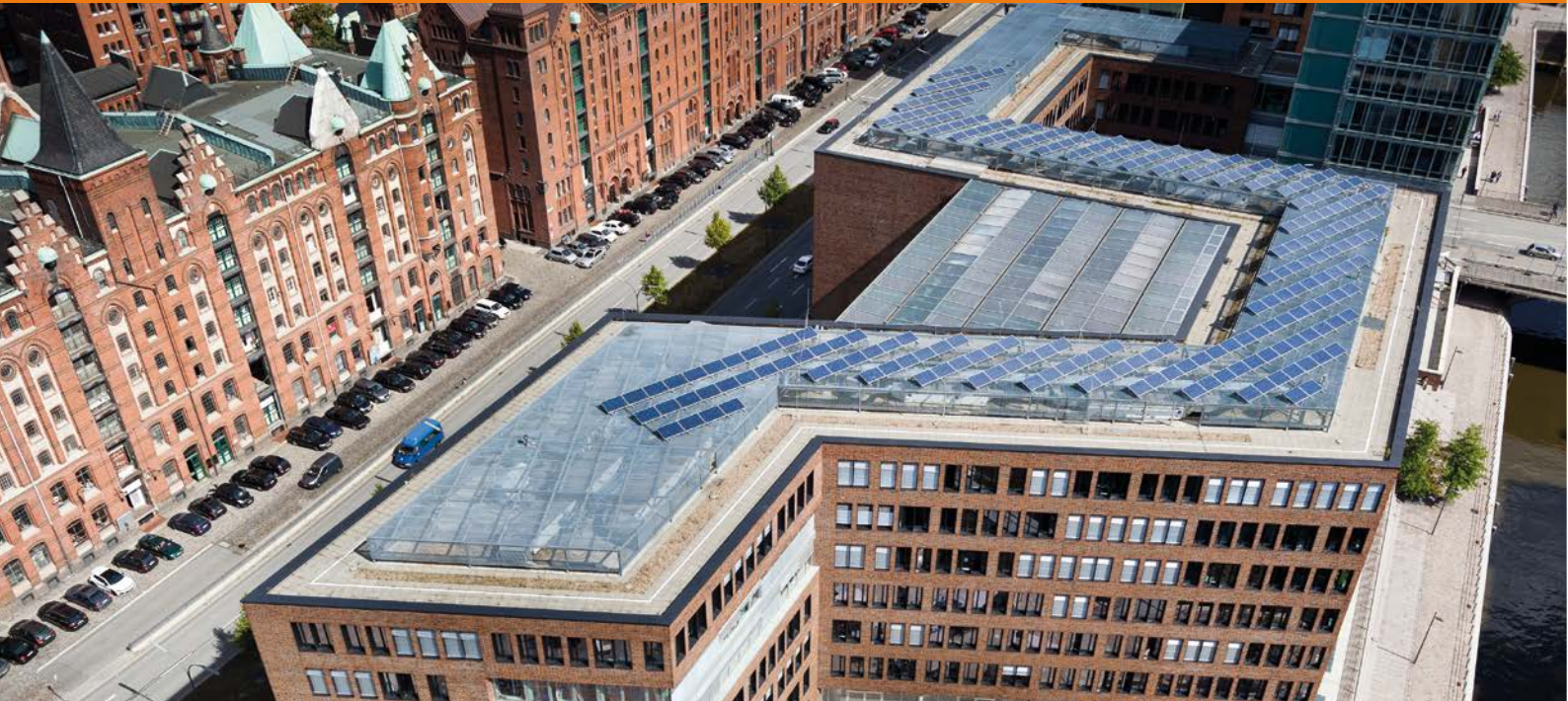


Combining Solar Energy and Cooling Storage: Save Money!

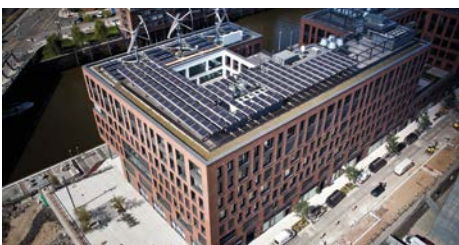




German Company based in Hamburg, provider of photovoltaic solutions with more than 13 years of experience in the field.

SunEnergy has developed, planned and installed more than 260 MWp of photovoltaic plants internationally.

Thanks to their experts team in the photovoltaic industry, SunEnergy offers a wide spectrum of services, bringing tailor made solutions to satisfy their clients' necessities.





