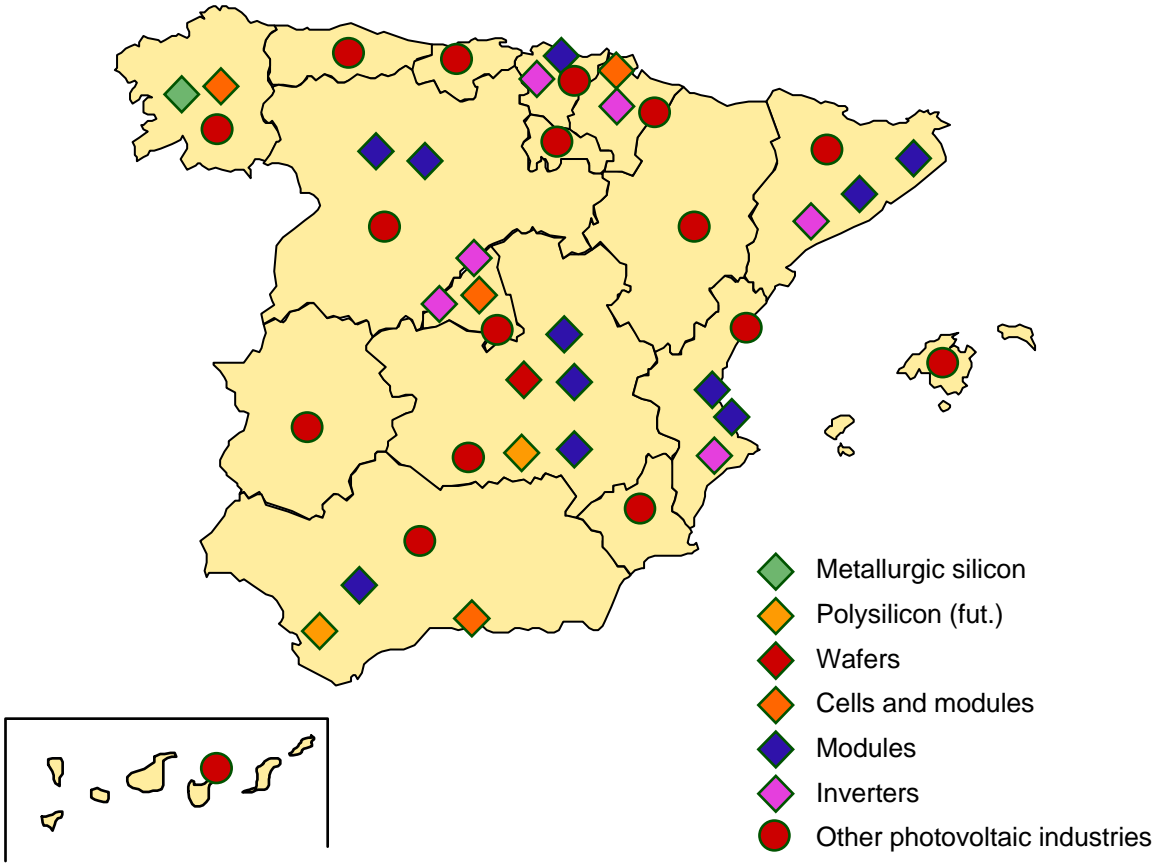


Legend: ● is 5 MW



Energía Fotovoltaica	
ANDALUCÍA	37,0
ARAGÓN	3,6
ASTURIAS	0,3
BALEARES	1,4
CANARIAS	13,6
CANTABRIA	0,6
CASTILLA LA MANCHA	62
CASTILLA Y LEÓN	50,3
CATALUÑA	31,4
EXTREMADURA	42,7
COMUNIDAD VALENCIANA	60,6
GALICIA	2,0
LA RIOJA	5,5
MADRID	11,2
MURCIA	224,7
NAVARRA	49,4
PAIS VASCO	6,0

Source:CNE



PV companies/Owners Turnover: 7.750 MM €

- In the process of Making Installations: 7.500 MM €
- In selling electricity: 250 MM €

Investments: 5.000 MM €

- In industrial installations: 400 MM €
- In PV installations: 2.500 MM €
- In PV shares: 2.100 MM €

