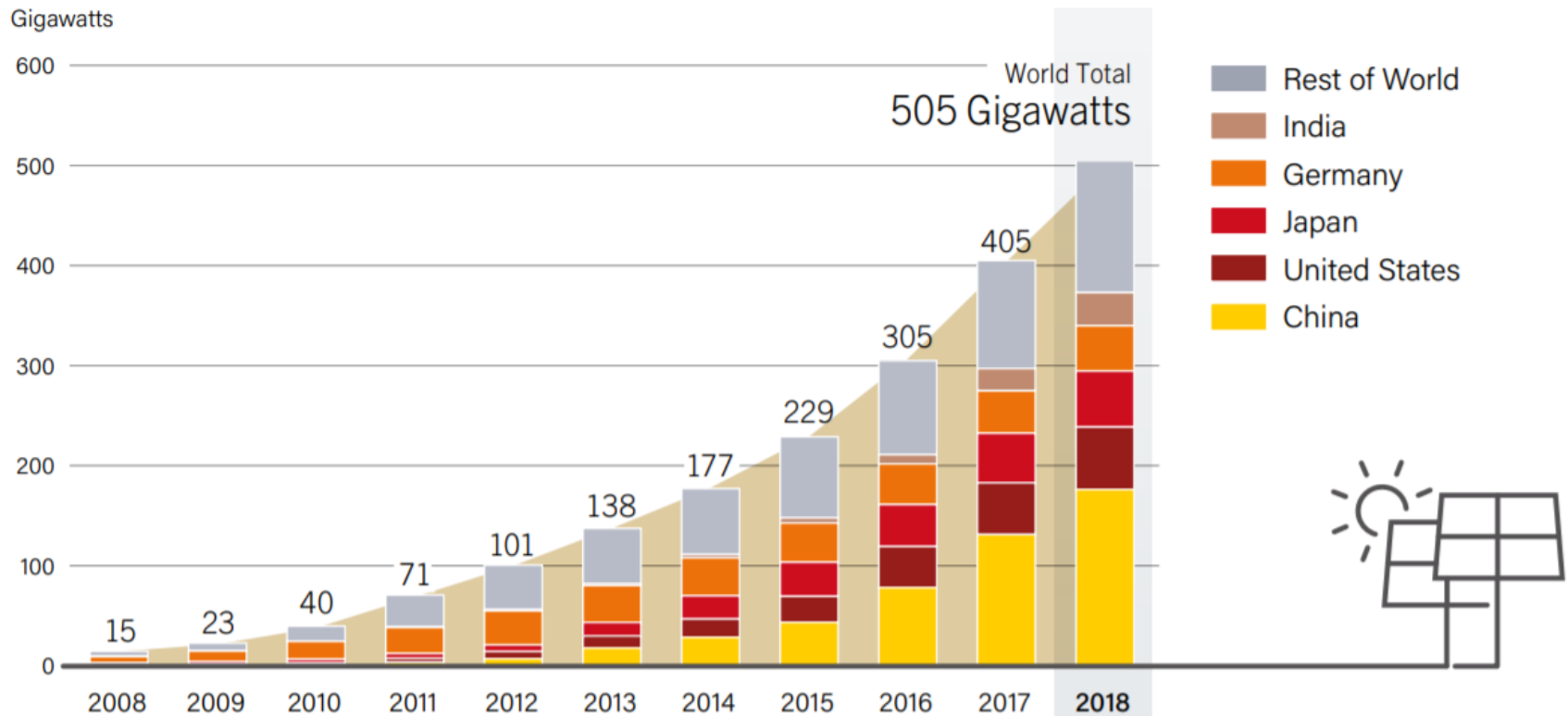


Fotovoltaico:

