

Support policies for PV in EU

## The impact of feed-in tariff

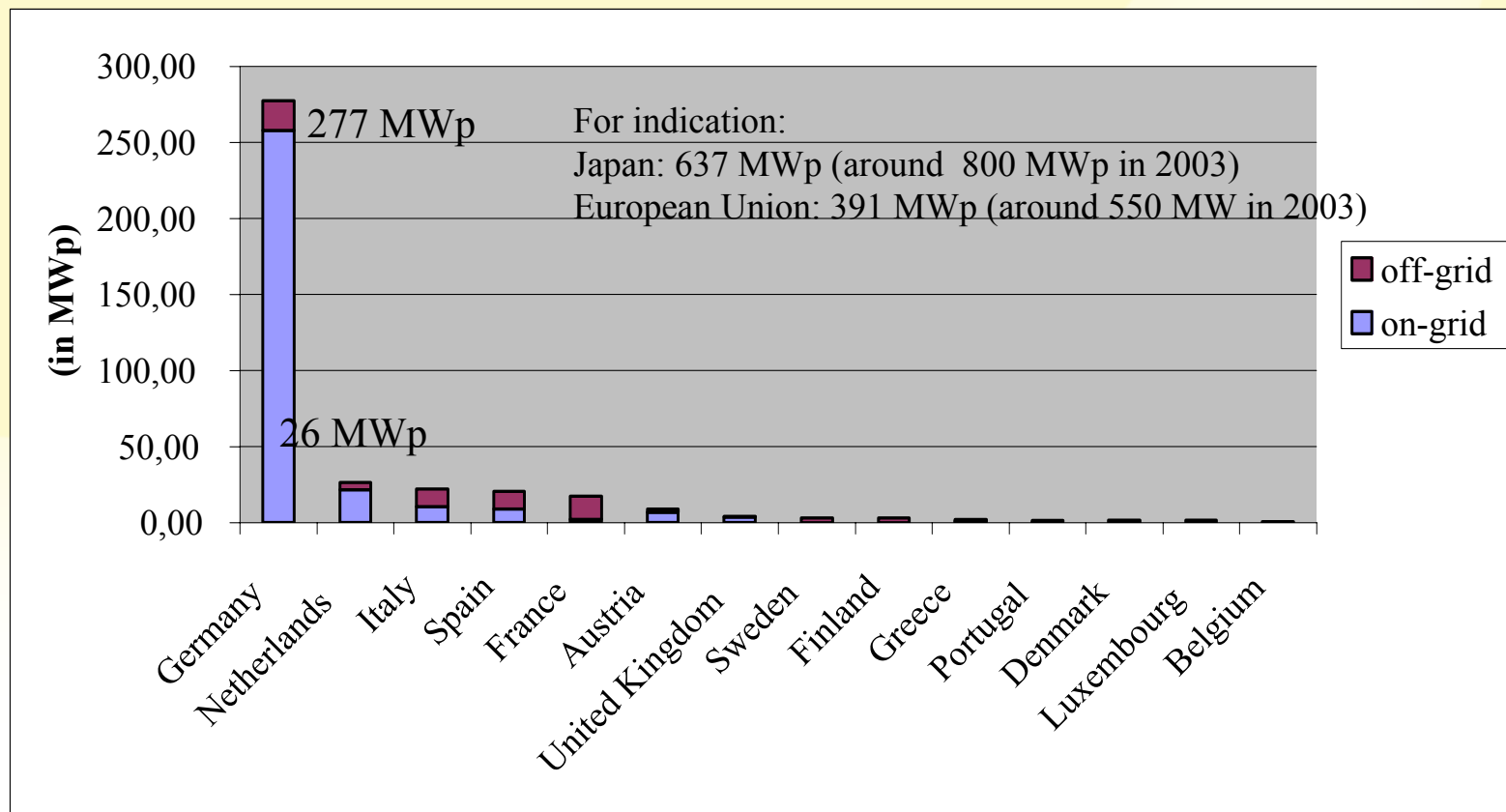
PV workshop - 8 March 2004

# Observ'ER: a pole for analysis and studies

- -Monitoring of all renewable energy sectors
- -Evaluation of policies
- -Market research
- -Specific expertise :
  - ○ Bioclimatic architecture
  - ○ Qualitative and quantitative research techniques
  - ○ Creation of interactive tools
  - ○ Organisation of awards