Mexican company founded in 1985, with 30 years' experience in the optimization of sustainable air conditioning and refrigeration systems.

Dyresa possesses its own patented systems, such as the ice storage system IS.

Best quality is achieved by applying high-end software technology for the design and control of your air-conditioning system, as well as highest quality equipment.



SunEnergy + Dyresa = Synergy

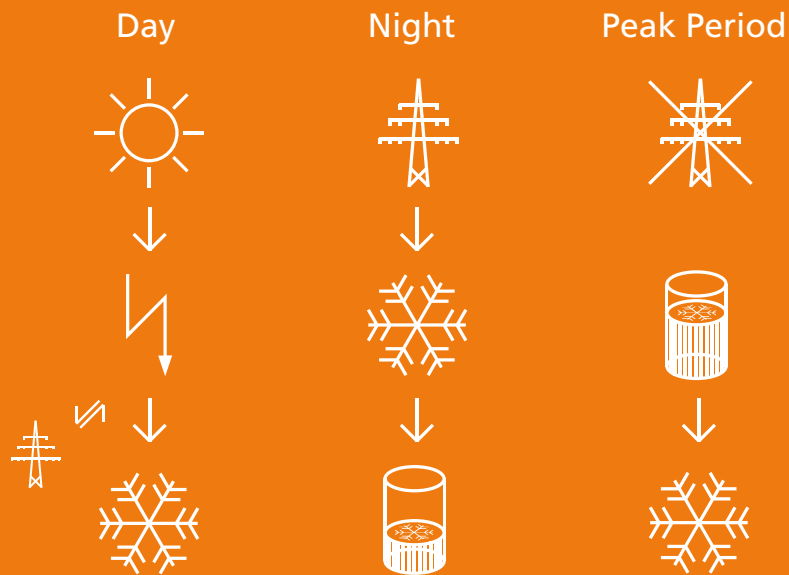


Air conditioning systems are important electricity consumers within commercial buildings.

The current scenario with increasing electricity prices and environmental degradation has led Dyresa and SunEnergy to develop an integral solution to reduce the electricity consumption of commercial-size air conditioning units to a minimum.

Applying broad experience and our knowledge in the fields of demand management and photovoltaic generators, both companies offer integral solutions for all clients that require cooling and who are looking for a state-of-the-art, sustainable and economically attractive solution.





During the day, the photovoltaic generator transforms the sunlight into electricity.

The generated electricity is simultaneously consumed by the cooling equipment.

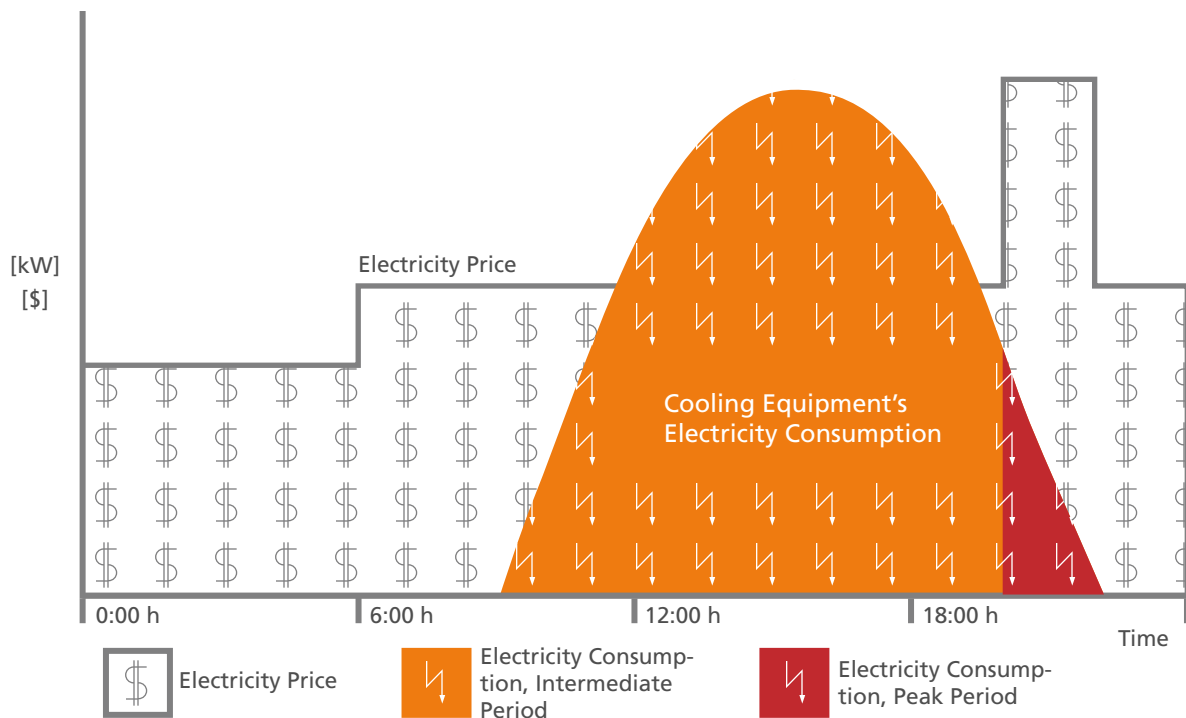
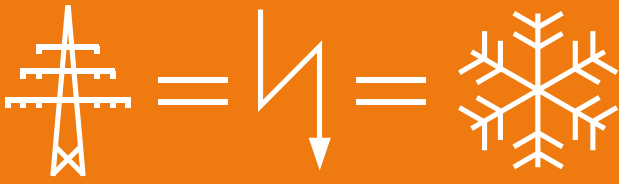
The “surplus” generated energy is injected into the electric grid to be consumed at times when there is no on-site generation (NetMetering).