**Conversione DIRETTA
di energia solare in energia elettrica
(gratis!)**

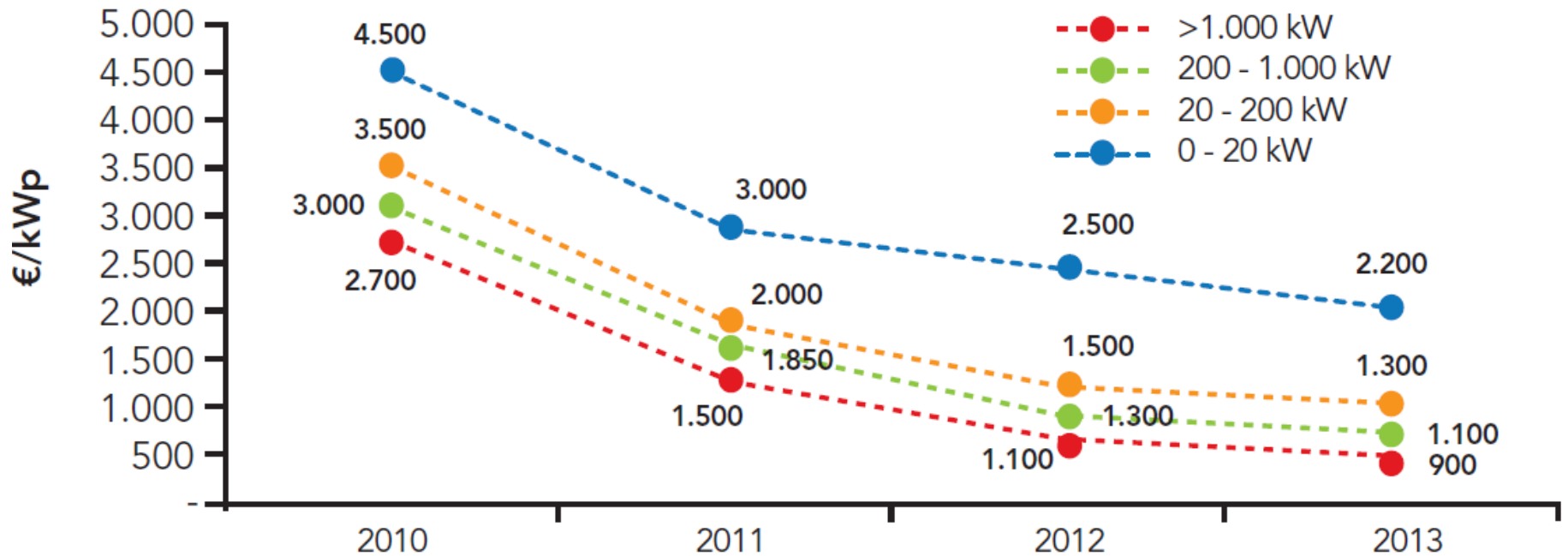


PV global capacity



PV price reduction

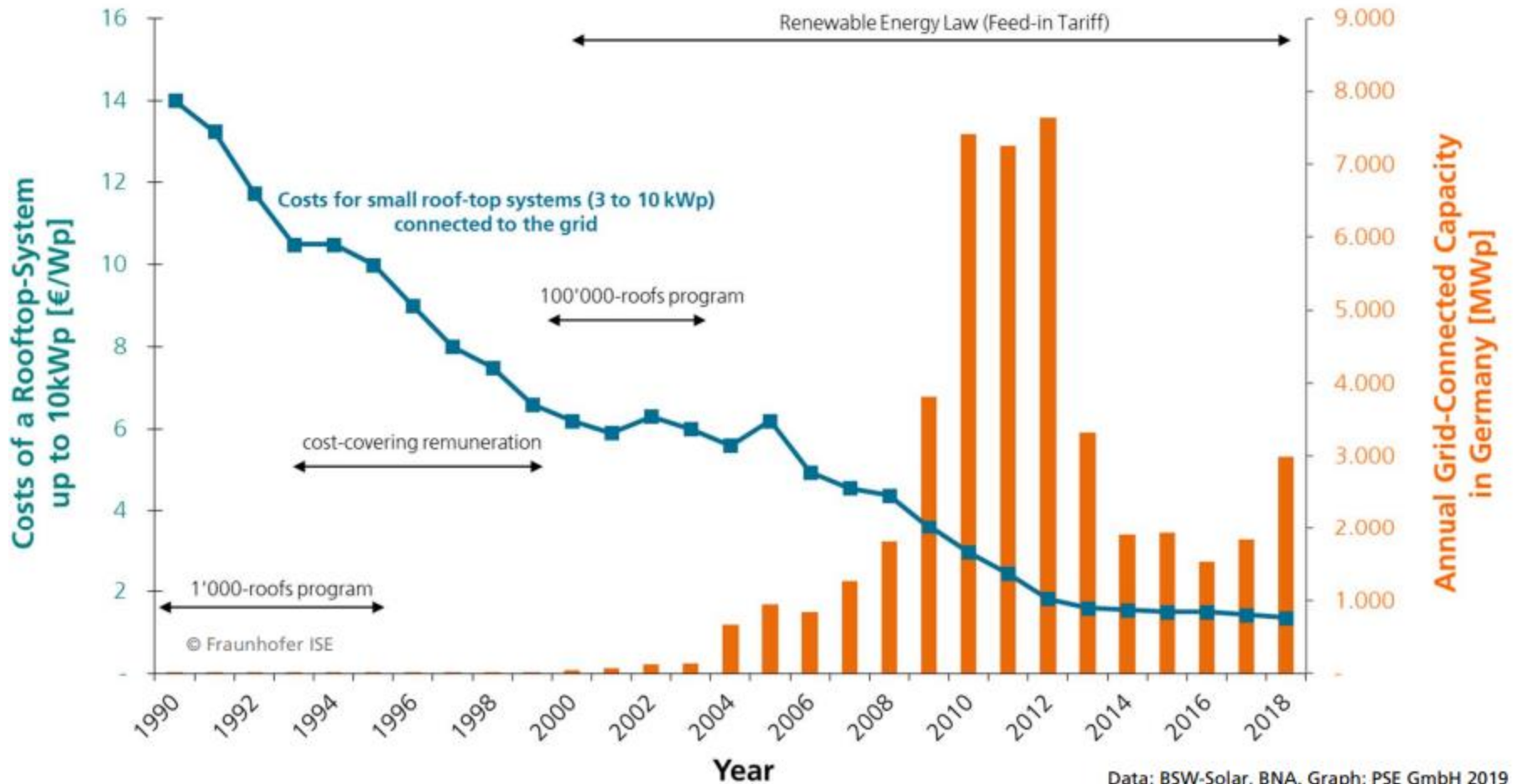
- example: turnkey PV installations in Italy -



