

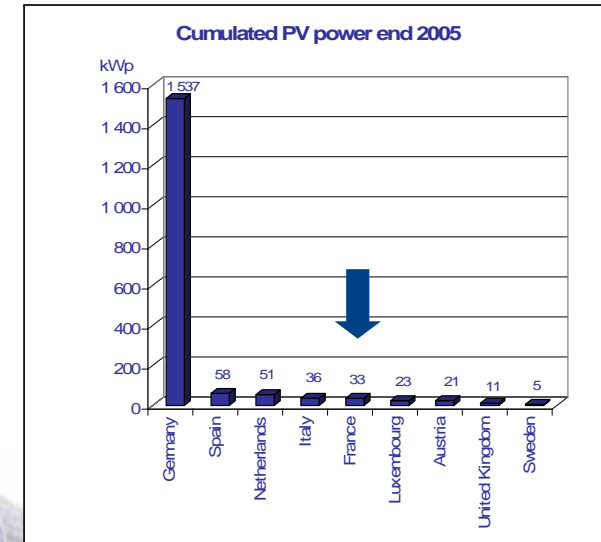
Exempel på urban-scale BIPV i Frankrike

Vilken effekt det fått på tillbyggnaden

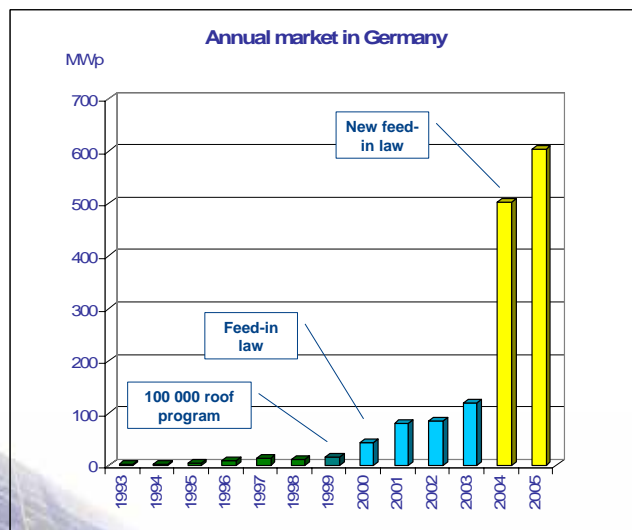
13 September 2006
Malmö

Bruno Gaiddon

Foreword



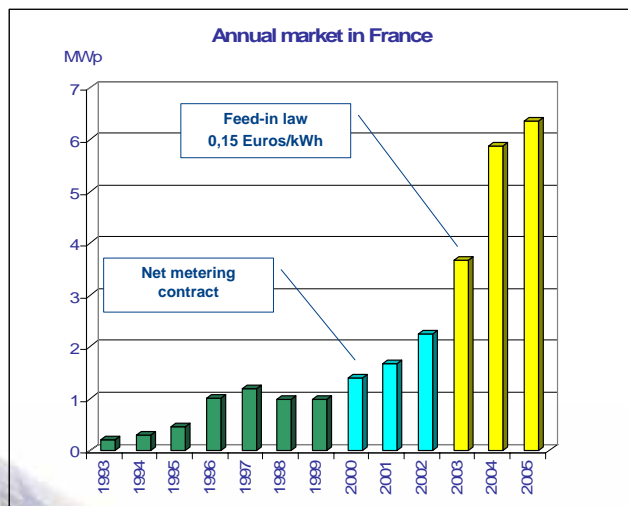
Effect of the feed-in tariff



Feed-in tariffs in Germany

- 45.7 c€/kWh for PV on free surfaces
- 54 c€/kWh for roof PV systems > 100 kW
- 54.6 c€/kWh for roof PV systems between 30 and 100 kW
- 57.4 c€/kWh for roof PV systems < 30 kW
- 59 c€/kWh for PV façades > 100 kW
- 59.6 c€/kWh for PV façades between 30 and 100 kW
- 62.4 c€/kWh for PV façades < 30 kW

French PV market



New French feed-in tariff



- Officially published on the 26 July 2006
- Base feed-in tariff : **0,3 Euros/kWh**, an increase of 100% !
- Additional feed-in tariff of **0,25 Euros/kWh** for "building integrated PV systems"
 - ➔ **0,55 Euros/kWh !**
- 20 year purchase contract
- and also 50% tax rebate plus reduced VAT rate for domestic owners