During night time, the cooling system generates cold which is stored in the storage tanks IS.

During the peak period, when electricity price is at its highest, the cooling equipment can be turned off and the required cooling is provided by the stored ice.



Descriptive Illustration – Conventional AC

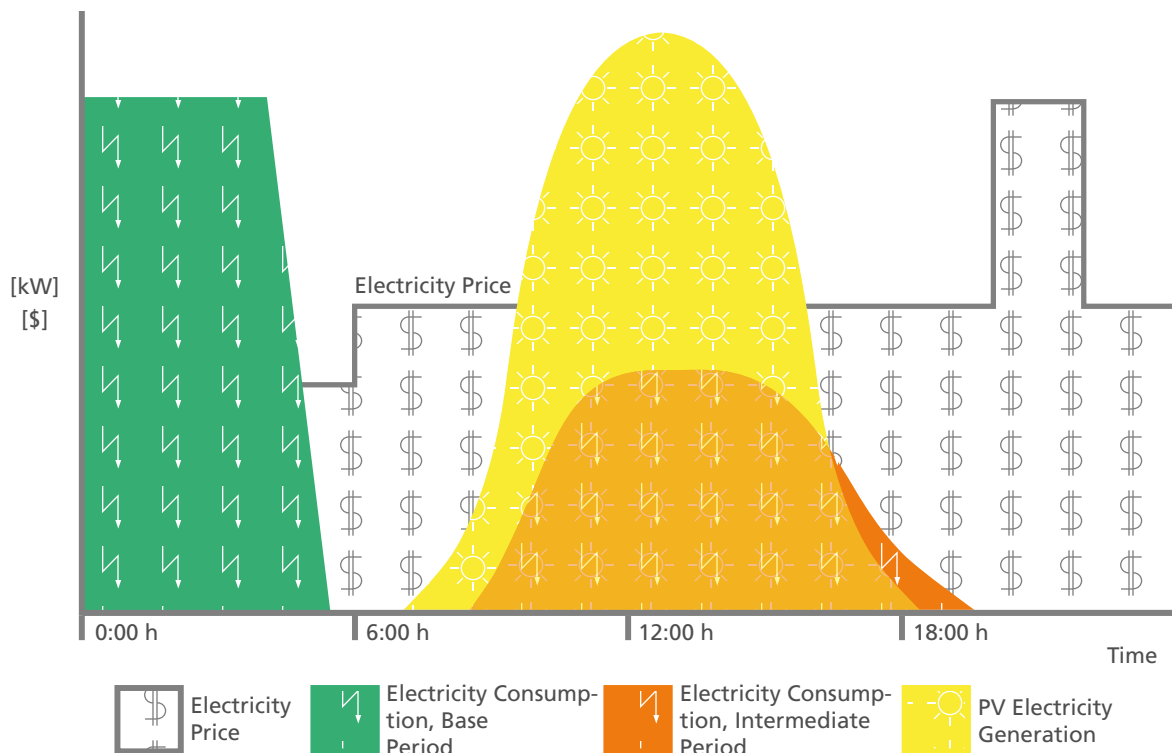
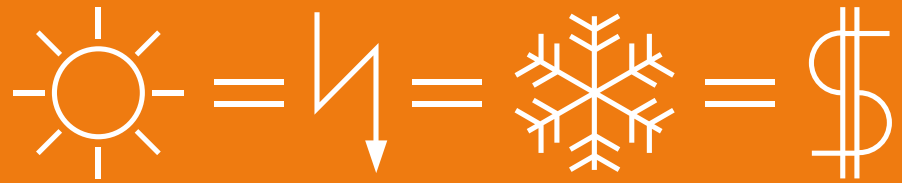


High electricity consumption during intermediate and peak periods leads to high electricity consumption costs.