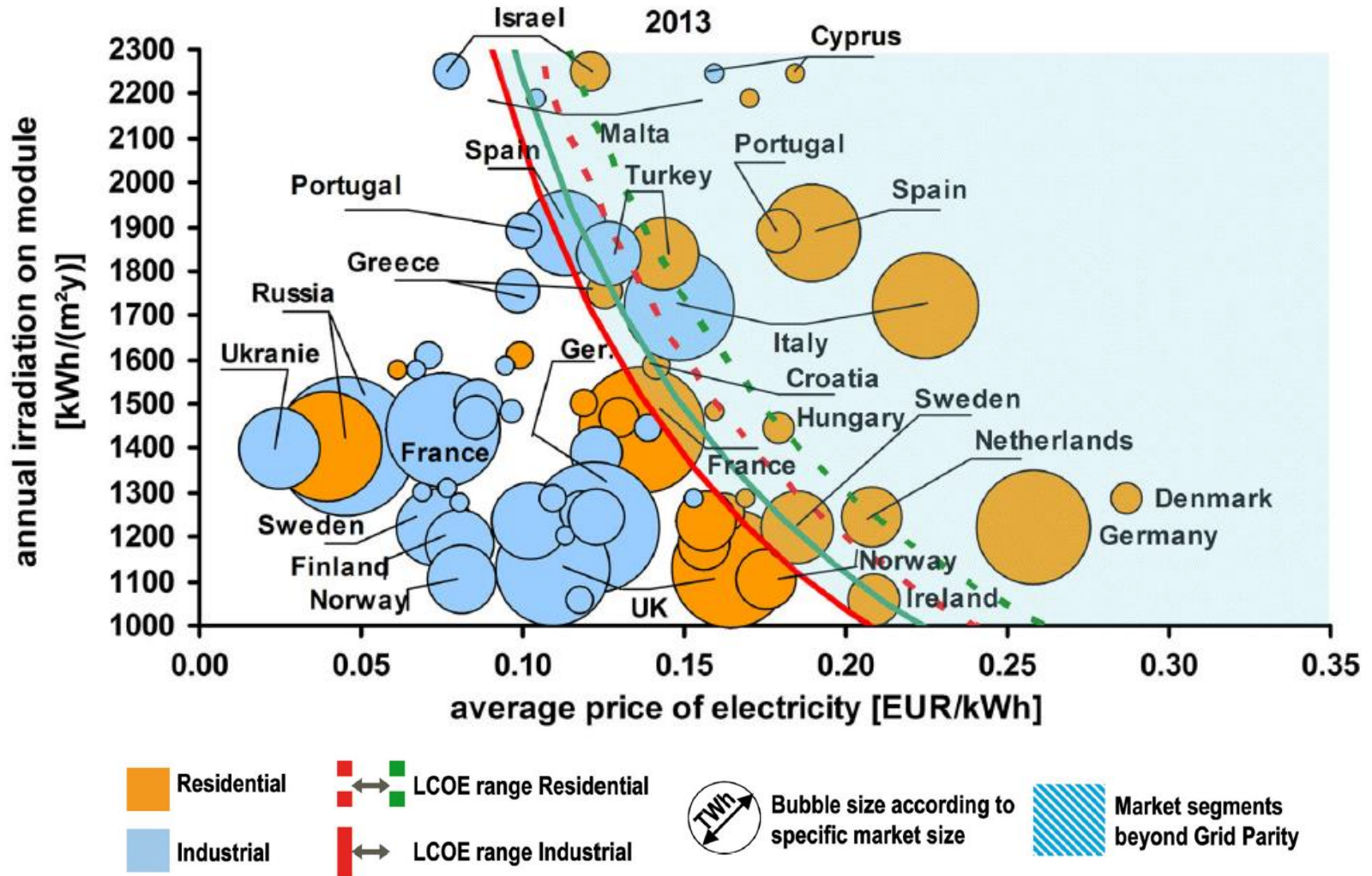
2010-2013:
Price reduction of PV installation of 2 €/W