PV in Spain (Identifying "The problem")



Accumulated PV Installations in Spain (in MW)



The PV tariff in dec-2006 for the regulation of mid-2007



Wants:

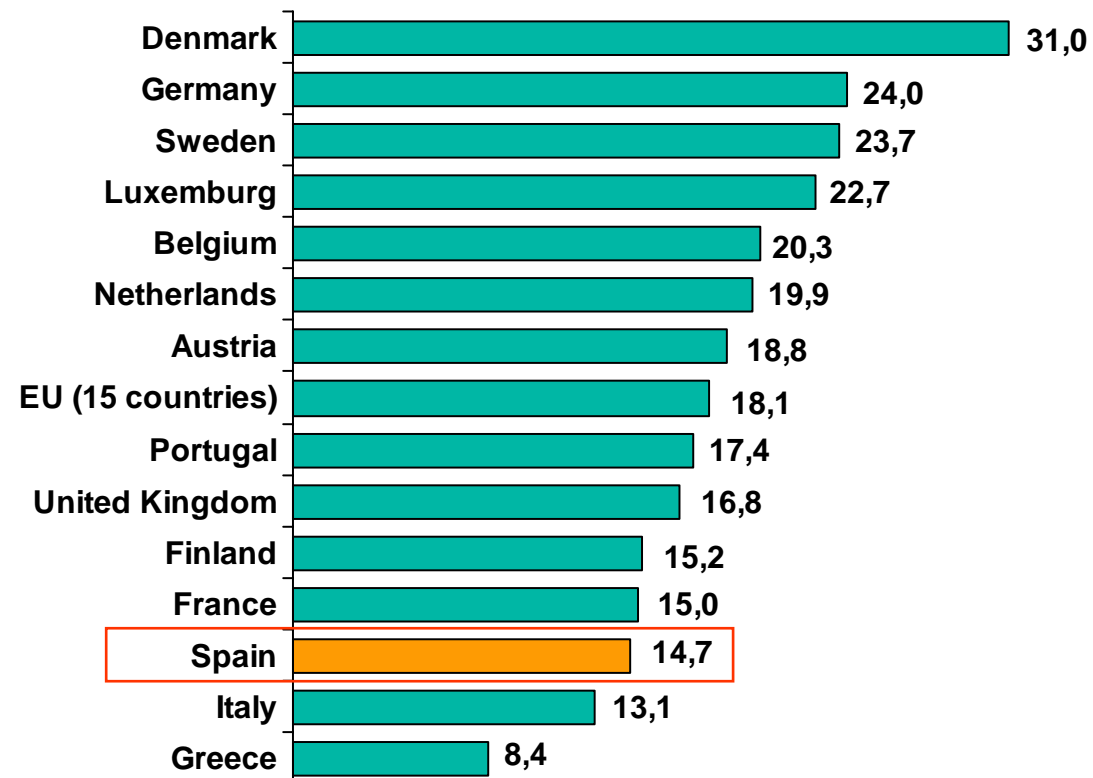
- ✓ Attain the PER PV target of 2010. **Surpassed**
- ✓ Reasonable returns **Surpassed**
- ✓ Support the Spanish PV Industry/Sector **Surpassed**

Results:

- ✓ Rapid but Balanced, Sustainable, Growth. **Missed**
- ✓ **Controlled cost to the Tariff** **Missed**

(Planned in PER: 500 M Euros for the period 2005-2010, to be used only for this year 2008)

