

Med *Clean* *Propre* *Limpio*



No. 150

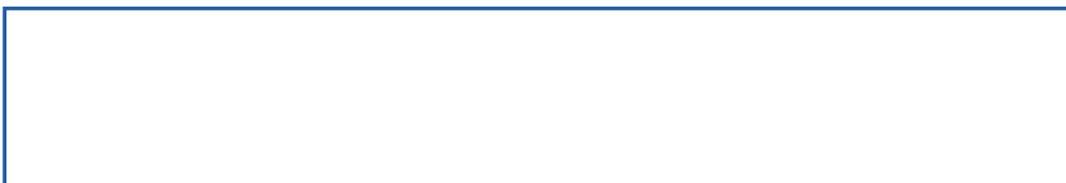
Pollution Prevention Case Studies

Energy Savings through Solar Captors: 100 Solar Hotels Project

Company	Accor Group
Industrial sector	Short term accommodation activities ISIC Rev. 4 no. 5510 (International Standard Industrial Classification of All Economic Activities)
Environmental considerations	Energy consumption is one of the main environmental impacts of the hotel sector. As part of its commitment to supporting renewable energies, Accor is carrying out a project called “100 Solar Hotels”. The goal is to equip about a hundred hotels with solar panels, most of them from the Etap Hotel and hotelF1 groups. The infrastructures are being installed in France in partnership with the ADEME (French Environment and Energy Management Agency).
Background	The Accor Group is the world’s leading hotel operator and market leader in Europe, operating in 90 countries with 145,000 employees and offering more than 500,000 rooms in more than 4,100 hotels. The Accor Group offers its clients and partners nearly 45 years of know-how and expertise.
Summary of actions	<p>The solar captors are used to produce hot domestic water, covering on average 40-60% of that needed each year. The principle of solar thermal energy is simple, but its application requires tailored technical solutions (materials chosen, regulation systems and circulation pump resistance). Accor set up an efficient collaboration with CLIPSOL, the company that will monitor the entire installation process. The collaboration will allow the following aspects of the project to progress quickly:</p> <ul style="list-style-type: none"> • Maintenance: finding a solution to avoid overheating during the summer. • Efficiency: warming the hotel’s closed-loop hot water system through solar energy. • Economy: cutting costs with pre-made structures for the panels. • Organisation: keeping things simple by being Accor’s single contact. <p>To raise awareness among the hotel guests, they are kept informed on how much solar energy is produced overall.</p>

<p>Photos</p>	
<p>Balances</p>	<div style="border: 1px solid black; background-color: #f08080; padding: 5px;">INVESTMENT</div> <p>The call for tenders helped reduce investment costs. However, this reduction is limited by the scattered location of the hotels, their architectural differences (roofs, space organisation, etc.) and the time needed to install the system. Hence, the price per m² varies depending on the hotel in question. On average, it is estimated to be around €800/m². In this case, the project is co-financed by the government, through ADEME. They have funded about 50% of the total investment since 2009.</p> <div style="border: 1px solid black; background-color: #90ee90; padding: 5px;">SAVINGS</div> <p>They vary depending on the amount of sun. In Lyon, for instance, productivity is about 570 kWh/m²/year, which makes for annual savings of €28/m².</p> <div style="border: 1px solid black; background-color: #4682b4; padding: 5px;">RETURN ON INVESTMENT</div> <p>Again, it depends on the amount of sun. On average, the return-on-investment period is between 10 and 15 years.</p>
<p>Conclusions</p>	<p>The implementation cost of solar energy is not low, but in many cases subsidies from regional or international organisations can be attained. In this case, Accor Group has established a partnership with ADEME to contribute to reducing the overall cost. Return on investment is far from immediate, but with the increasing price of energy from traditional fuels, solar energy is already a profitable investment.</p>

NOTE: This case study seeks only to illustrate a pollution prevention example and should not be taken as a general recommendation.



Regional Activity Centre
for Cleaner Production

Dr. Roux, 80
08017 Barcelona (Spain)
Tel. (+34) 93 553 87 90
Fax. (+34) 93 553 87 95
e-mail: cleanpro@cprac.org
<http://www.cprac.org>