279 PROJECTS & REFERENCES

WALKABLE PV FLOOR RENOVATION

Madrid's Teatro Real, one of Spain's most iconic cultural institutions, has taken a major step toward sustainability with the installation of Onyx Solar's walkable photovoltaic flooring on its rooftop. This innovative solution not only generates clean energy but also transforms former gravel-covered surfaces into accessible terraces for events and special gatherings.

With over 1,200 m² of photovoltaic pavement and more than 2,000 crystalline silicon photovoltaic glass units installed, this project demonstrates that renewable energy can be seamlessly integrated into historic buildings without compromising their architectural value. As a Cultural Heritage Site (BIC), the Teatro Real required a balance between technological innovation and heritage preservation, which has been key to the success of this installation.

The energy generated reaches **229 MWh per year**, significantly **improving the building's energy efficiency** and upgrading its certification from category D to A. Additionally, the Teatro Real has become **the first Cultural Heritage Site to receive the Energy Savings Certificate (CAE)** from the Ministry for Ecological Transition and Demographic Challenge, reinforcing its commitment to sustainability.

The modular design of the installation **respects the theater's** original architecture, ensuring the seamless integration of photovoltaic glass without altering its aesthetics. This project, carried out in collaboration with CÓDEC Obras, Servicios y Proyectos S.L., IDAE, the Madrid City Council, and the Ministry of Culture, strengthens the Teatro Real's leadership in adapting historical heritage to the energy needs of the 21st century.





TECHNICAL DATA

Nominal Power (Wp/m²) Visible Light Transmittance (VLT) Solar Factor (g-value) U value (W/m²K) U value (Btu/h ft² °F)



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MADRID

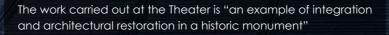
MINISTERIO

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E.



General Directorate of Fine Arts



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TEATRO REAL

MADRID, SPAIN

WALKABLE PV FLOOR

CRYSTALLINE SILICON TECHNOLOGY



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