



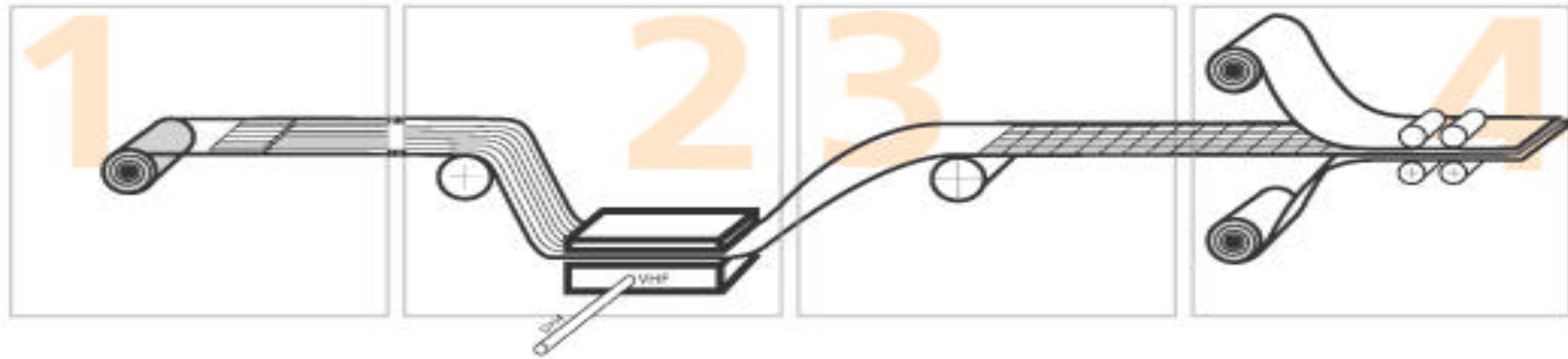
# Custom-designed Flexible Photovoltaic Cells/Modules

Alain Barbal (CEO) and Diego Fischer (CTO)

European Energy Venture Fair

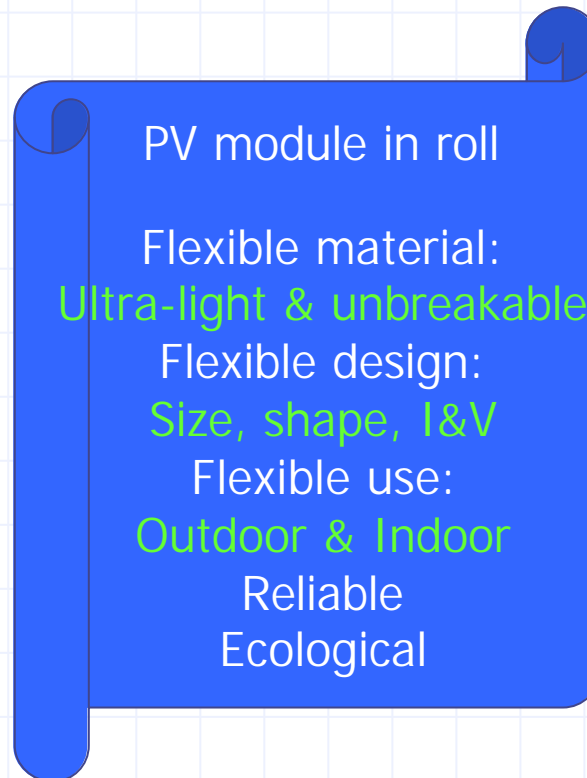
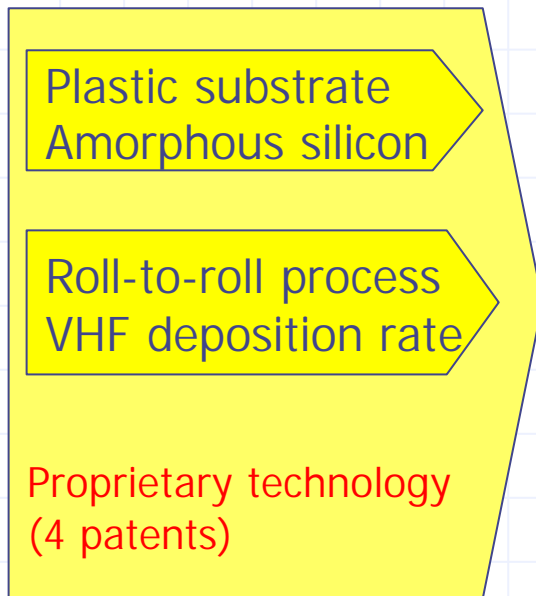
29 October 2002, Zurich