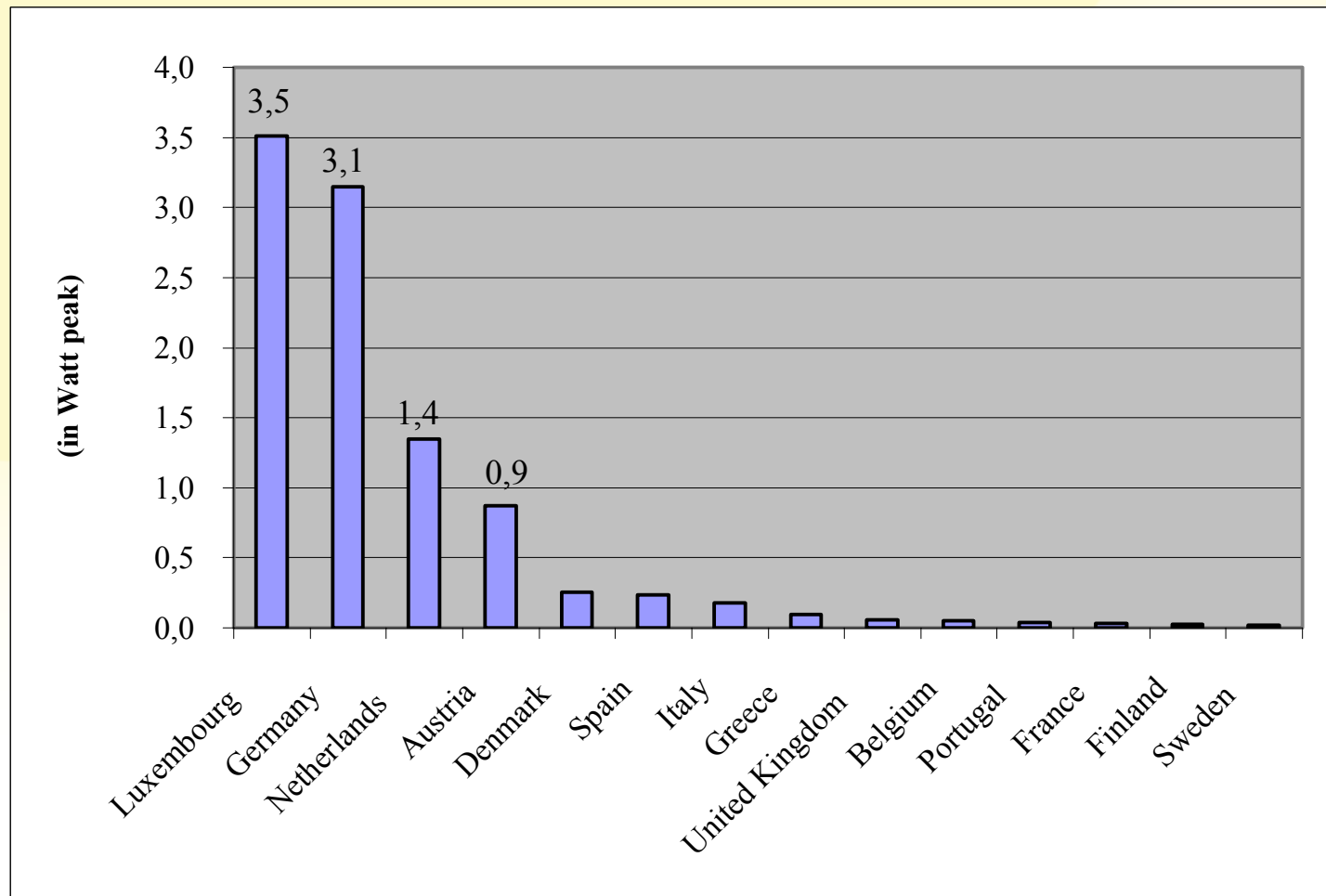
# PV state of the art in the E.U.

## Cumulative installed PV power in European Union countries at the end of 2002



# PV state of the art in the EU

Wp per inhabitant for each Union european countries at the end of 2002



# A Successful example: Germany

## 100 000 rooftops program /high Feed-in tariff

- Support programme until 2003
  - 1999: 100 000 Rooftop program (soft loan)
  - 2000: Feed in tariff 50,6 c€/kWh -( a 5 % decrease per year start in 2002)
  - 2001: 50,6 c€/kWh
  - 2002: 48,1 c€/kWh
  - 2003: 45,3 c€/kWh
- New Feed-in Law - from 2004 (20 years-5% decrease each year)

<b>Feed-in tariff levels (euro cents/kWh)</b>		
Built environment	Rooftops	Facades
< 30 kW	57,4	62,4
> 30 kW < 100 kW	54,6	59,6
> 100 kW	54	59
Undevelopped area	45,7	

