University of Applied Sciences and Arts of Southern Switzerland
Department of Environment Constructions and Design
Institute of Applied Sustainability to the Built Environment

SUPSI

Swiss BiPV Competence Centre

Warm facade

14 Unit Housing Development
Ijsselstein (NL)

Building Details

CONTACTS	Name	Website (or e-mail)
Owner	Various	
Architect	Han van Zwieten ft. Kiss + Cathcart	www.hanvanzwieten.nl
Energy Consultant	Terrasolar	www.terrasolar.com
PV Installer	N/A	

BUILDING				
Completion year	2002 Building		2002 PV Plant	
Category	New	Renovation	Enlargement	Other
Typology	Residential	Administration	Industrial	Sport
	Agricultural	Urban	Historical	Other

Description

The 14-unit housing project in Ijsselstein has become the way to investigate the relationship between space and energy. Integrated solar power presented an obvious solution. Architects wanted to focus on aesthetics of PV, so thin-film solar panels made more sense to them than the more efficient, conventional solar panels. So the homes have been characterized by the volume of a multi-level solariums encased in PV panels. Only a few gaps were left for operable windows to let in natural light and fresh air. PV allows to supply about 30 % of each house's energy need.

BiPV Details

LOCATION OF PLANT

Roof	Flat roof	Sloped	Curved	
Façade	Cladding	Balcony	Greenhouse	
Glass	Façade	Roof	Solar shading	Canopy
Orientation	South	West	East	North

ARCHITECTURAL EVALUATION

Color	Black homogeneous
Transparency	Opaque and semitransparent (15%)
Frame	Frameless module
Aknowledgements	Sustainable energy NOVEM, 1999

SPECIFICATION

Photovoltaic	Monocrystalline	Multicrystalline	Thin Film
PV Module	**Cells**	a-Si
	Module	EPV (standard-size BiPV glass laminate panels, 40 W each)
Power	**kWp**	1,6 (each dwelling)
Size	**m²**	30
Energy production	**kWh/year**	N/A