# WHAT'S NEW IN PV ?



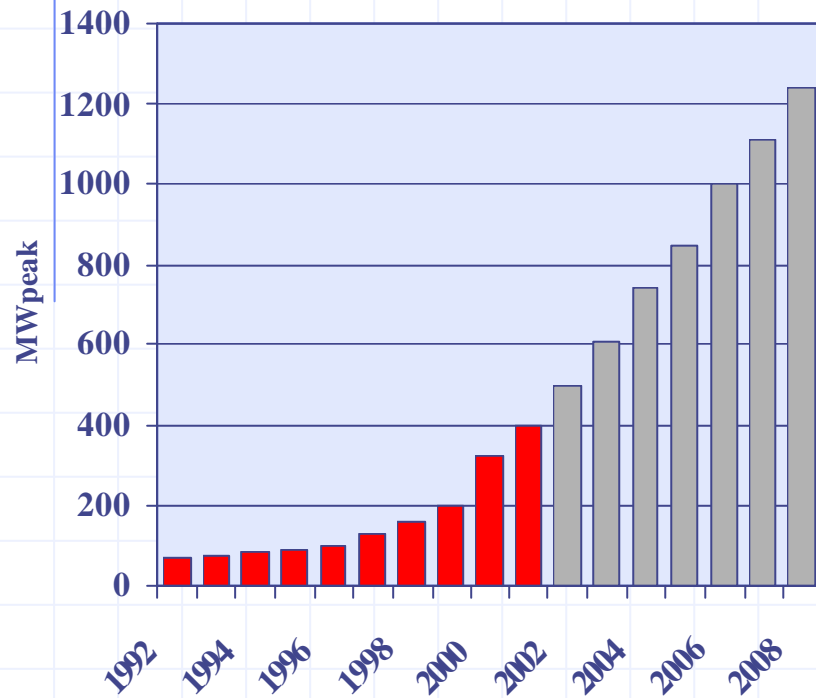
- ◆ Roll of plastic (Polyimide > PET) as substrate
- ◆ Very High Frequency (VHF) plasma deposition of
- ◆ a-Si
- ◆ Custom-designed cells in terms of:
  - ✎ Electrical specifications
  - ✎ Outdoor or indoor use
  - ✎ Shape
  - ✎ Encapsulation (with or without) material