New French feed-in tariff



- Definition of eligible "BIPV systems":
 - Roofs, tiles, slates industrially manufactured
 - Brise-soleil (shading elements)
 - Solar windows
 - Glazing structures (greenhouses)
 - Balconies
 - Façades



PV systems in Lyon



- Tram service station
 - 80 kWp



PV systems in Lyon



➤ Solar car park

– 150 kWp



PV systems in Lyon



➤ ZAC les Hauts de Feuilly

- First French Solar PV Community
- 19 x 1 kWp
- 3 x 2 kWp



PV systems in Lyon



➤ La Darnaise – Venissieux

- Large Urban Renewal
- 12 buildings with 4 to 12 kWp



Energy Conservation in Buildings in Lyon



➤ RESTART project (EU funded)

- Design of construction of energy efficient social homes

➤ Local innovative policy

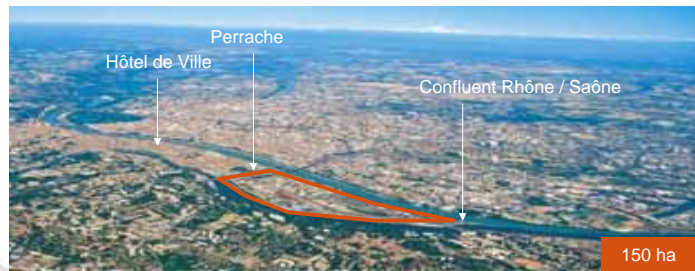
- Developers must design energy efficient residential building if local community involved in the project
- Objectives : primary energy consumption for heating < 60 kWh/m²/year
- 40% above the national thermal regulation



The Lyon-Confluence project



“A combination of the Grand-Lyon experience in Energy Conservation in Buildings and Renewable Energy Systems in a extraordinary site”



ENERGIES RENOUVELABLES ET EFFICACITE ENERGETIQUE



The Lyon-Confluence project



ENERGIES RENOUVELABLES ET EFFICACITE ENERGETIQUE



Lyon-Confluence First residential project



- 3 sections of Estate
- 75 000 m² of useful floor
- 15 European developers in competition
- An integrated guideline :
 - 60 kWh/m²/year for the heating
 - 80% of RES on heating and DHW needs
 - 50% of RES on electricity for common spaces

ENERGIES RENOUVELABLES ET EFFICACITE ENERGETIQUE



Awarded teams



- Section of Estate “A”
 - Developer : Nexity Apolonia
 - Main architect : T. Conko
- Section of Estate “B”
 - Developer : Maignan Bowfonds
 - Main architect : M. Fuksas
- Section of Estate “C”
 - Developer : ING Real Estate
 - Main architect : W. Maas



ENERGIES RENOUVELABLES ET EFFICACITE ENERGETIQUE



RES to be implemented



- **Wood chip boilers**
– 3 x 500 MW
- **Solar thermal systems**
– 1 250 m²
- **PV systems**
– 250 kWp

ENERGIES RENOUVELABLES ET EFFICACITE ENERGETIQUE



Other buildings with PV



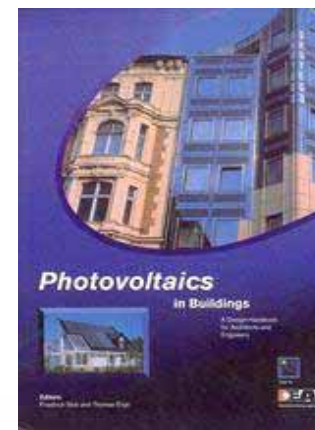
Regional Council
Portzamparc
?? kWp

Confluence Museum
COOP HIMMELBLAU
200 kWp

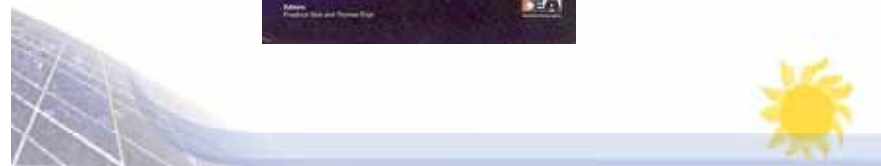
ENERGIES RENOUVELABLES ET EFFICACITE ENERGETIQUE



Thank you for your attention



ENERGIES RENOUVELABLES ET EFFICACITE ENERGETIQUE





HESPUL
114, boulevard du 11 novembre
F-69100 Villeurbanne
Tel : +33 4 37 47 80 90
Fax : +33 4 37 47 80 99
info@hespul.org
www.hespul.org

