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RECP Experiences at Howard Johnson Grand Plaza Hotel

The efficient and environmentally sound use of materials, energy and water - coupled with the minimization of waste and emissions - makes good business sense. Resource Efficient and Cleaner Production (RECP) is a way to achieve this in a holistic and systematic manner. RECP covers the application of preventive management strategies that increase the productive use of natural resources, minimize generation of waste and emissions, and foster safe and responsible production. Benefits are eminent in many enterprises, regardless of sector, location or size, as demonstrated by the experiences of Howard Johnson Hotel, in Bucharest, Romania.

Achievements at a Glance

During the CP assessment 48 CP options and 15 CSR options have been identified, analyzed and presented to the hotel management. The evaluation of CP options revealed good opportunities for cost cut, in particular with energy and water, and important environmental benefits, and this perspective convinced the management to proceed to the implementation of 35 options out of 48. The total environmental benefits achieved through implementation of CP options are: 557 MWh/year in energy savings; 3992 m3 /year in water savings; 314 m3/year of waste diverted from landfill and overall financial benefits of 42 000 USD/year.

Overview

The Cleaner Production In-Plant Assessment in **Howard Johnson Grand Plaza Hotel** was a demonstration project carried on by the Centre for Sustainable Production and Consumption in Bucharest, Romania, during the implementation of the **"Program for the sustainable development of enterprises in Romania with focus on enhancing national expertise in Cleaner Production and Corporate Social Responsibility methodologies in particular for the tourism industry";** the Program was financed by State Secretary for Economic Affairs (SECO) in cooperation with the United Nations Industrial Development Organization (UNIDO) and based on the Agreement signed with the Romanian Ministry of Tourism.

The assessment was one of the fifteen projects carried on in Romanian tourism sector, that served the purpose of demonstrating how Cleaner Production (CP) and corporate social responsibility (CSR) can be implemented in hotels, and furthermore, to provide opportunities for hands-on training in CP and CSR of the tourism industry personnel.

Howard Johnson Grand Plaza Hotel is a five stars hotel located in the very heart of Bucharest city center. The hotel features 285 rooms and suites, 7 conference rooms, fitness club, and 2 restaurants (260 places), Bar Centro (60 places), 2 Multi-functional Ballrooms (500 places). The main activities of the hotel are accommodation, in particular of business travelers, restaurant and gastronomy and organization of business and private events. The hotel was built in 1973 and modernized between 1999 and 2004, when the entire concrete structure was consolidated and the façade modified, all functional systems were replaced and interiors were re-designed and furnished.
The hotel decided to join the project due to the need for improving energy and water consumption, and being also very interested in social responsibilities aspects, in particular their relation with clients and stakeholders and how to motivate their employees and keep them satisfied with their work.

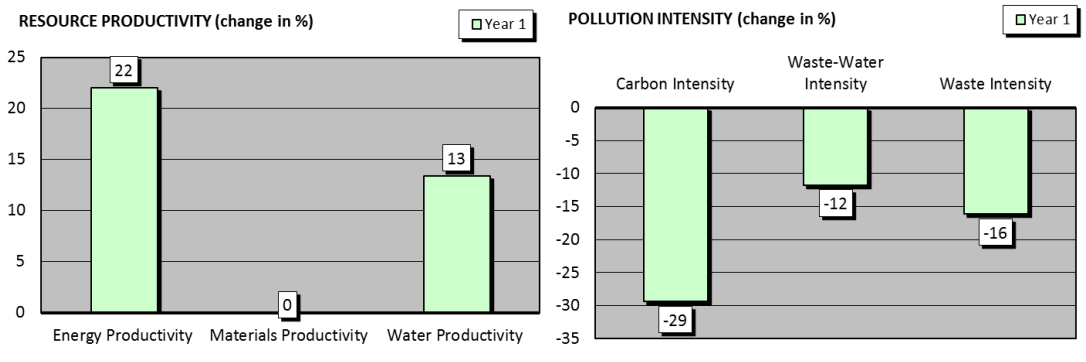
Benefits

The hotel had economic benefit out of CP and CSR options implementation, they succeed to reduce direct cost with resources, in particular energy. Indirect savings from reduced maintenance, less auxiliary materials, reduced functioning of motors, reduced waste and increased the total benefit and helped them to effectively cut costs by about 18 to 20%. For example besides the quantified benefits, the company could profit of less visible benefits such as the reduction in heat emissions from spots light bulbs, a situation that led to the decreased need for cooling of the public spaces during the summer, longer life of the LED lights. Installing variable speed drivers at the ventilation system' fan motors had as indirect benefit the reduced utilization of motors, less heat and less maintenance needs, auxiliary materials, waste, etc.