# PROCESS AND TECHNOLOGY ADVANTAGES FOR END-PRODUCT ADDED-VALUE

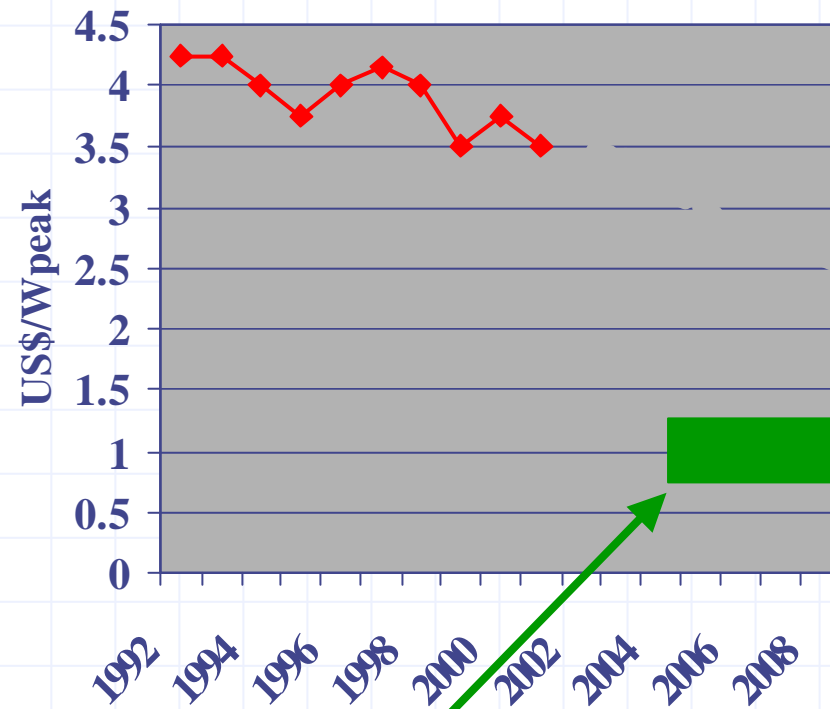


# RIGID PV CELLS: MARKET TRENDS

Source: SARASIN



Source: Ren. Energy World



**VHF mfg cost range**

# VHF's STRATEGY FOR MARKET ENTRY

2001

Wireless Devices  
0.5 MWp  
Island production

profitable business

2004 and 2005

Building integrated PV  
50 MWp  
Continuous process

profitable business

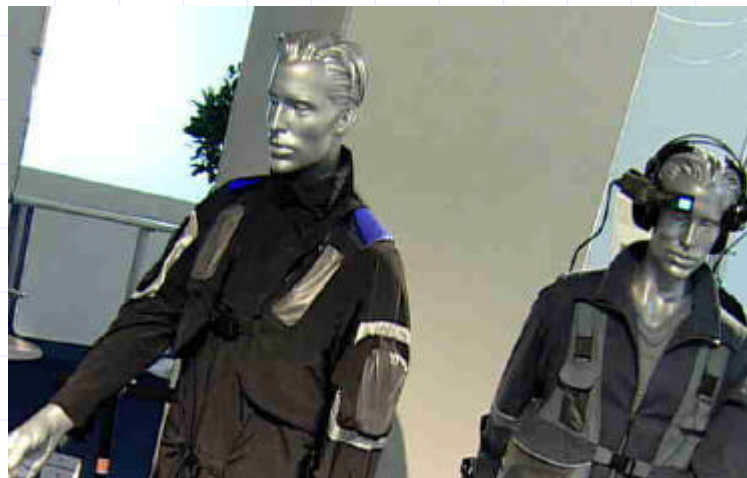
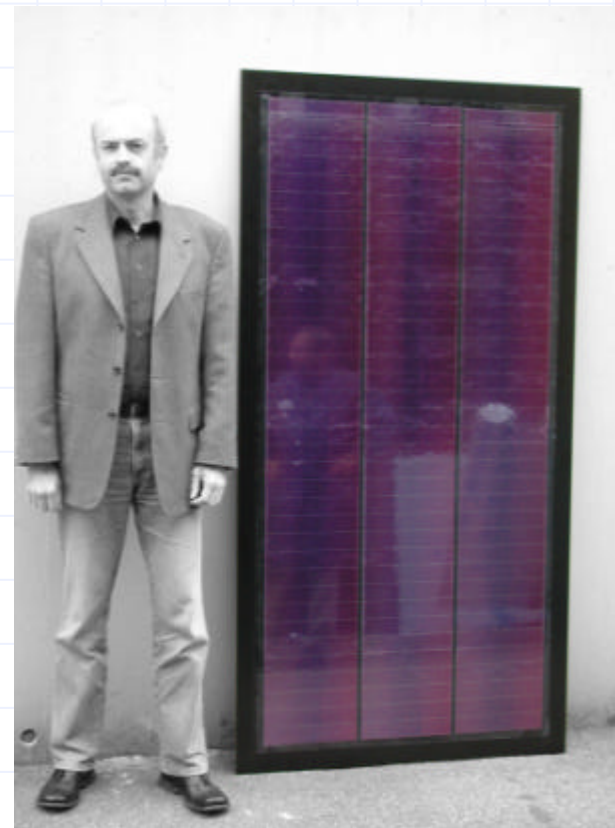
2010

High power markets  
> 500 MWp  
Technology licensing

# KEY FIGURES FOR VHF's DEVELOPMENT

	<b>Phase 0 2000-2002</b>	<b>Phase I 2003-2004</b>	<b>Phase II 2005-2008</b>
Cumulated sales (M€)	<b>0.1</b>	<b>4</b>	<b>200</b>
Investment (M€)	<b>1.2</b> (+0.7 subsidy)	<b>4</b>	<b>30</b>
Employees	<b>13</b>	<b>30</b>	<b>200</b>