Less than EU average,... but difficult to raise



✓ **Past**

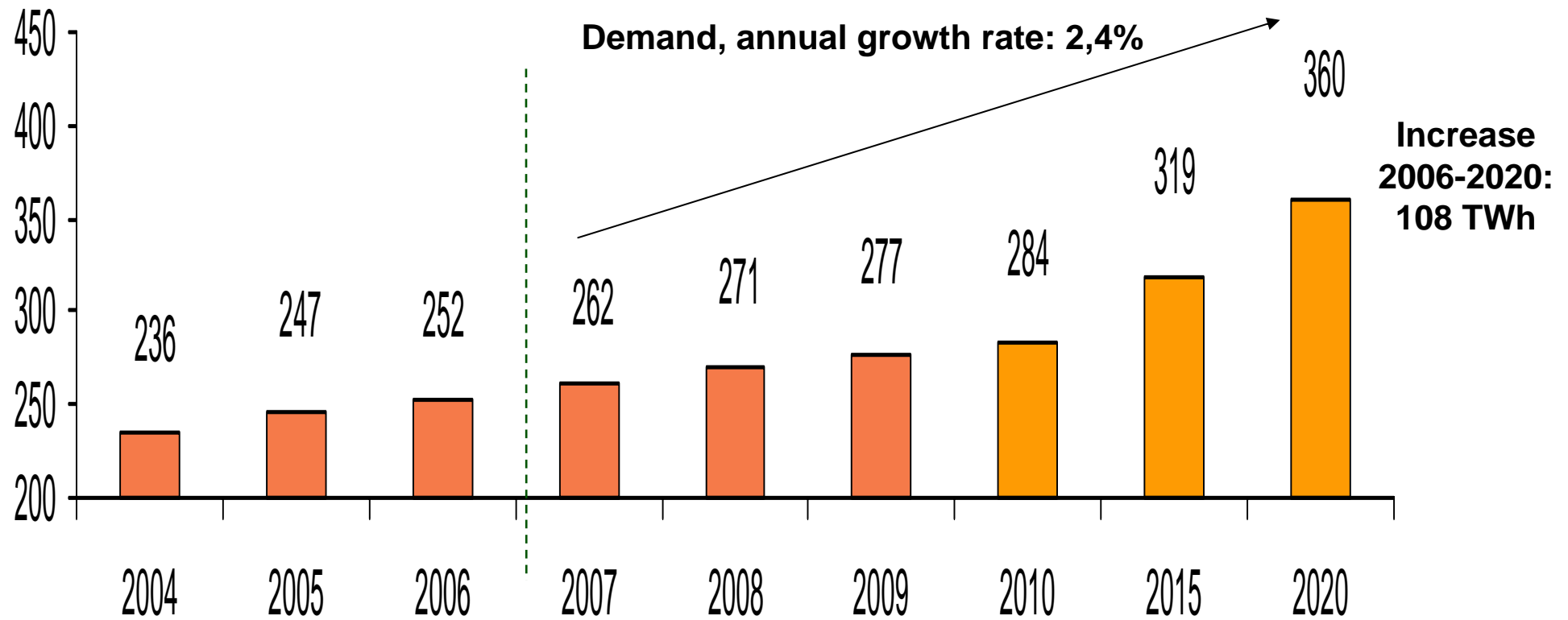
