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

Louvres Balcony

GDF Suez

Dijon, Bourgogne(F)

Source: Atelier Phileas

Before renovation

After renovation

Source: ISSOL

Building Details

CONTACTS	Name	Website (or e-mail)
Owner	GDF Suez S.A.	www.gdfsuez.com
Architect	Atelier Phileas, Paris	www.atelier-phileas.com
Energy Consultant	ISSOL sa	www.issol.eu
PV Installer	ISSOL sa	www.issol.eu

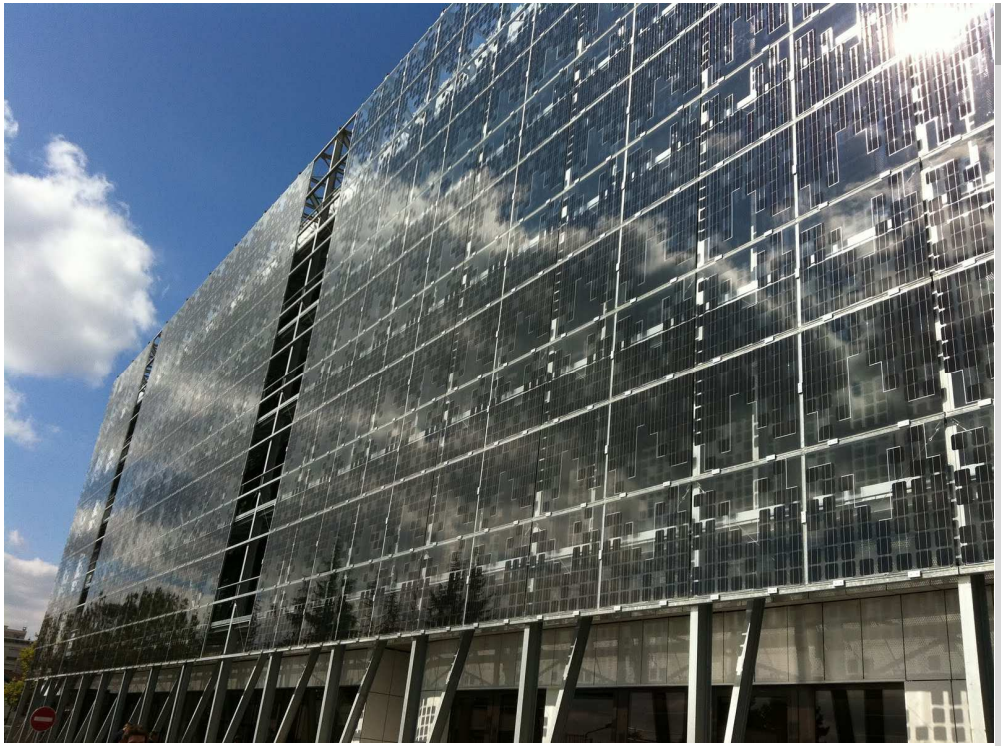
BUILDING

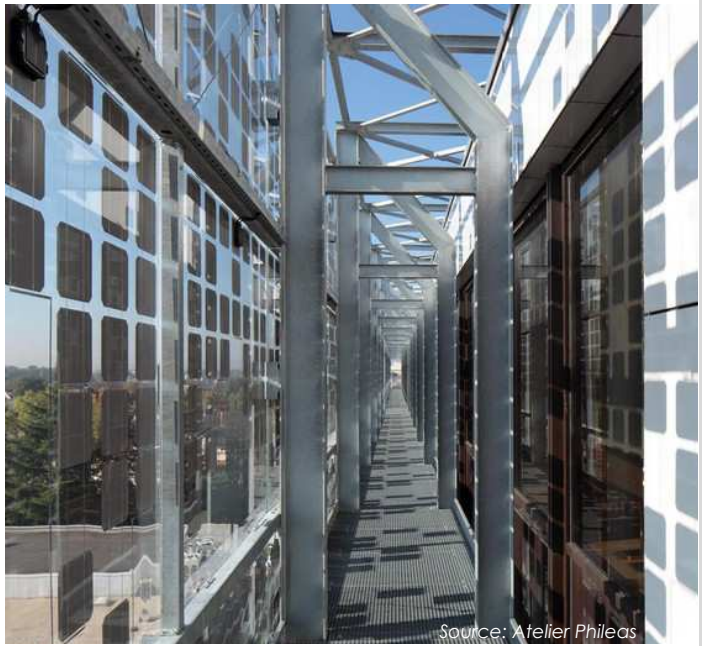
Completion year	1973 Building		2013 Plant	
Category	New	Renovation	Enlargement	Other
Typology	Residential	Administration	Industrial	Sport
	Agricultural	Urban	Historical	Other
Building Energy Performance	**kWh/m² y**	-		