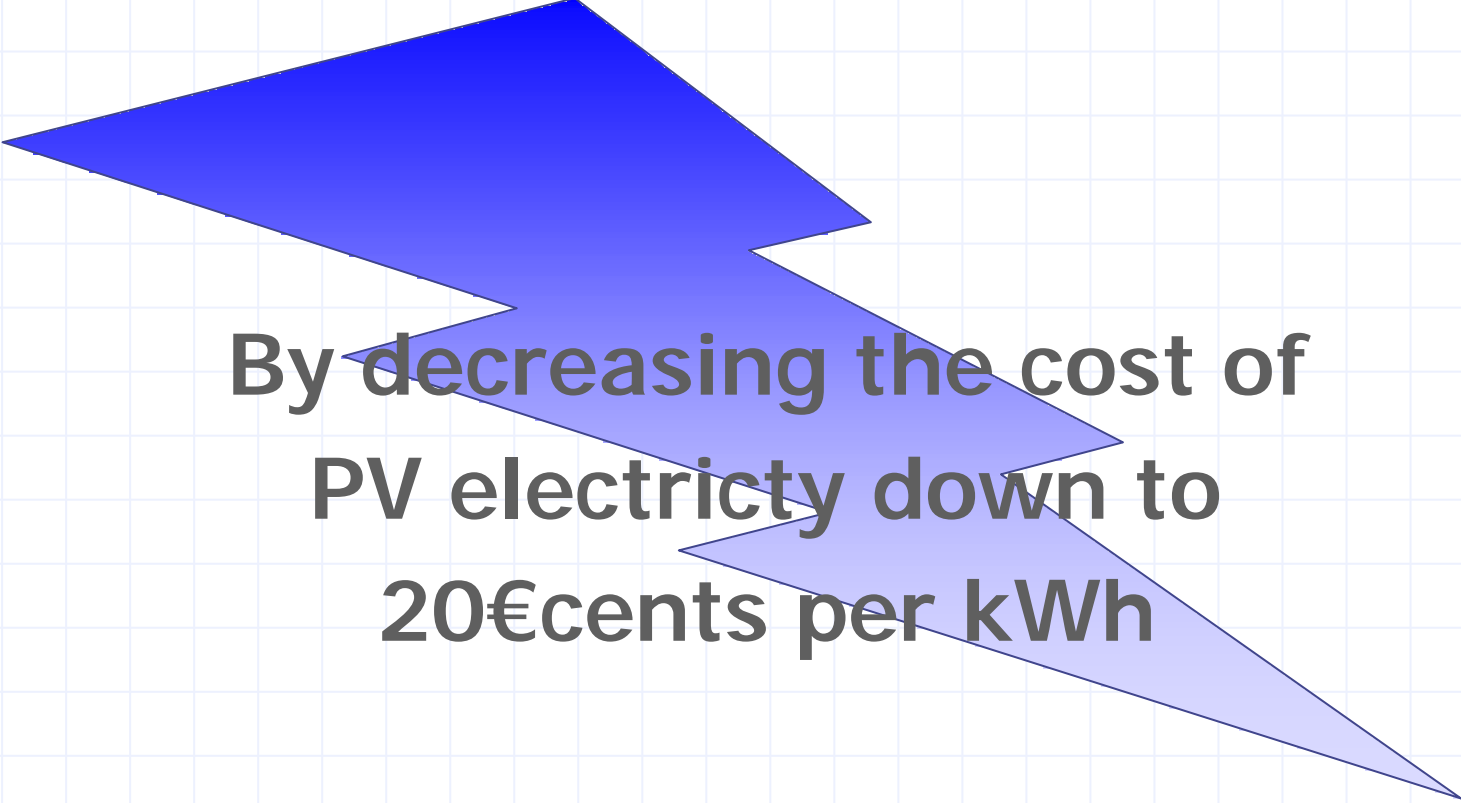
# ENABLING TRUE FLEXIBILITY



29.10.02

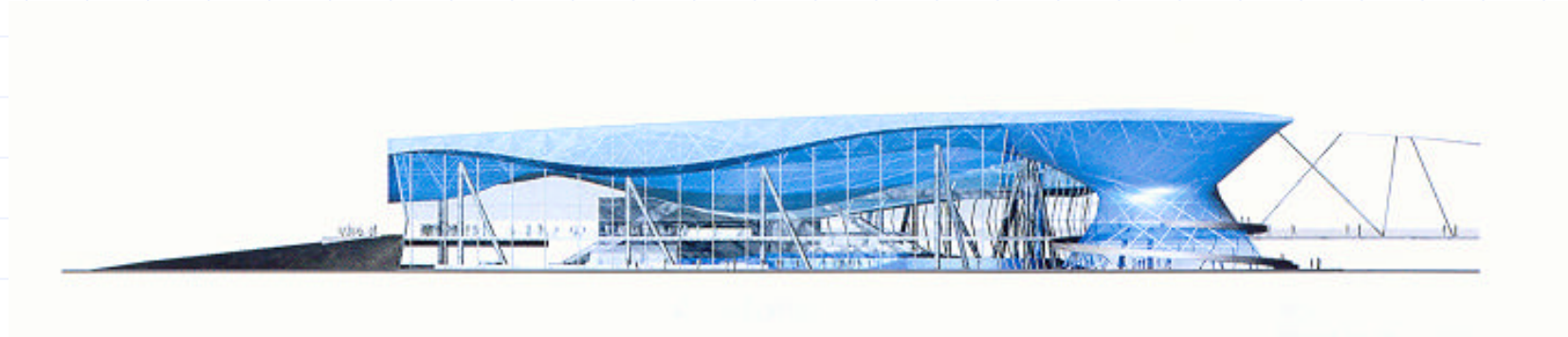
VHF Technologies

# WIDENING MARKET SIZE



**By decreasing the cost of  
PV electricity down to  
20€cents per kWh**

# ENABLING A NEW FUTURE



29.10.02

VHF Technologies

END