Consumption during peak period leads simultaneously to higher Billable Demand values.

Electricity consumption during peak periods is generated with peaking power plants, leading to higher environmental damage.

Descriptive Illustration – Integral Solution



Maximize savings on electricity expenses by reducing the expenses in consumption AND billable demand.

No consumption during peak periods, achieved by demand shifting.

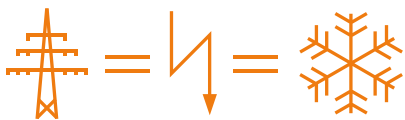
Reduction of energy consumption.

Reduction of electricity expenses by producing your own energy on-site.

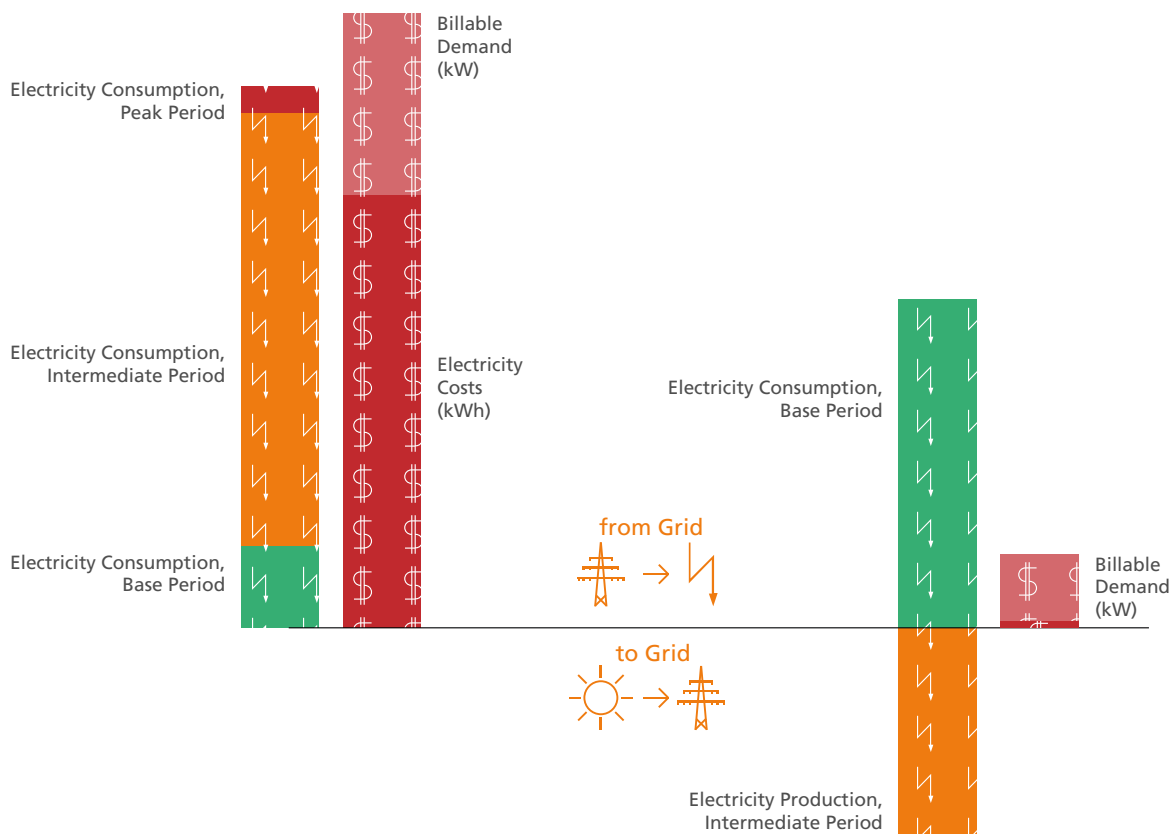
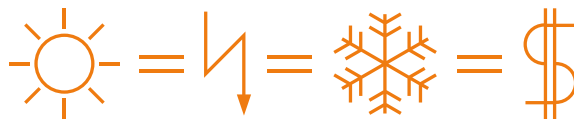
Increase of planning security by stabilizing your electricity expenses for the next 25 years.