PV price reduction

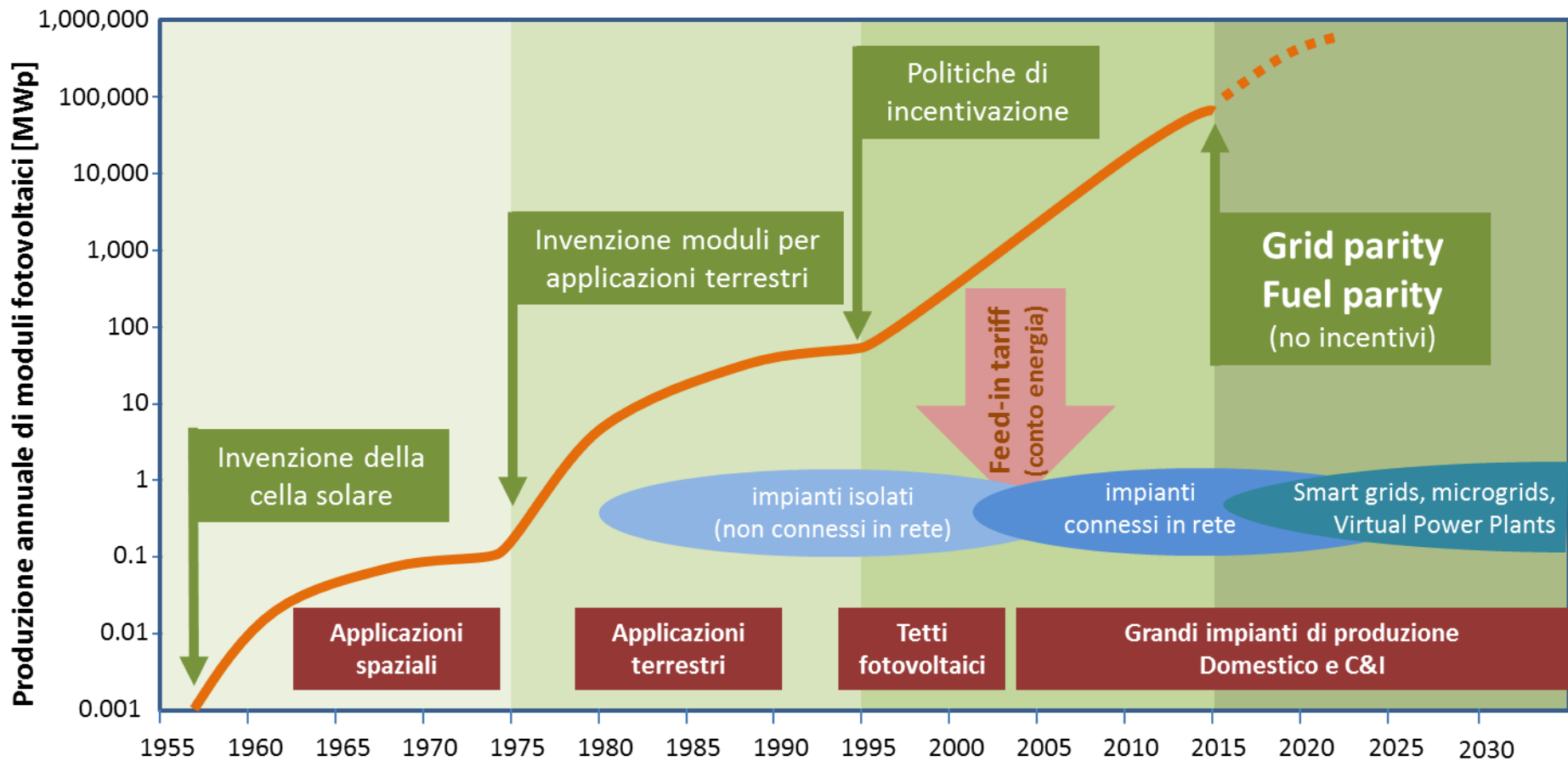
- example: rooftop PV installations in Germany -