Description

The rehabilitation of the existing office building in Dijon, located in the Bourgogne French region, regards the removal of the asbestos and the substitution of the existing skin, preserving the real estate asset characterized by a metal post and beam structure.
The principal goal of the project was the energy retrofit. The new façade is used as "thermal shield", with integration of PV cells. The PV system is integrated in the double skin glazed façade that includes metal maintenance walkways. These elements are more than mere "environmental gimmicks", since they merge with the building structure and the nature of the project. A special distribution of the PV cells creates a particular texture in the façade becoming a solar shading device.

Aknowledgments





Source: Atelier Phileas

BiPV Details

LOCATION OF PLANT

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

ARCHITECTURAL EVALUATION

Color	Black
Transparency	Semi-transparent
Frame	Frameless

COSTUMIZATION LANGUAGE AT COMPONENT SCALE

PV CELL **MODULE LAYERING** **MODULE FEATURES** **DUMMIES**

DESCRIPTION Special distribution of cells in glass modules

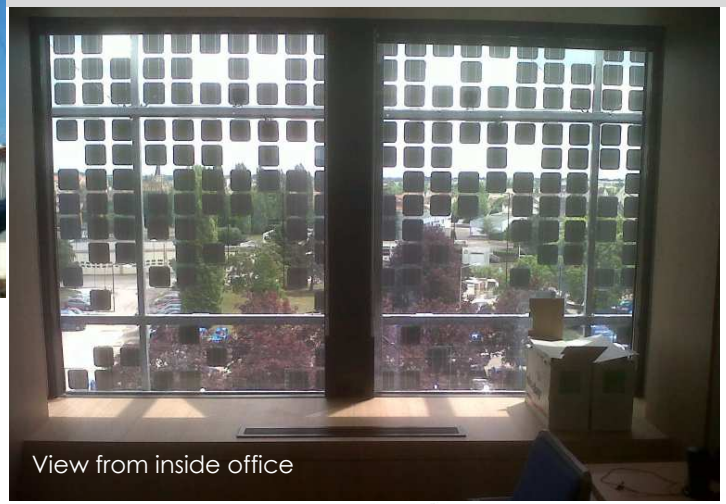
SPECIFICATION

Photovoltaic	Monocrystalline	Multicrystalline	Thin Film	
PV Module	**Cells**	41 monocrystalline cells 170 W +-3%		
	Module	441 ISSOL semitransparent modules		
Power	**kWp**	85		
Size	**m²**	1020		
Energy production	**kWh/year**	-		
Cost	**€/m²**	-		

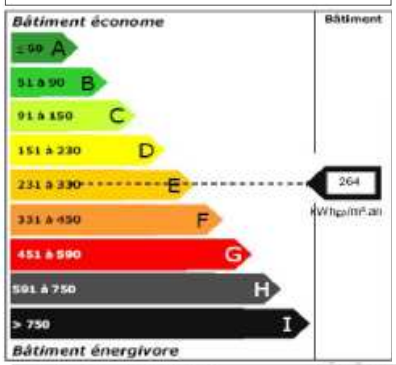
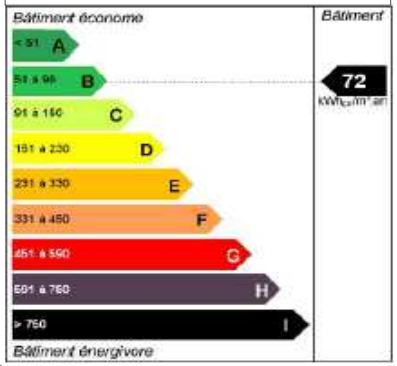
BiPV Details

BUILDING SYSTEM INFORMATION

Trasparency	OPAQUE	TRASPARENT	G Value
Constructive system	MASSIVE BUILDING		LIGHTWEIGHT
Ventilation system	NOT VENTILATED	MICROVENTILATED	NATURAL VENTILATED
U value (W/m² K)			



Source: GDF Suez

	BEFORE RENOVATION	AFTER RENOVATION
Energy consumption		
Carbon gas emission