

# Procurement of energy-efficient equipment to improve competitiveness in El Salvador



## Quick facts



Type of procurement:  
**energy-efficient equipment**



Year of inception: **2015**



Type of business: **Hotel**



Organisation name: **Novo Hotel & Suite**



Number of staff: **30**



Country/region: **El Salvador**



Procurement value: **72,500 USD**

## Background information

Novo Hotel & Suite is located in the heart of the capital San Salvador city, in the vicinity of most business centres of El Salvador. The business community makes up the majority of guests at Novo Hotel & Suite.

As there is a large variety of hotels in the city centre, **innovation and cost-efficiency are the two main levers to remain competitive in the local market.**

## The challenge

Electricity consumption represents a significant part of the expenses of hotels. In tropical countries such as El Salvador, air conditioning equipment can represent up to 70% of the entire electricity consumption of a hotel. As El Salvador is not an oil producing country, energy costs tend to be volatile, which may increase the average price per kWh at certain periods of the year, affecting the profitability of businesses such as hotels.

**The use of energy-efficient air conditioning technologies and infrastructure improvements can enable significant cost savings and improve productivity of hotel services by reducing the hotel's dependency on energy costs.**

## The strategy

In collaboration with the National Cleaner Production Centre of El Salvador<sup>1</sup> (NCPC El Salvador), Novo Hotel & Suite launched its energy efficiency project in 2015 to strengthen its management of energy resources. Technical assistance was supported financially by the Inter-American Investment Corporation<sup>2</sup>, in the framework of its GREENPYME programme<sup>3</sup> in the Central American region, whose goals are to help small and medium-sized enterprises improve energy efficiency, encourage them to use energy sources that are low in carbon emissions, and offer the tools necessary to implement energy-saving measures.

The project kicked off with **an energy audit** to measure all of the equipment at Novo Hotel & Suite, analyse the multiple sources of energy, and quantify the potential energy savings.

The feasibility of installing new equipment was evaluated through technical, economic and environmental indicators, including: economic savings, investment costs, electric and thermal savings, CO<sub>2</sub> emissions, Return on investment (ROI), Internal Rate of Return (IRR) and Net Present Value (NPV).

<sup>1</sup> More information is available at: <http://cnpml.org.sv/>

<sup>2</sup> More information is available at: <https://www.iic.org/en>

<sup>3</sup> More information is available at: <https://www.iic.org/en/greenpyme/program#.XHQ344hKiUk>

Following the energy audit, Novo Hotel & Suite decided to:

- ➡ Replace 40W T12 type luminaires with 18 W LED technology in its two large meeting halls;
- ➡ Replace window type air conditioners (945 W) with high efficiency mini split technology (600 W) in bedrooms;
- ➡ Replace air conditioners for multi-use rooms (installed capacity 10.3 kW) with more efficient technology (installed capacity 6.7 kW)
- ➡ Replace its laundry equipment (installed capacity 4.66 kW and 208 Litres of water per cycle) with high efficiency equipment (installed capacity 2.45 kW and 75 Litres of water per cycle);
- ➡ Minimize thermal load on roofs by replacing and isolating them.

## Impacts

	Base year (2015)	2016	2017
(KWh/year)	167,738	135,021	132,041
Production (guest night-staying/year)	11,924	11,421	12,037
Environmental Indicator (KWh/guest night-staying)	14.07	11.82	10.97
(Ton CO <sub>2</sub> /year) for electric energy	115.84	93.25	91.19
Total investment (USD\$)		72,534.97	
% of reduction of Environmental Indicator with regard to base year		15.99%	22.03%
Savings in KWh/year		32,742	35,692
Environmental Benefit (Ton CO <sub>2</sub> /year)		22.61	24.65
Economic Benefit (US\$/year)		\$6,220.94	\$6,781.50

*"The energy audit allowed us to take stock of where we stand and learn how to improve to further our contribution to protecting the environment and reducing CO<sub>2</sub> emissions and it enabled us to more efficiently produce and save resources."*

- Carmen García Prieto, Chief Executive, Novo Hotel & Suite



### Lessons learned

- ✓ To strengthen the engagement of the suppliers of electrical appliances, it is critical to include, in the supplier contract, specifications setting quality expectations with regards to the delivery, installation and maintenance of the new equipment as well as provisions detailing the projected energy savings.



Installation of new air conditioners in Novo Hotel & Suite

For further information



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