Grid parity



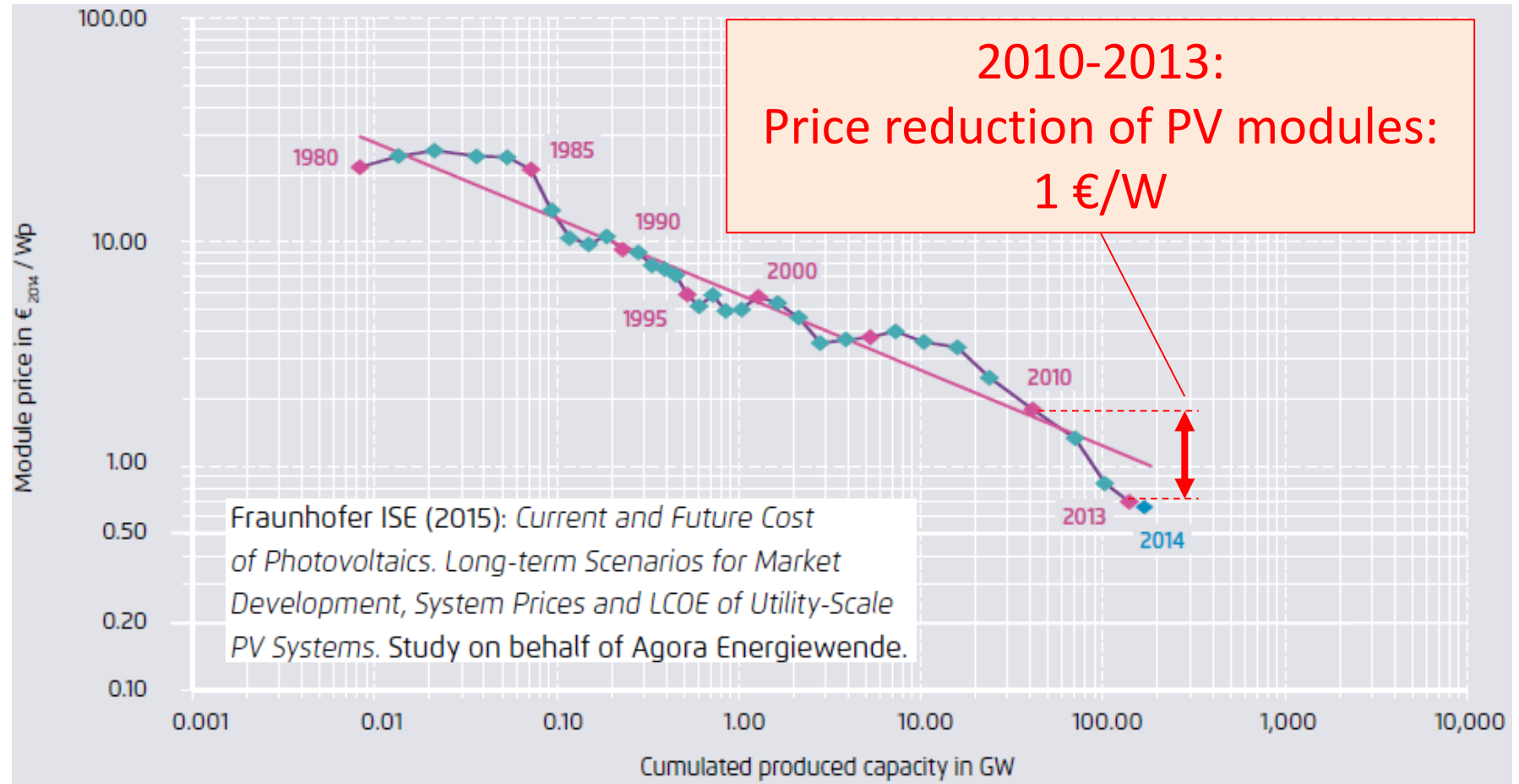
PHOTOVOLTAICS - HISTORY



During the third phase in the history of PV a fundamental milestone can be observed: **THE GRID PARITY** occurring in many countries of the world!!!

