



## PalaCinema Locarno - Locarno, Switzerland

Author: Cristina Polo (SUPSI)

Free standing Photovoltaic system

Link to best practice example (Hiberatlas):

Links: [https://espazium.s3.eu-central-](https://espazium.s3.eu-central-1.amazonaws.com/files/migration/documents/5b5eccb2676d1.pdf)

[1.amazonaws.com/files/migration/documents/5b5eccb2676d1.pdf](https://espazium.s3.eu-central-1.amazonaws.com/files/migration/documents/5b5eccb2676d1.pdf)



*What is the solution?*

A photovoltaic system has been installed on the roof. With a nominal power of 135.7 kWp, the production is about 130'000 kWh/y. The total cost is 178'000 CHF.

*Why does the solution work in terms of compatibility with conservation and technical aspects?*

The preliminary analysis showed an open horizon on the roof, with good sunshine throughout the year. For this reason it was decided to work with modules inclined at 15° with a bidirectional east-west system that allows energy production to be better distributed throughout the day. The lower inclination results in lower profitability, but the covered surface area can be increased in the absence of shading, thus compensating for this factor.

*Description of the context:*

In the aftermath of the 2007 global financial crisis and rampant global warming –and perhaps the demise of “starchitecture” as a default procedure to build urban identity–, the Palazzo del Cinema Locarno project is guided by principles of economy, trying to capitalise in the existing structure and the public affection for the Palazzo Scolastico –which used to host the local schools and now hosts a variety of NGOs and community associations, to provide an

architectural identity for the new cinema complex in Piazza Remo Rossi in Locarno, in the shores of Maggiore Lake. At a time when energy resources are dwindling and climate change has become a crucial problem for our cities, it would have been irresponsible to simply discard the existing building in order to build an entirely new one, with the corresponding expenditure of vital resources. Urban Recycling is a more adequate strategy for this intervention. Three levels of action to reduce the emissions have been considered: demand reduction, improved energy efficiency of systems and improved building management.

*Pros and cons of the solution:*

The intention is to guarantee the best possible integration from an aesthetic and architectural point of view. For this reason, the system has been inserted on the roof. Initially the intent was to install an integrated PV system, but after a cost comparison it was decided to continue with a standard black/blue monocrystalline cell system. The inverter is installed in the technical room on the top floor. The bidirectional east-west orientation of the PV system allows energy production to be better distributed throughout the day.

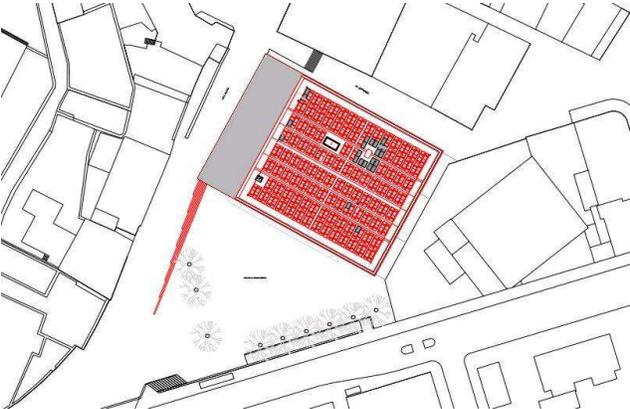
*Type of data available (level of information, simulation):*

PALACINEMA, LOCARNO Wie ein Palast aus der Asche, Real estate and energy. Nr. 1/N° 1 2018 (Ed. spazio), p. 35-37. Special issue spazio - Editions for the culture of construction. Attachment to TEC21 n. 46/2018, TRACÉS n. 23-24 / 2018 and Archi n. 6/2018 <https://spazio.s3.eu-central-1.amazonaws.com/files/migration/documents/5bf7a9347396d.pdf> Luoghi e architetture del cinema, Archi n. 4/2018, ISSN 1422-5417. <https://spazio.s3.eu-central-1.amazonaws.com/files/migration/documents/5b5eccb2676d1.pdf> Articles (Italian): · Le architetture per il Festival del Film di Locarno 1946-2018 Gabriele Neri, p. 29-38 · PalaCinema: ieri, oggi, domani. Interview with Carla Speciali, p. 46-47 · Un commento sul concorso per il Palazzo del Cinema a Locarno, Paolo Fumagalli, p. 48-49 · PalaCinema, Locarno, AZPML Architects, p. 50-57 Palazzo del Cinema a Locarno, in Archi n. 4/2018 (Digital) <https://www.spazio.ch/it/attualita/palacinema-locarno>