Absolute Indicator	Change (%) Year 1	Change (%) Year 2	Relative Indicator	Change (%) Year 1
Resource Use			**Resource Productivity**	
Energy Use	18 483 360.00	15 125 050.08	Energy Productivity	-18.17
Materials Use	0.00	0.00	Materials Productivity	0.00
Water Use	33 470.00	29 478.00	Water Productivity	-11.23
Pollution Generated			**Pollution Intensity**	
Air emissions (global warming, CO_2 equivalent)	10 350.68	8 470.03	Carbon Intensity	-18.17
Waste-water	33 100.00	29 170.00	Waste-water Intensity	-11.78
Waste	2 093.00	1 752.00	Waste Intensity	-16.29
Production Output	60100	60000		

The absolute indicators provide a measurement of how much resource use/pollution output has changed in absolute terms e.g. units of energy used or tons of waste generated. A negative percentage indicates a decrease and a positive percentage indicates an increase. The relative indicators provide a measurement of changes in resource use/pollution in relation to production output. Resource productivity provides a measurement of how much product output can be produced per unit of resource use, from a sustainability perspective, productivity should increase. Pollution intensity provides a measurement of how much pollution is generated per unit of production output, from a sustainability perspective, intensity should decrease.

RECP Profile



Resource Efficient and Cleaner Production (RECP)

Resource Efficient and CLeaner Production (RECP) entails the continuous application of preventive environmental strategies to processes, products and services to increase efficiency and reduce risks to humans and the environment.

RECP addresses three sustainability dimensions individually and synergistically:
- *Production efficiency*
  > Through improved productive use of natural resources by enterprises

- *Environmental management*
  > Through minimization of the impact on nature by enterprises

Human development
  > Through reduction of risks to people and communities from enterprises and supporting their development

Success Areas

The hotel focused in particular on the implementation of energy efficiency opportunities as these types of options offered rapid and tangible economic benefits. Some investments were required in order to achieve these benefits, amongst them the investment required by the replacement of the spot lights with LED was the most important one.

Principal Options Implemented	Benefits			
	Economic		Resource Use	Pollution generated
	Investment [USD]	Cost Saving [USD/yr]	Reductions in energy use, water use and/or materials use (per annum)	Reductions in waste water, air emissions and/or waste generation (per annum)
Install variable speed drives on the fan of air ventilation system	2 116	1635	24 032 kWh	15,6 ton CO2
Insulate the hot water tanks and pipes for energy saving, to reduce gas consumption	1096	2057	81 910 kWh	53 ton CO2
Replace ambient spotlight bulbs with LED type bulbs in all areas of the building	36 282	10 282	151 009 kWh	98 ton CO2

Approach taken

The main problem was the high amount of electricity and gas consumed by hotel facilities and operations. The top management was very much concerned about energy consumption and was interested to make progresses towards minimizing the amount of energy used in all relevant areas, processes and activities.
The monthly monitoring of energy consumption in different areas of the hotel revealed high consumption of electricity of the ventilation system, cooling and heating, lighting of public areas and kitchen's equipment. The hotels' resource use performance was compared based on the calculated key performance indicators (energy and water per weighted number of guest) with best performances from European hotels located in temperate climates. The management was surprised to find out that the electricity and water consumption was two times higher than same consumptions in European hotels and this situation raised a big question mark and motivated them to act towards improvement of the resources use.

Business case

In this particular case, the hotel was focused mainly on energy efficiency and favored implementation of energy efficient options. An energy-efficiency program can save between 10% and 30% of those energy costs within three years. Indirect savings from reduced maintenance, materials, waste and risk increase the benefits, combining to effectively cut direct energy costs consistently. By reducing dependence on energy, the energy cost was less reflected in the total business cost and businesses was able to better plan their resources and investments.

More opportunities related to the way energy and water were used for cooling and heating were postponed at the time because of restricted investment budget, but considered on long term. What is important however is the changing in the mindset of the company staff and management and their engagement towards embedment of RECP in their day to day operations, as part of the their continuous improvement process.

Testimony
National Centre for Sustainable Production and Consumption in particular
Performing the cleaner production assessment in a big hotel like Howard Johnson was a challenging mission, in particular because of the hotel standard requirements and in the same time limitations. At the first glance the impression as that hotel is aware of social responsibility issues and resources are used in an efficient manner, however, digging deeper into their processes and operations revealed numerous improvement opportunities.
The management of Howard Johnson Hotel
"The Howard Johnson Grand Plaza management team considers that the UNIDO project has brought valuable insight on both Clean Production and Corporate Social Responsibility issues. *It has been a useful experience to analyse our operations and policies through the new CP and CSR lenses imparted by the UNIDO consultants. We have seen interesting ideas arise from these discussions regarding the improvement of business, production and staff policies and we are committed to implement the advised measures to the best degree possible.* *Overall, the workshops proved to be a valuable exercise into corporate responsibility and sustainability"* *Sonia Nastate , Hotel Manager*
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ABOUT *RECP EXPERIENCES*

Through the joint Resource Efficient and Cleaner Production (RECP) Programme, the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Programme (UNEP) cooperate to improve the resource productivity and environmental performance of businesses and other organizations in developing and transition countries. The Programme is implemented in partnership with the Global Network for Resource Efficient and Cleaner Production (RECP*net*). This series of enterprise success stories documents the resource productivity, environmental and other benefits achieved by enterprises in developing and transition countries through the implementation of RECP methods and practices.

These successes were achieved with the assistance of the National Cleaner Production Centres, which are part of RECP*net* established with support of the UNIDO and UNEP. The success stories employ the indicator set described in *Enterprise Level Indicators for Resource Productivity and Pollution Intensity*, UNIDO/UNEP, 2010. The primer with accompanying calculator tool and further case studies are available at www.recpnet.org, as well as on www.unido.org/cp.