✓ **Present**

✓ **Future**

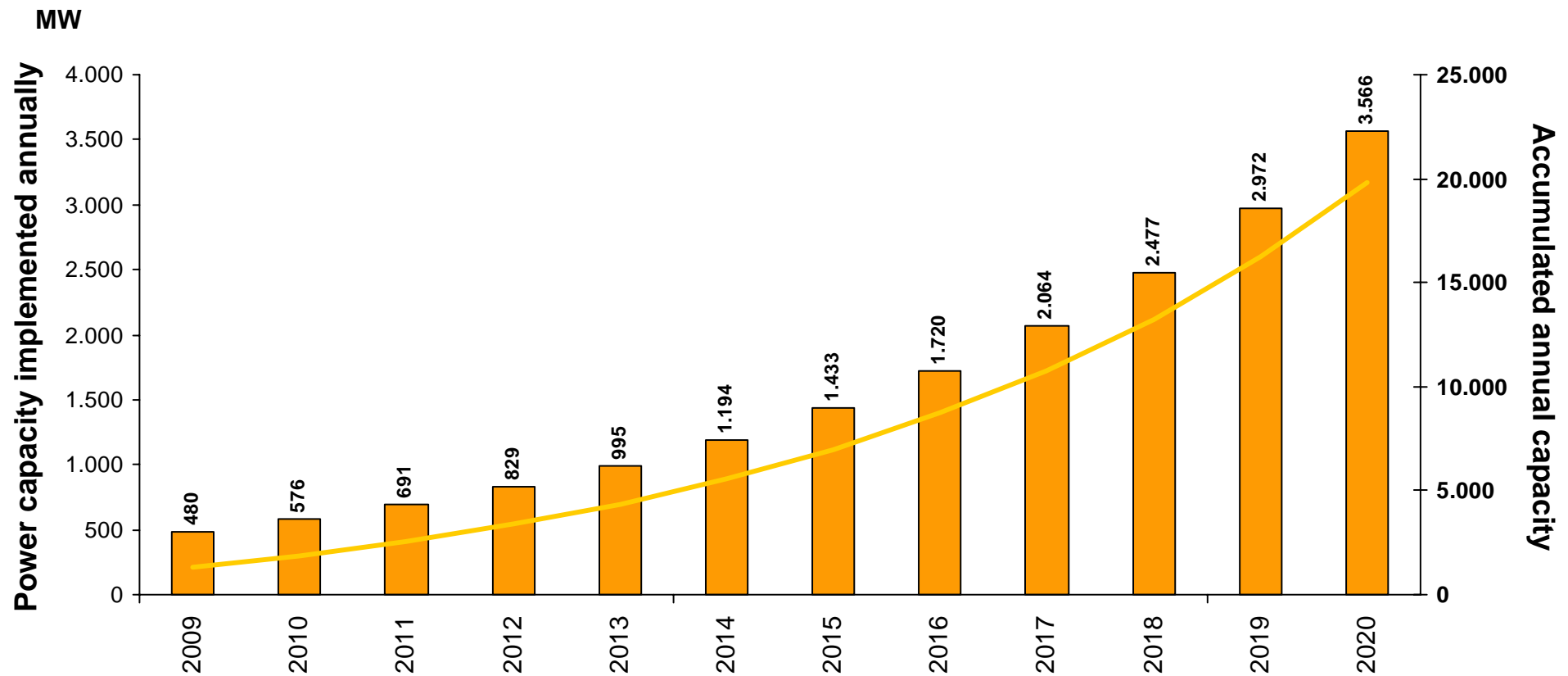
Spanish Future