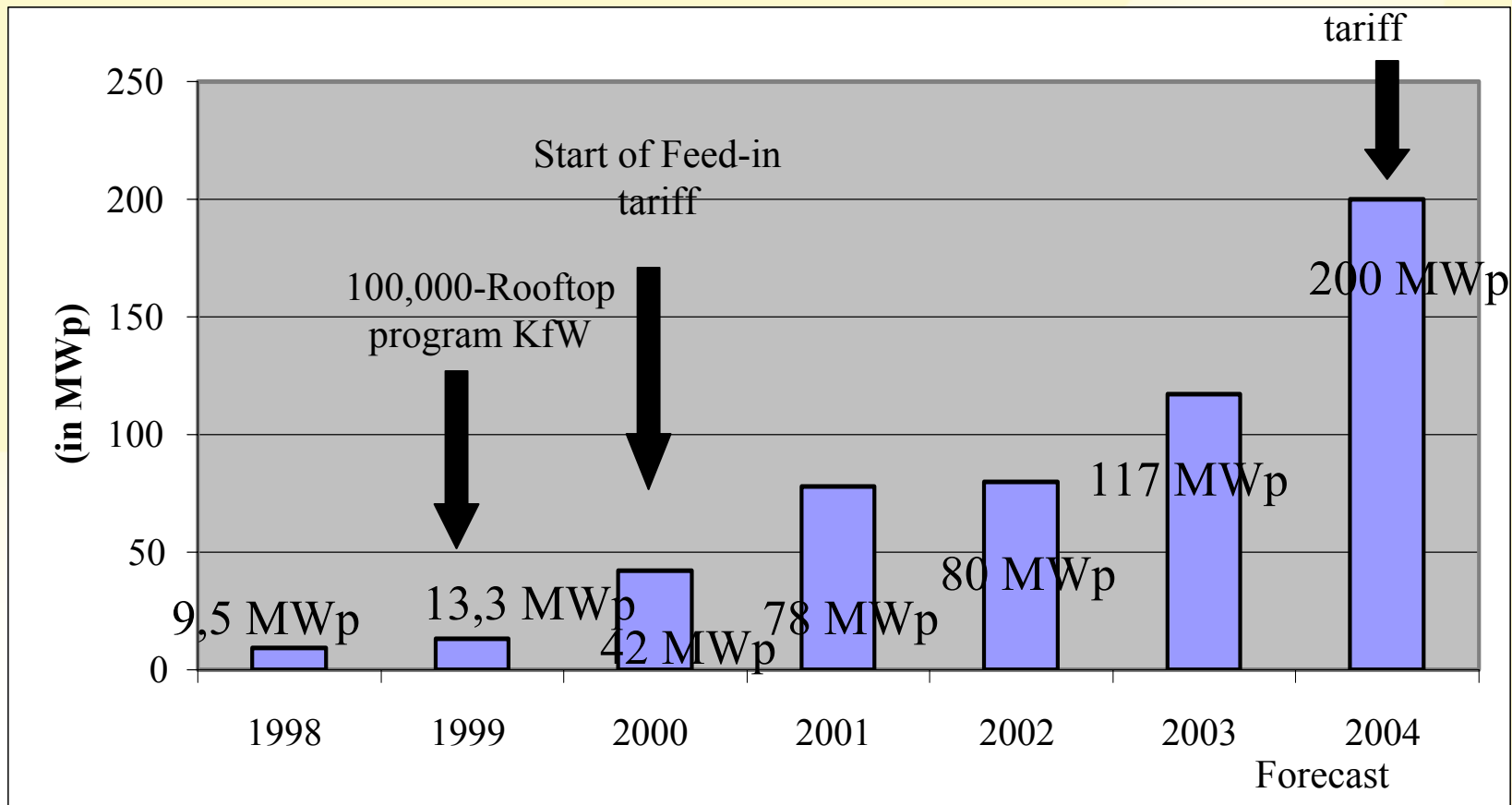


# A Successful example: Germany

100 000 rooftops program /high Feed-in tariff

Annual market for grid connected applications in Germany

Expectations with the new feed-in tariff



# Luxembourg: a new interesting market

## Feed-in Tariff and Subsidy on capital Investment

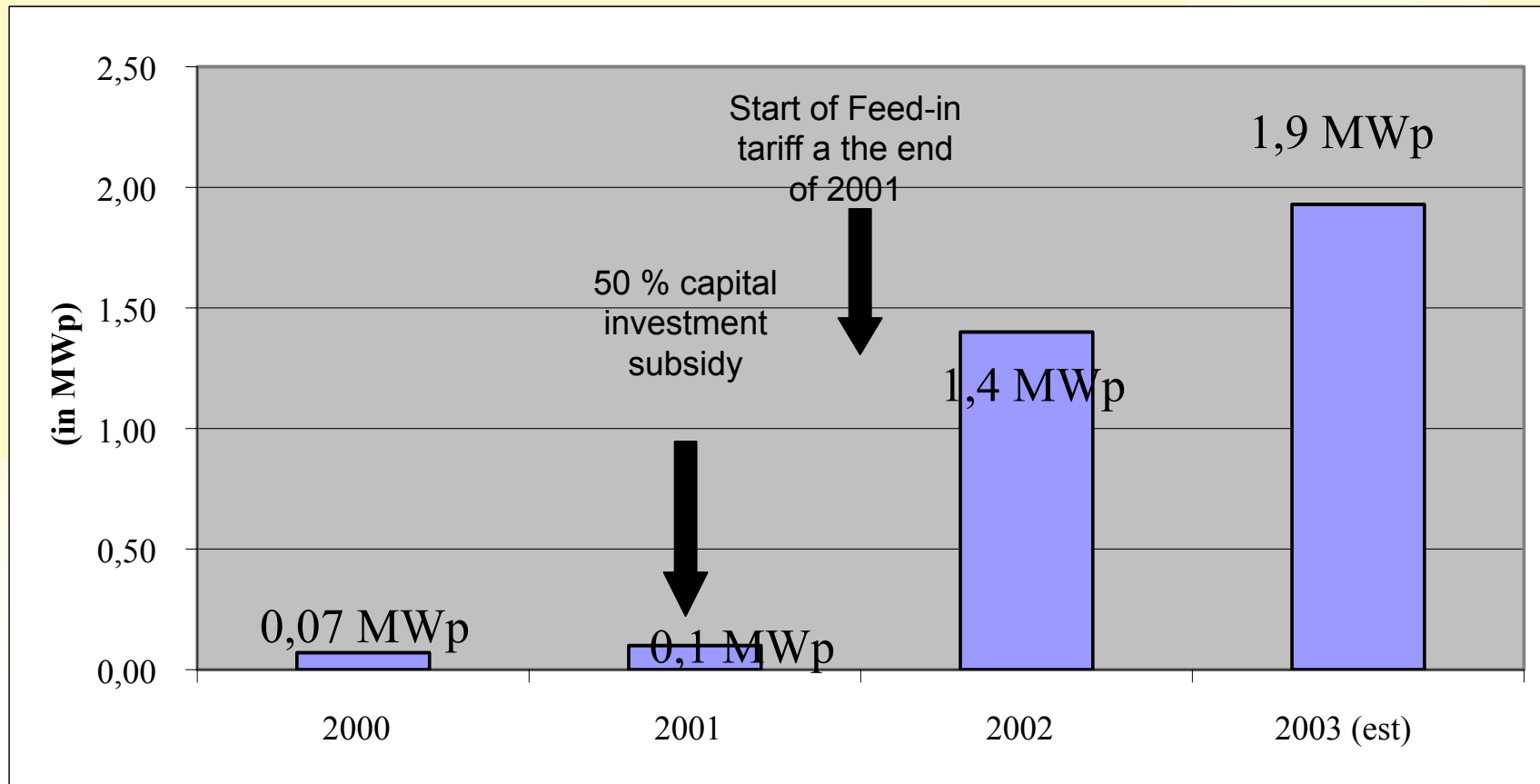
- Support programme
  - 17th July 2001: 50 % capital investment subsidy for residential house (up to 4 kW) or residential building
  - 2002: Feed-in tariff 0,55€/kWh for 20 years
  - 2003: Feed-in tariff 0,50€/kWh + additional incentive from the Ministry of Economics of around 0,10€/kWh
  - 2004: Feed-in tariff 0,45€/kWh + additional incentive from the Ministry of Economics of around 0,10€/kWh



# Luxembourg: a new interesting market

## Feed-in Tariff and Subsidy on capital Investment

### Annual market for grid connected application in Luxembourg





# Other support schemes in Europe

- **France:** Low feed-in tariff with investment support scheme
