



Shining a Light on the Future in Rome

Solar Utility Completes Installation of World's Largest Energy-Efficient Single Reflective Rooftop on Italian Shopping Center



THE PAST MEETS THE FUTURE

Rome is known for wonderful wine and cuisine, great shopping, and ancient cultures and architecture. So it might be a little hard to fathom that the world's largest installation of a Solyndra solar paneled roof is just outside the heart of this historic and beautiful European city.

It's on top of the Domus Shopping Centre, a commercial building located at Centro Commerciale in Rome. As partners in the project, SunEdison chose Solyndra, a manufacturer of cylindrical photovoltaic (PV) systems

for large commercial rooftops and UniCredit Leasing, an international financial institution based in Italy.

The 1.4MW system is located in the popular "Romanina" area of Rome, on the ring road for the Rome-Naples motorway, close to La Romanina Shopping Centre. The plaza includes supermarket space, as well as six medium/large retail units ranging from 1,000 to 6,000 square meters, 50 small retail units, and a food court and a pizzeria/restaurant.

OVERVIEW

SOLUTION AT A GLANCE

- 7,920 panels installed on single rooftop
- 40,000 square meters covered
- 1.441 MWp, enough to power 500 homes for one year
- 1,924,766 AC kWh projected energy production in the first year

SOLYNDRA PARTNERS

- SunEdison

BUSINESS VALUE SUMMARY

- Non-penetrating mounting
- Limited recourse financing

“This significant installation is a great example of the simplicity of rooftop distributed electricity and places a powerful, clean rooftop power plant in of Rome.”

— Clemens Jargon, Solyndra’s president, EMEA and corporate senior vice president

WORLD’S LARGEST SOLYNDRA INSTALLATION

The rooftop area of the Domus shopping plaza project is 40,000 square meters and now hosts nearly 8,000 Solyndra solar panels, making it the world’s largest Solyndra solar installation on a single rooftop.

“For an installation of this size on a single rooftop, Solyndra offered strong advantages with its lightweight design and ability to be installed in any orientation,” said SunEdison. “We were able to complete this project in just a few weeks because of the ease of installing Solyndra, many times faster than we would have been able to do the project with traditional flat solar panels.”

Solyndra’s cylindrical system is designed to optimize PV performance on rooftops with a flat or low angle, such as the Domus Shopping Centre. The patented Solyndra solar modules are manufactured using thin-film technology and cylindrical copper indium germanium diselenide (CIGS) modules, which are lightweight tubes that catch solar radiation across their entire surface. This patented design allows for maximum, cost-effective capture of sunlight across a 360-degree photovoltaic surface capable of

converting direct, diffuse and reflected sunlight into electricity.

Collecting sunlight in a 360-degree manner enables efficient acquisition of more light earlier and later in the day. Consistent power generation during the day allows for the use of a smaller inverter, which reduces costs and improves energy yield over time. This system offers two major advantages:

1. The diurnal cycle of the sun is optimally exploited.
2. Radiation reflected back from the surface of the roof is also converted into electrical power.

SunEdison worked side-by-side with Solyndra on this installation. It installed a new white reflective roof, increasing the building’s cooling efficiency and bouncing the sun’s rays back at the Solyndra cylinders above it to increase the overall energy yield.

FEEDING THE FRENZY OF SOLAR ENERGY

There is more development to come. Italy is the world’s fourth largest producer of photovoltaic-derived power in the world today.¹ With thousands of new installations every year, the country is in the midst of a

renewable energy surge that’s likely to continue over the next several years.

Because high levels of sunshine reach much of Italy’s land surface, the Italian government has made solar energy technologies a top priority. According to one European Union study, Italy funds one quarter of all photovoltaic (PV) research in the EU.

In 2009, Italy installed 720 megawatts, outpacing the entire U.S. In 2010, it was on track to surpass the U.S. in total installed PV capacity, moving towards 2,500 MW.

The country’s appetite for solar energy is being further fueled by generous Feed-in Tariffs (FITs) established by the Italian government in 2007. FITs encourage investment in solar energy development by providing renewable power producers with a lucrative, long-term guarantee that the government will purchase solar power that producers generate.

FUNDING THE ENERGY FUTURE

FITs also encourage financial institutions, such as UniCredit Leasing, headquartered in Milan, to fund this type of project.

“We were able to complete this project in just a few weeks because of the ease of installing Solyndra, many times faster than we would have been able to do the project with traditional, attached flat panels.”

SunEdison

Says Marco Martorana, Energy Product Specialist at UniCredit Leasing:

“SunEdison worked with Solyndra and Pradera to create a project with compelling economics and ‘bankability.’ We were able to arrange non-recourse financing for it in a short amount of time.”

places a powerful, clean rooftop power plant in the middle of Rome.”

1. <http://www.pvresources.com/en/top50pv.php>

This is just one sign that a broad change that is underway. “Italy’s government has wisely realized the importance of renewable energy to its future and through smart policy is creating an exciting new photovoltaic market,” said Clemens Jargon, Solyndra’s president, EMEA and corporate senior vice president. “This significant installation is a great example of the simplicity of rooftop distributed electricity and

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