



INTERNATIONAL WORKSHOP ADVANCES IN CLEANER PRODUCTION

"KEY ELEMENTS FOR A SUSTAINABLE WORLD: ENERGY, WATER AND CLIMATE CHANGE"

Cleaner Production Applied to the Hotel Sector

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Abstract

This paper presents the results of the Bajío Cleaner Production Center (Bajío CP Center) in its project conducted jointly with the Tourism Development Secretariat (SEDETUR) and the Guanajuato's Environmental Protection Office (PROPAEG). The project called "Cleaner Production - Clean Company" focused on the hotel sector in the major cities of the state of Guanajuato. The objective of this project was to detect the potential savings in the use of raw materials, water and energy, and also contribute to a productive efficiency and reduction of operating costs of companies in this sector. In addition to the economic and environmental benefits achieved by the Cleaner Production (CP) and Energy Efficiency (EE) Implementation, PROPAEG joined efforts to design guidelines based on terms of reference for conducting environmental audits in the state of Guanajuato, to complement the Cleaner Production Diagnosis and Implementations. Therefore, under this scheme all the hotels that make a Cleaner Production project can get the "Clean Company" Certificate issued by PROPAEG, so in a single project the hotel can get environmental regulatory compliance, financial savings, improves public image, increases competitiveness, minimizes negative environmental impacts and the efficient use of raw materials, water and energy.

So far, 34 hotels in the cities of León, Irapuato, Guanajuato, Silao and San Miguel de Allende have participated in this project. Some of the results obtained are: awareness and training to over 100 employees from the participating hotels, in terms of productive efficiency, pollution control and pollution prevention. The detection of areas of opportunity in CP and EE in 34 hotels can lead to an estimated savings potential of \$3 million of Mexican pesos (around 250,000 USD). The implementation of CP and EE at four different hotels is being translated in a decrease in water consumption of 52,987 m³/year, a decrease in polyethylene bag of 1740 kg/year, a decrease of 1,532 l/year of liquid chemicals and 2,065 kg/year of solid wastes. In regard to energy, there will be a decrease in diesel consumption of 5,790 l/year, a decrease in the consumption of LP gas of 47,374 l/year and a reduction in electricity consumption of 20,308 kWh; all this translated also in a decrease in CO₂ emissions to the atmosphere of about 135 ton/year. The economic benefits are savings for \$ 1,191,300 pesos/year, with a required investment of about \$ 218,592 pesos, which has a simple recovery rate of 2 months. Also, 3 hotels obtained the "Clean Company" certificate with a total compliance with environmental laws of the state of Guanajuato.

Keywords: Cleaner Production, Guanajuato, Hotels.