Electrical Demand (Sustainable scenario)



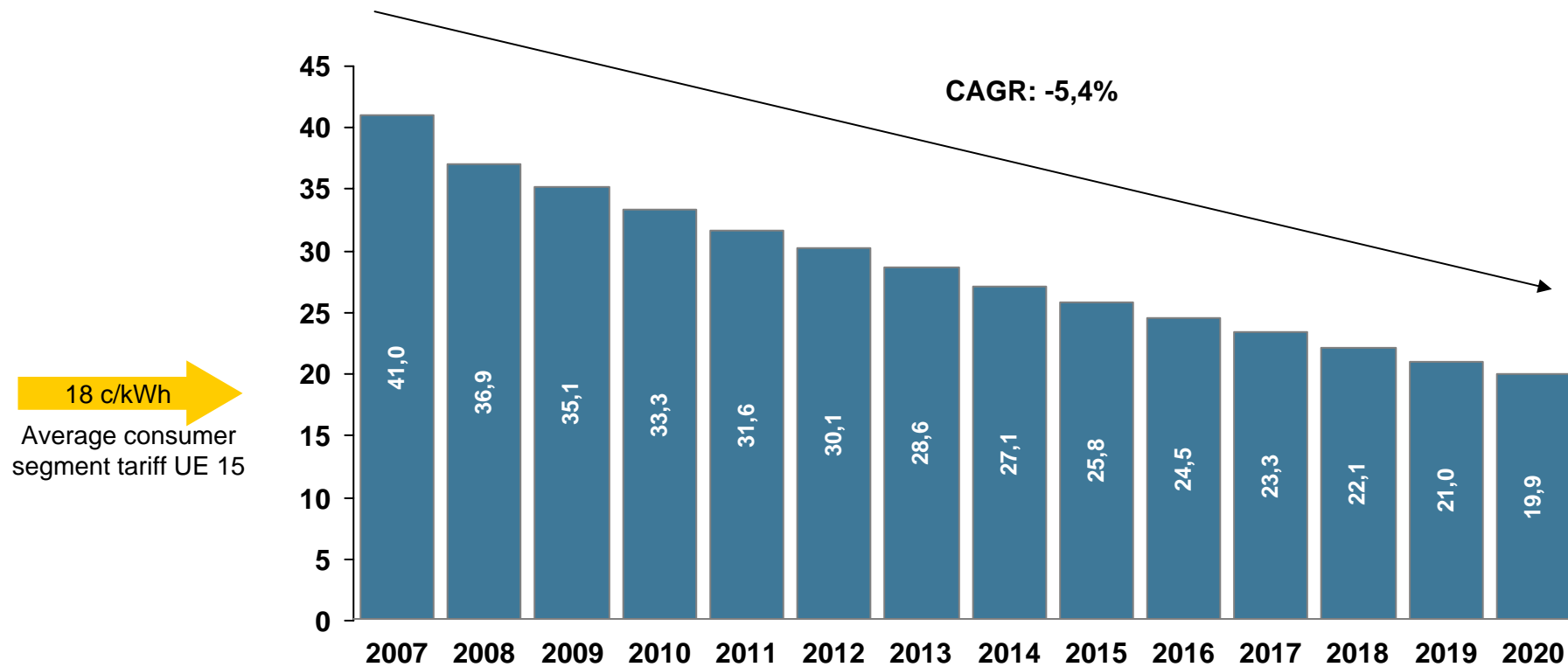
Energy (TWh)