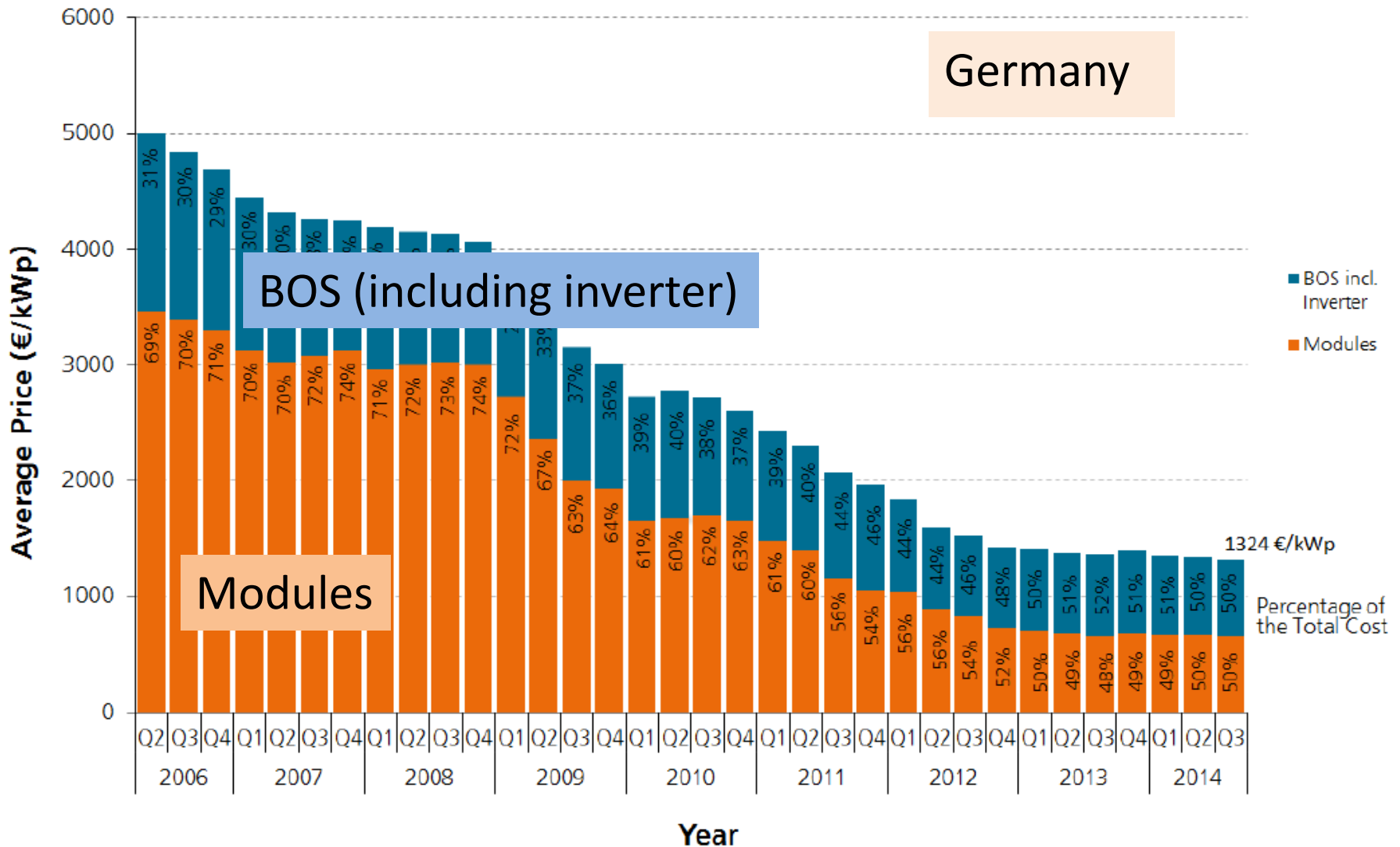
Price reduction of PV modules

- «learning curve» - the effect of the economies of scale -



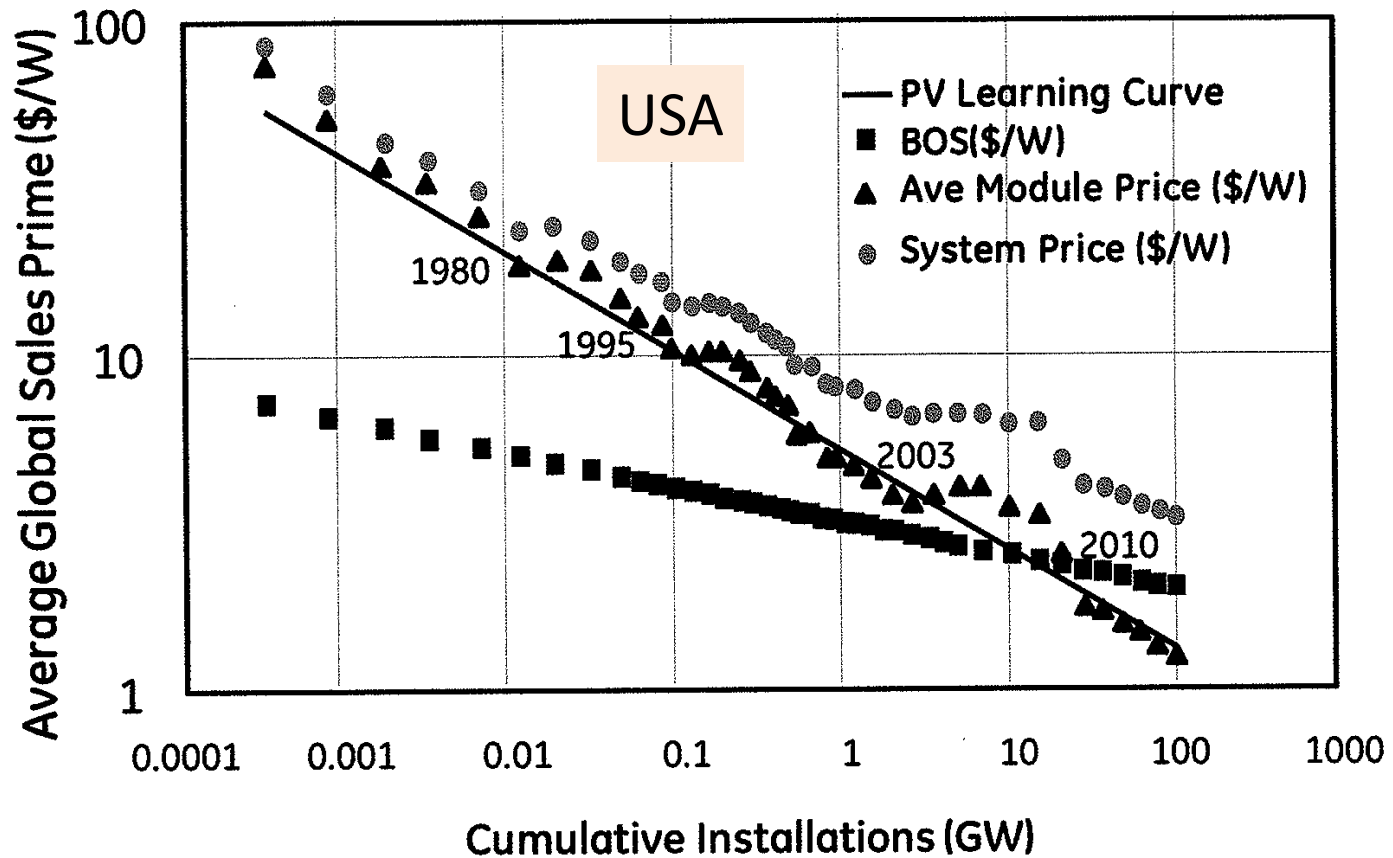
Role of Balance of System