  - 2002: 15,25 c€/kWh in continental France and 30,5 c€/kWh in Overseas department and Corsica, 5 % rebate per year
  - End 2002: investment support from 4,6 €/Wp to 6,1€/Wp for selected projectAdministrative barriers
- **Netherlands:** favourable investment support scheme until 2003 called Energy Premium Regulation) (3,5 € per Wp minimum).  
Stop on 15 october 2003.  
« Stop and go policy »
- **Austria:** High feed-in tariff
  - 2003: up to 20 kWp - 60 c€/kWh  
Bigger than 20 kWp - 47c€/kWp  
But the upper limit is too low (15 MW)



# Preliminary figures of the PV grid connected market in 2003

- **Japan:** 168 MWp (other source 220 MWp)
- **Germany:** 117 MWp
- **The Netherlands:** 22 MWp
- **Austria :** 6,3 MWp
- **Italy:** 4 MWp
- **France:** 2,8 MWp (subsidized not necessary installed)
- **Luxembourg:** 1,9 MWp
- **Denmark:** 0,3 MWp
- **Greece:** 0,07 MWp
- **Portugal:** 0,01 MWp

Sources: PV activities in Japan, BSI, Novem, ADEME, CESI, Photon, PA Energy, Helapco, EDP, GIF1, Bundesverband PV Ostereich