Integral Solution vs. Conventional AC - Yearly Comparisson

Conventional AC



Integral Solution

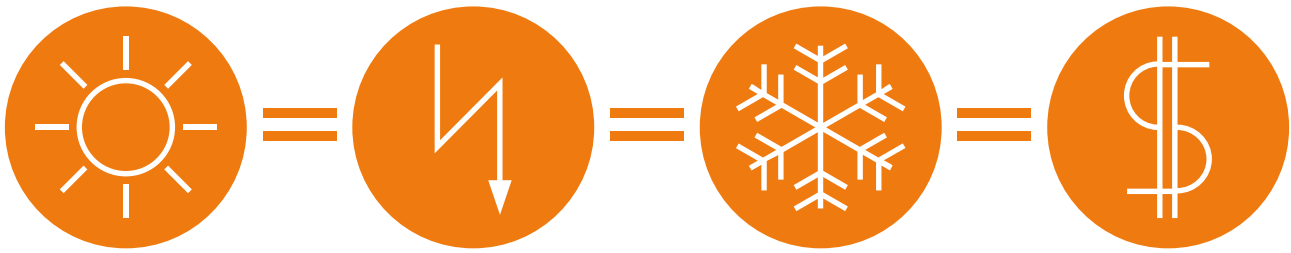


Electricity consumption in the intermediate and peak periods considerably reduced by the Photovoltaic Cooling Solution.

The effects of the Photovoltaic Cooling Solution lead to reduced expenses in electricity consumption and in billable demand.

High savings achieved from the start.

Integral Solution vs. Conventional AC



Original Scenario

Shopping mall, electricity consumption of conventional air conditioning system > 860,774 kWh/year

CFE electric tariff: HM – Mexico City

Annual electricity expenses: \$ 107,302.00 USD

Example project

Photovoltaic generator: 549 kWp

Ice storage system IS: 2,000 ton-Hrs

Access to a German credit through SunEnergy

<5^{years}
Payback
Period

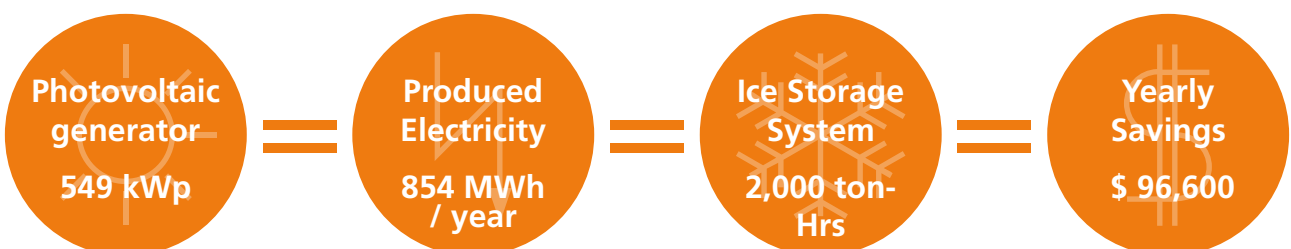
90%
Savings in
Electricity
costs!

28%
IRR

Yearly savings achieved

- + \$ 18,000 USD - Billable Demand
- + \$ 78,600 USD - Electricity Consumption

- = \$ 96,600 USD - Total savings = 90%





68 kWp Elbarcaden in Hamburg, Germany

- Self-consumption plant design for the new Greenpeace building in Hamburg's Hafencity
- 40 kWp mounted on a tailor-made steel structure
- Special construction of concrete foundations to withstand high wind loads



125 kWp in Hamburg, Germany

- In cooperation with green energy supplier „Hamburg Energie
- Aerodynamic mounting system
- Solar energy for 80 households in Hamburg



305 kWp in Sardinia, Italy

- Previous dismantling of asbestos roof covering required
- Restructuration of stables including installation of new roof cover
- Works performed without interrupting farm work activities





Becerril Office Building, Mexico City

- First installation of IS tanks in Mexico, realized in 1990
- Installation of four IS tanks with storage capacity of 190 ton Hrs. each



Corporate Offices Arcos Bosques, Mexico City

- Installation of 12 IS tanks with storage capacity of 190 ton Hrs. each



Ampliación Centro Comercial Santa Fe, Mexico City

- Installation of 24 IS tanks, finished in 2013



Contact



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