- The cost of BoS today is comparable with that of the modules -



Role of Balance of System

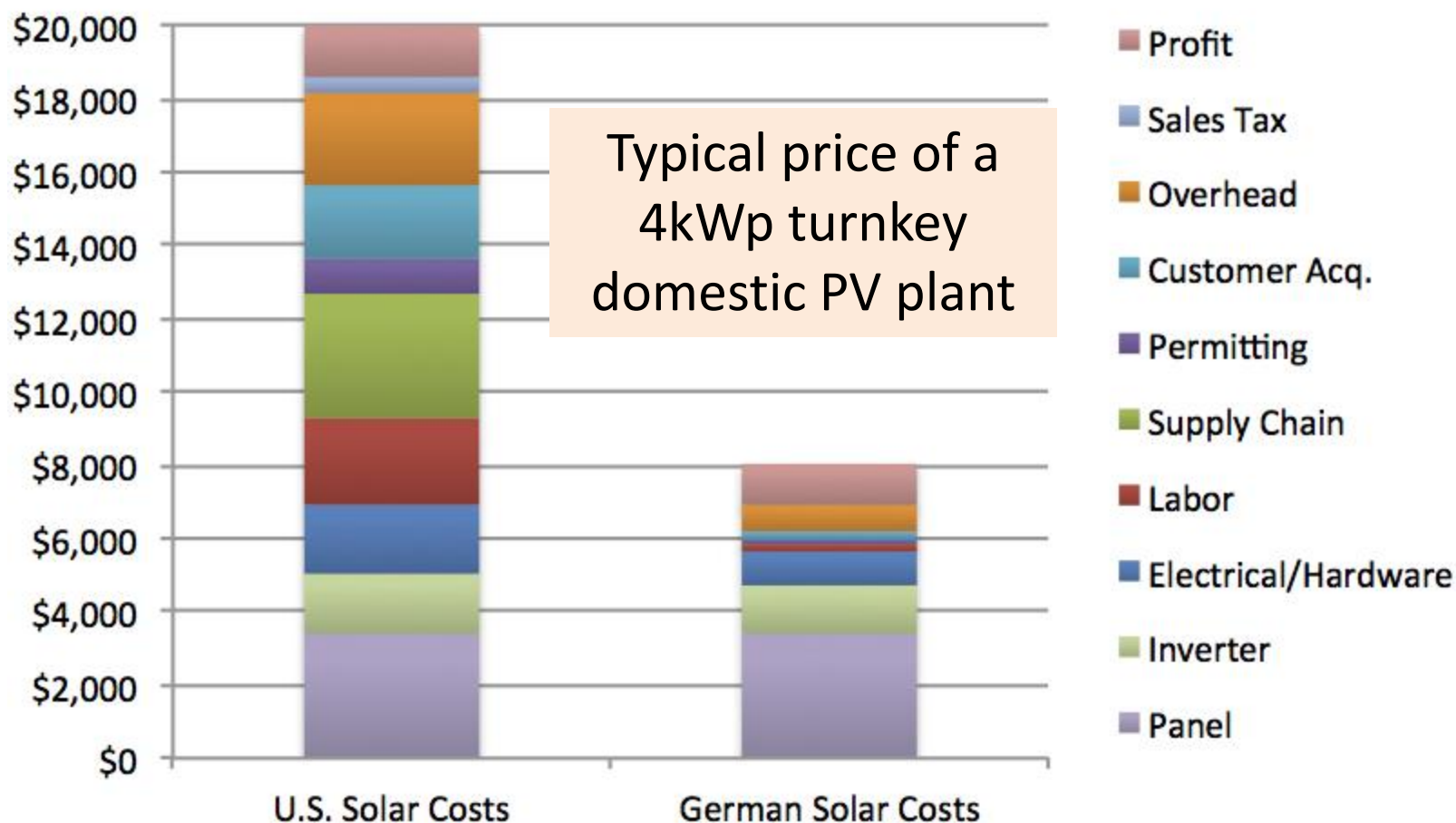
The cost of BoS today is comparable with that of the modules (or less – the case of USA)