Spanish PV Future as per ASIF proposal - Quantities (ADL Sustainable Scenario)

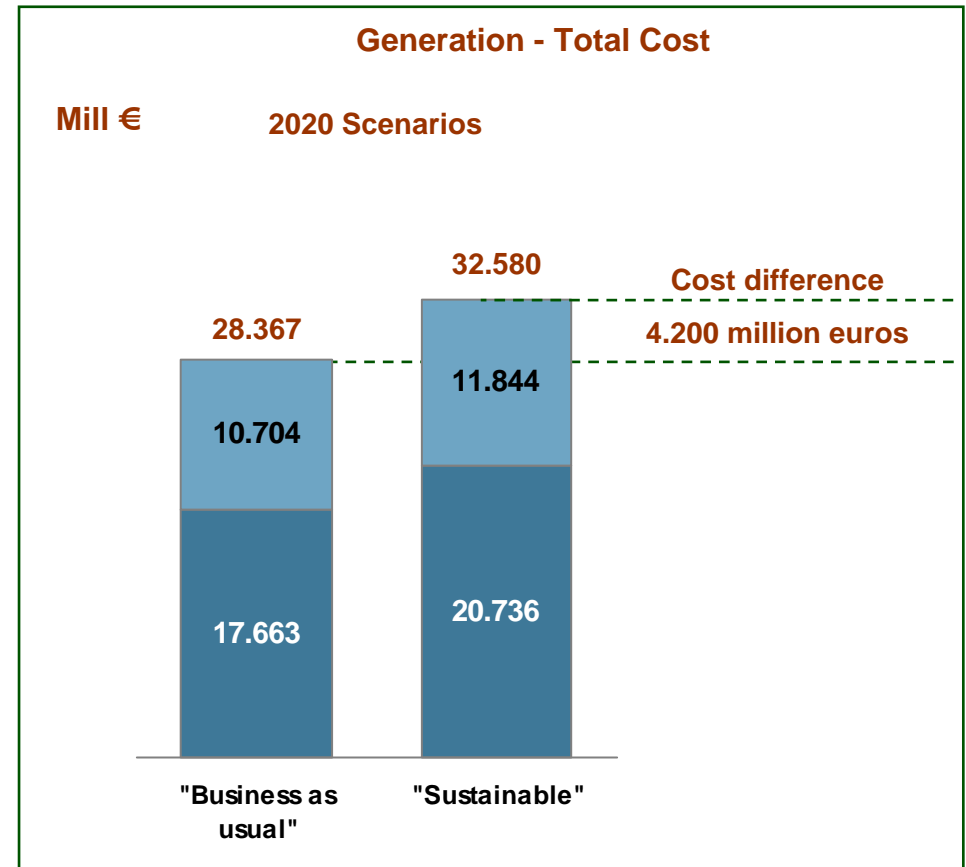
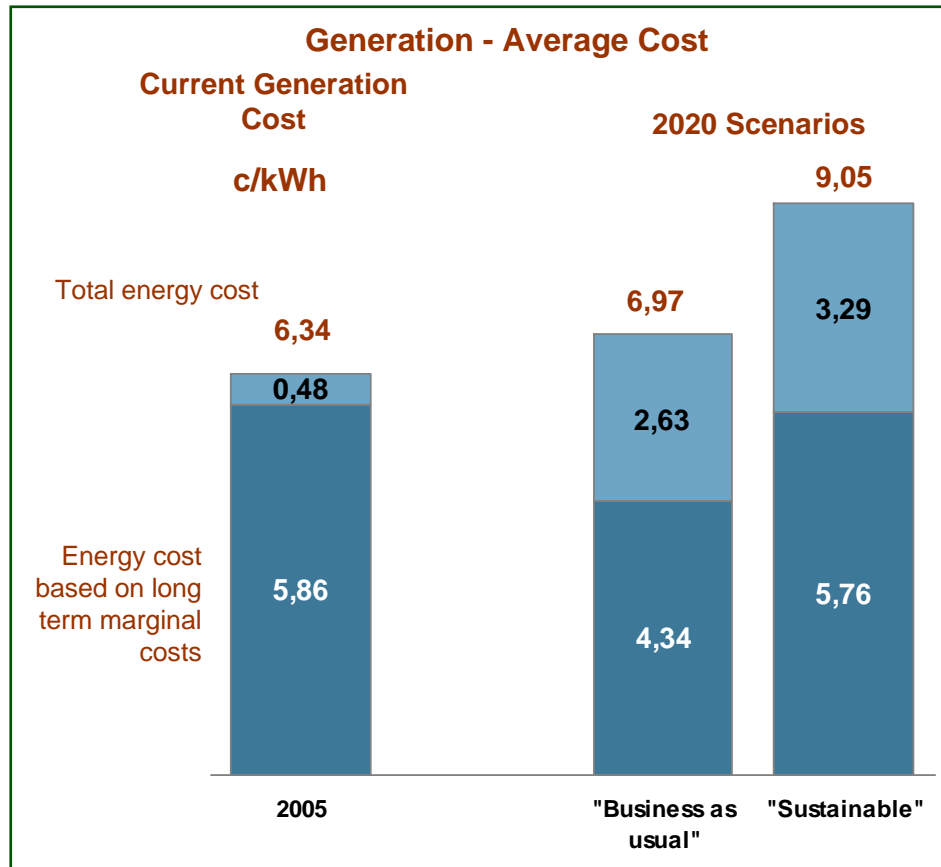


