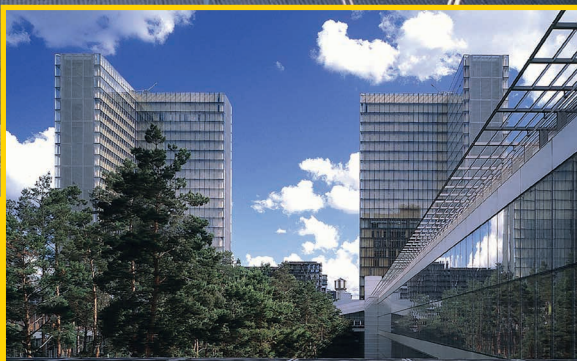


SageGlass®

CASE STUDY:

45% ENERGY SAVINGS AND ENHANCED COMFORT WITH SAGEGLASS

© Georges Fessy / Dominique Perrault Architecture / ADAGP



Synthesis of «La Bibliothèque Nationale de France et la métropole durable»

Simulation conducted in the framework of the COP21

DPAx

DPA
ENERGIE PAR LA ARCHITECTURE

{BnF



SageGlass is a registered trade mark of Saint-Gobain, official partner of the COP21.



Higher education



Renovation

The French National Library (Paris, France) is one of the main cultural projects of French president François Mitterrand. Designed by the architect Dominique Perrault, it was awarded the European Union Prize for contemporary architecture, the Mies van der Rohe Award upon its opening in 1996. The library centralizes, preserves and promotes the French national documentary heritage. The site comprises a public esplanade which connects 4 towers of 20 floors each, around a garden.


SAINT-GOBAIN

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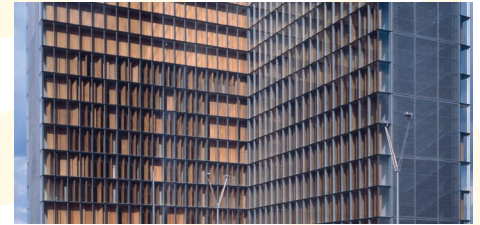
“In a context of limited energy natural resources, we need to reinforce the technical performances of some [of this building’s] components.”

*Dominique Perrault, architect of the project
© Patrick Swirc*



In 1989, when the library was first designed, Dominique Perrault wanted a facade with photo-chromic glass, capable of adapting to ever changing solar exposure and climatic conditions. But this newly emerging technology was not yet available for building applications.

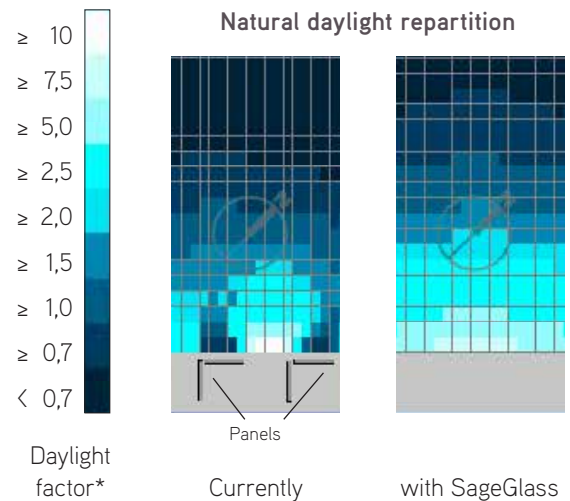
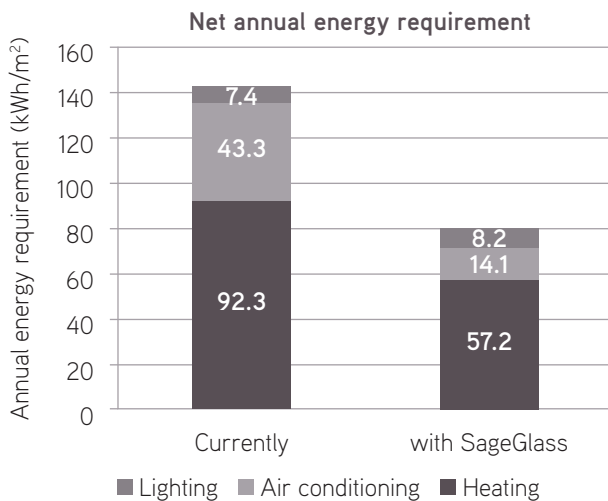
So instead, revolving **wood panels** have been installed in order to ensure the preservation of the books. They are efficient sunscreens but **block the view and let the heat enter the building**. Moreover, **the energy consumption is no longer up to today’s standards**. Thus, the floors cannot be converted into offices.



Wood panels blocking the view and sun
© Georges Fessy / Dominique Perrault
Architecture / ADAGP

Renovation with SageGlass for far less energy consumption and more comfort

SageGlass is the revolutionary electronically tintable glass from Saint-Gobain, which allows an intelligent solar control.



45% energy savings

The use of SageGlass could lead to a **reduction in the annual energy consumption of 45%** in comparison to the existing facade. Air conditioning needs would in particular be significantly reduced.

Enhanced comfort

The use of SageGlass enhances the wellbeing of occupants via:

- Permanent access to the **outside view** over Paris
- Improved interior **light quality**: no glare due to the sun, ideal distribution into the space.



These conclusions are extracted from the study «La Bibliothèque Nationale de France et la métropole durable» available on http://issuu.com/dparchitecture/docs/la_bibliothèque_nationale_de_france. All hypothesis can be consulted there.

* Ratio of the light level inside a structure to the light level outside the structure

For more information about SageGlass: www.sageglass.com