The role of BoS

- In BoS, overall there is more margin for cost reduction -

Comparison of U.S. and German Solar Costs

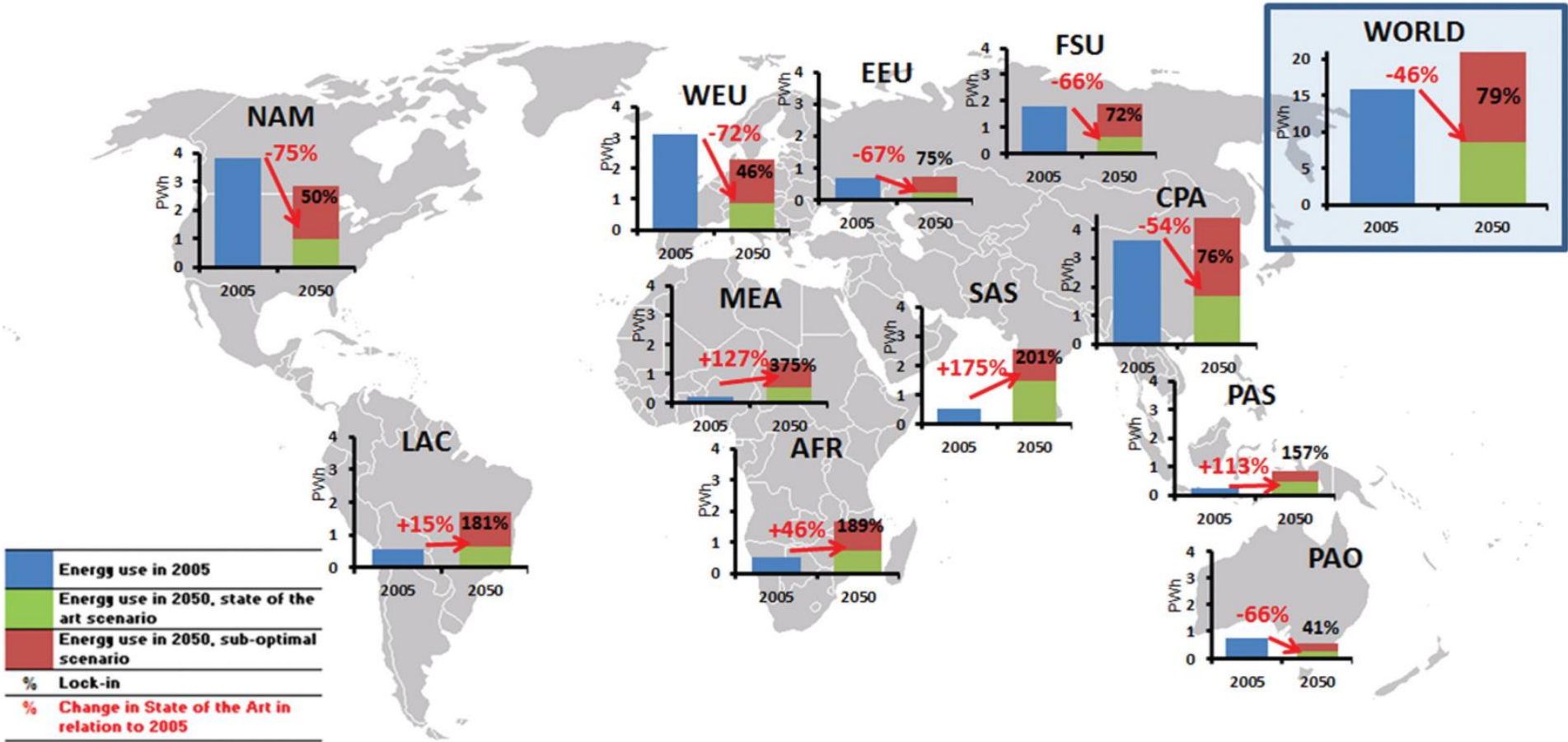




Earth at Night

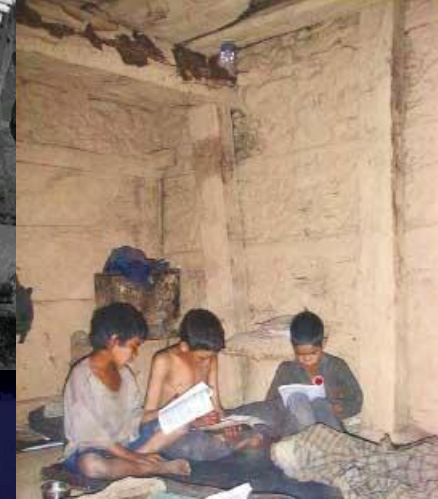
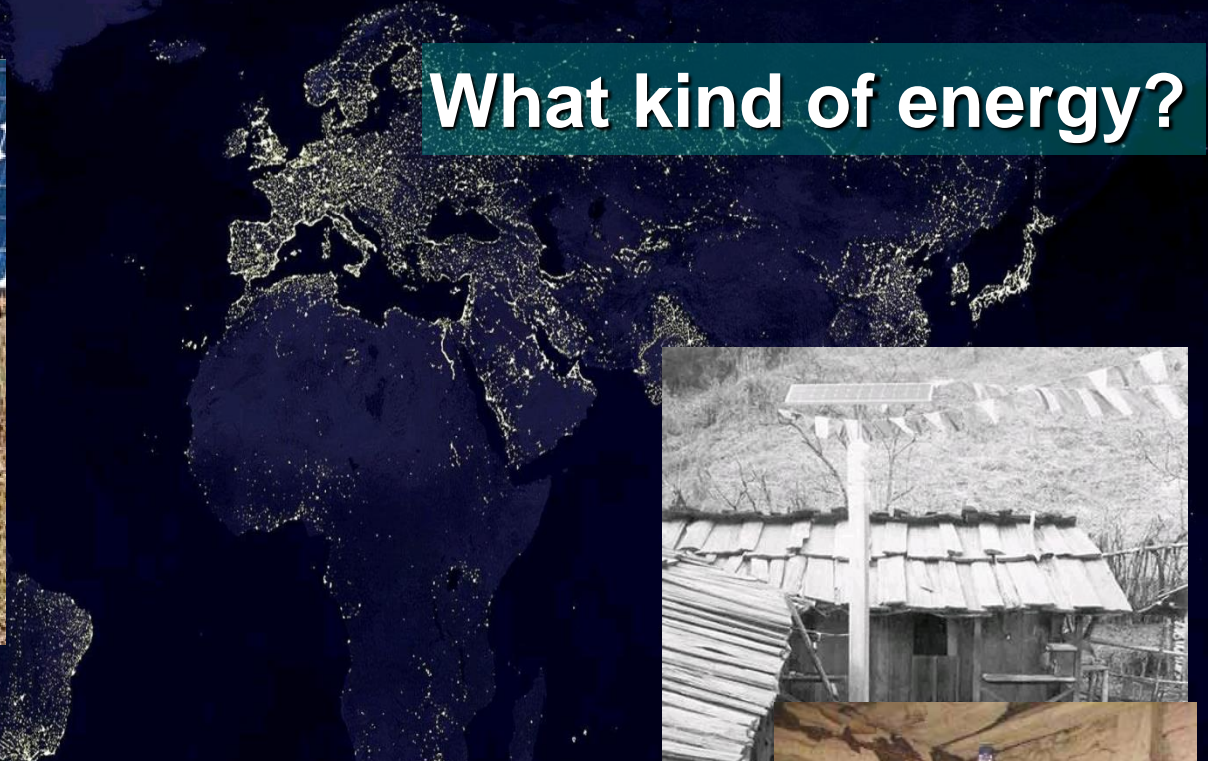
Energy use forecast

- growth of energy demand from developing countries -



Growing Energy Demand in Developing Countries

What kind of energy?



A satellite-style image of the Earth at night, showing the continents of North America, South America, Europe, Africa, and Australia. The landmasses are illuminated by the lights of cities and towns, appearing as bright yellow and white speckles against the dark blue and black background of the oceans and night sky. The map is centered on the Atlantic Ocean.

What kind of energy?

What role for photovoltaics?

What role for new technologies?

Portable power

The portable power market is just starting and needs new technology