Spanish PV Future as per ASIF proposal – Cost reduction (ADL Sustainable Scenario)

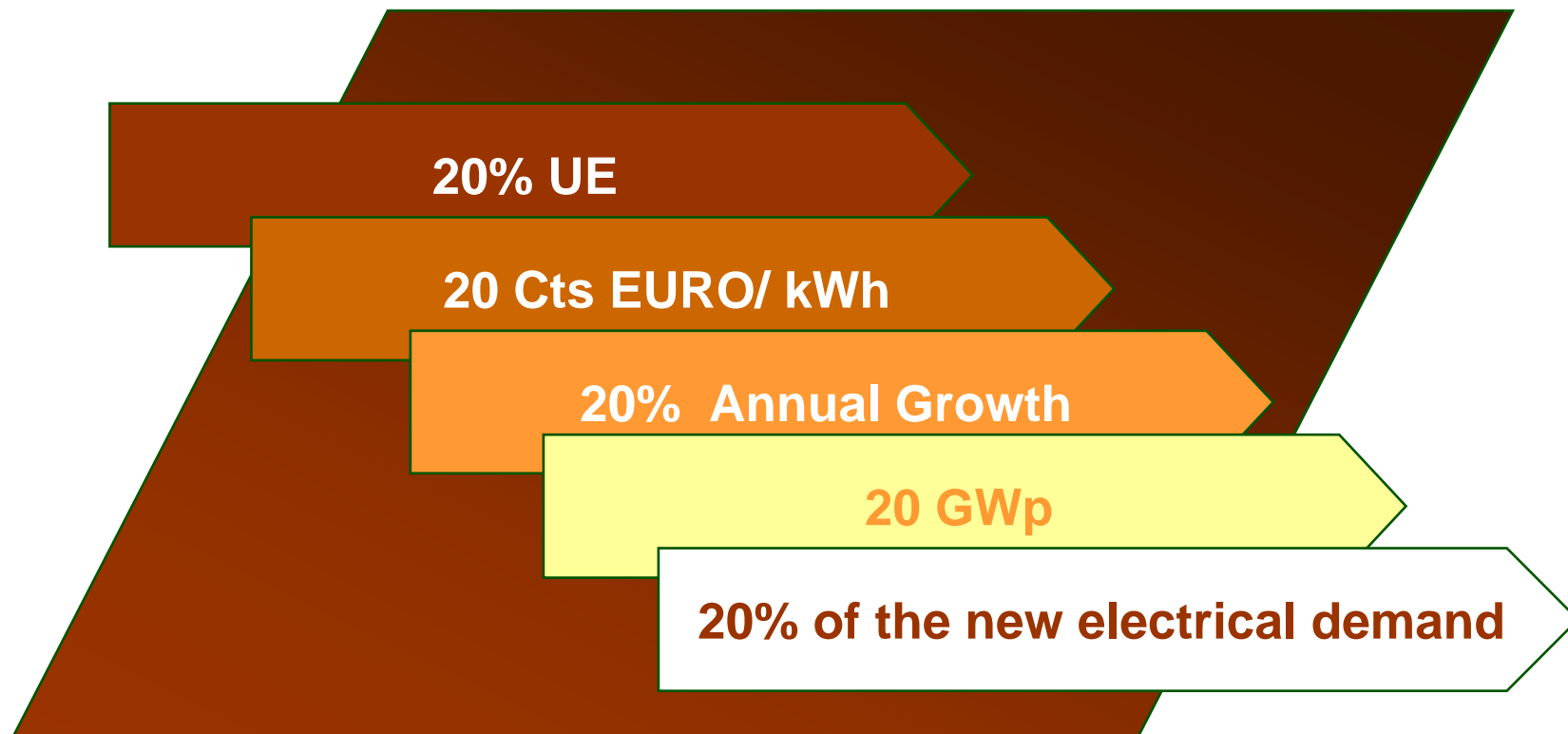


Spanish Future as per ASIF proposal

Differential cost (As Usual Vs Sustainable Scenario)



in 2020:



Is the Spanish Government going to accept PV 20? Some reasoning



- ✓ PV 20 starts with the present level of activity (400 MW p.a.)***
- ✓ Spain, compared with Germany (half the PIB, half the surface, half the number of habitants, etc.), makes with 400 MW p.a. equivalent tariff effort than the leader with 800 MW p.a.***
- ✓ The rate growth is a reasonable 20% p.a.***
- ✓ The differential cost of the Sustainable Scenario can be affordable.***
- ✓ PV 20 are small steps forward, but step by step, we will become a significant share in the electrical mix.***
- ✓ It would be difficult to accommodate a step backward, “to make later a big jump” (this will damage significantly the Sector), with the firm political commitment with PV of all Political Spanish Parties... but you cannot be sure.***

We consider the draft announced by the Government, and sent to the ENC (CNE), to apply from Oct 2008, as a quick attempt to dampen the present growth rate (not achieved).

More detailed work is needed to improve the draft.

In spite of its commitment to PV, the Government is now slow in redefining the new rules, probably due to fear of a new uncontrolled PV growth, independent of the PV tariff defined.

The way forward can be a flexible PV tariff.

Growth as per PV 20.

Monitoring of cumulative growth (cost to the electrical tariff)

Flexible tariff.

Annual variation -5% would be the middle point if the planning is followed, but up to -10% and -2% possible if we deviate.