*Additional information about the solution:*

Photovoltaic system: Monocrystalline Total nominal power: 135.7 kWp Elevation angle: 15° Orientation: Est - West Overall yearly production: 130'000 kWh/y Cost: 178'000 CHF

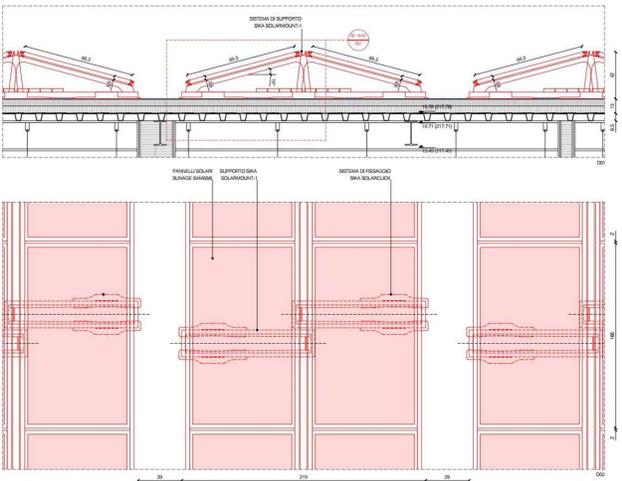
*Are there any related publications or pictures of the solution?*



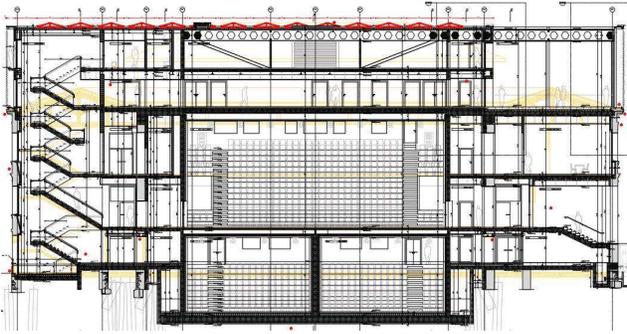
Solar PV plant © Greenkey Sagl



Solar PV plant © Greenkey Sagl



Solar PV plant, details © Greenkey Sagl



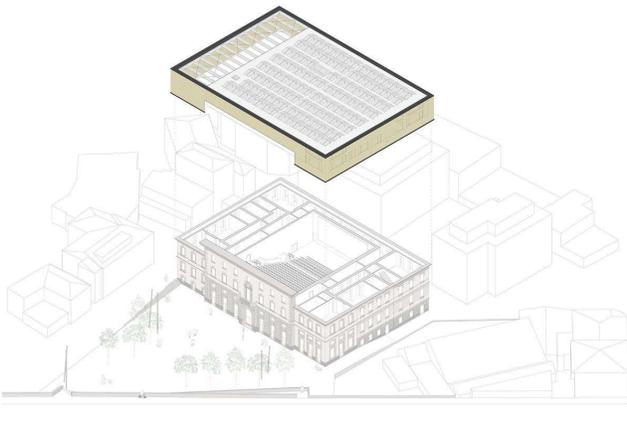
Solar PV plant, details © Greenkey Sagl



Solar PV plant, details © Greenkey Sagl



© LaRegion.ch



Drawings © AZPML



Solar Plant © Greenkey Sagl



Solar Plant © Greenkey Sagl