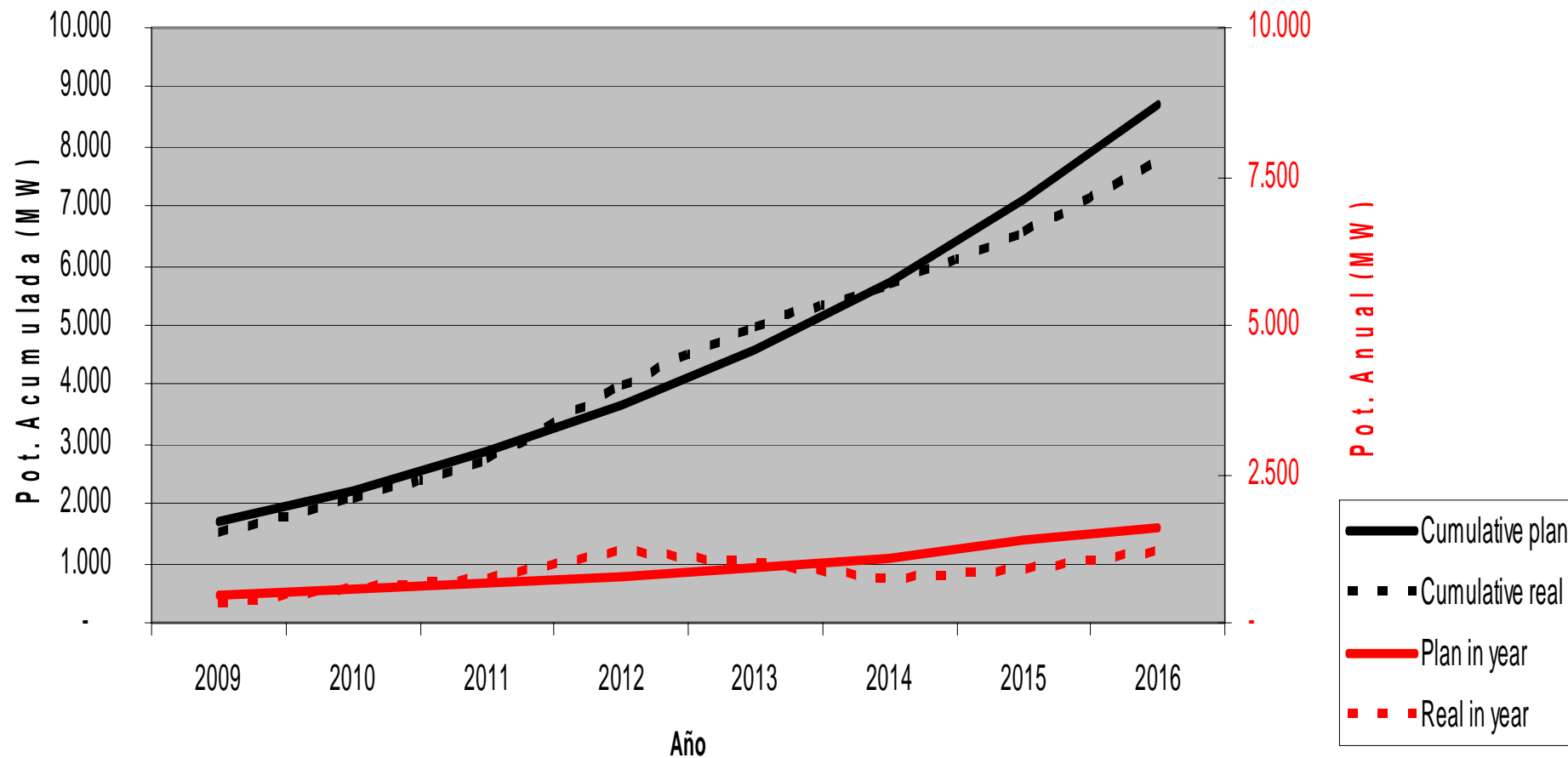
Starting tariff:

The one expected to provide in 2009, the quantity for this year in the PV 20 Planning.

A flexible PV Tariff



PV annual and cumulative Power (in MW)



Spain has an important Industry and presents a bright market history... too bright due to excessive growth the last months... unsustainable.

Solutions exist to walk firmly the future... satisfying all Parties.

We believe (in ASIF) that, after trying to cool down the present situation... Spain will continue contributing significantly to the global effort of develop the PV technology.