GP: Energy and resource efficiency in hotel industry

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The Cohesion Region Western Slovenia (KRZS) is one of the 281 European regions at the NUTS-2 level and brings together four Slovenian development regions: Central Slovenia, Gorenjska, Goriška and Obalno-Kraška.

It is characterized by great diversity in a small area, notably high landscape diversity and biodiversity. It is one of the greenest European regions with one of the highest proportions of forest cover, protected areas and abundant water resources.

Tourism represents approximately 12 % of GDP in the KRZS.
Committed to the principles of social responsibility and sustainable development and the transition to a low carbon society, we would like to see the Cohesion Region of Western Slovenia as:

(i) a region of high quality of life and residence for all residents and visitors,

(ii) an innovative and creative region with a competitive economy, and

(iii) an associated region with effective governance.
When building a resort in Bohinj glacial valley and rural region, on the brink of Triglav National Park, it was crucial to take environment into consideration. Constructing an ecological and energy efficient hotel was the best possible option for the area, foretelling future sustainable tourism development not only regionally but in Slovenia overall.
Bohinj ECO Hotel is the first and only Green Globe certified hotel in Slovenia. Having received the highest scores on an audit, it is placed among best of the sustainable hotels in the world.
Detailed information on the practice

**Key people and organizations** (initiator, leader, partners)
Company: MPM Engineering d.o.o., owner Mr. Boštjan Čokl
Facility: Bohinj ECO Hotel & Aquapark Bohinj, General Manager Mr. Anže Čokl,
1st ecological hotel built in 2009, involving European Union funding

**Issues and challenges**
- Implementing most efficient, best available technologies possible
- Marketing a 5* ecological resort (no competition or comparison in SE Europe)
- Facing challenges on account of innovative approaches (e.g. bureaucratic obstacles, larger starting investments)
- Sustainable management including hiring local people (even when uneducated, then investing into their knowledge and expertise)
- Uniting the concept of luxury with environmentally friendly behavior
- Bringing (more) guests to an industrially undeveloped region (facing challenges involving destination management, traffic, regional co-working)

**Methods /steps / tools used**
MPM is an engineering company which specializes in energy-efficient construction. They built an energy efficient hotel from scratch, using top technologies available, even implementing some pilot systems (which require constant surveillance, adaptation, improvement, monitoring). An enthusiastic managerial team took over marketing and leading of the business, setting an example in sustainable management overall (preferring local food suppliers, recycling and separating waste, promoting cultural and historical heritage, launching sustainable incentives and events for seminar groups, etc.).

The LCA methodologies used were life cycle sustainability assessment (LCSA), eco design and life-cycle thinking.
Evidence of success

When a guest sleeps in Bohinj ECO Hotel, over 10-times less CO\textsubscript{2} emissions emerges (data comes from the Slovenian Tourism Board calculation).

The hotel is equipped with LED lighting, which brings enormous energy savings.

<table>
<thead>
<tr>
<th>Construction</th>
<th>Nr. of lights</th>
<th>Type</th>
<th>Power</th>
<th>Energy consumption/ year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bohinj ECO Hotel</td>
<td>100</td>
<td>Power LED</td>
<td>2 W</td>
<td>1.752 kWh</td>
</tr>
<tr>
<td>Comparable hotel</td>
<td>100</td>
<td>Classic/Halogen</td>
<td>50 W</td>
<td>43.800 kWh</td>
</tr>
</tbody>
</table>

It produces electricity (it has its own cogeneration station) and entire heating & cooling is based on heat pumps utilizing water from its very own energy source - 430 m deep energy drilling.

Extra heat produced in the computer and washing rooms as well as laundry facilities is extracted and used for the swimming pool water and sanitary water heating, etc.

The walls and the roof of Bohinj ECO Hotel are very well isolated. Together with additional isolation materials, the whole building also has windows with a factor Ug=0.9. With both of the above, minimal heat losses through the walls occur.

Overall, with an extensive range of sustainable measures, the Bohinj ECO Hotel produces 56 % fewer emissions and results in a carbon footprint 90 % less than a traditional hotel.

As a consistent benchmark, Bohinj ECO Hotel also received Green Globe Certificate, which requires the venue to improve on all areas (water management, energy efficiency, waste management, social responsibility, environmentally friendly practices) up to 5 % each year.
Evidence of success

Since it was built in 2009, the ecological building has been proclaimed as the most frequently awarded hotel.

Among noticeable recognitions from general and professional public are:
- Green role model in tourism (STO, 2009)
- Green Globe certificate (Green Globe Society, 2010)
- Zlati Sejalec (STO, 2010)
- Conventa 2011 Award for innovation in congress activities
- Green Traveler Guides badge (Green Traveler Guides, 2011)
- Good practice in energy saving building (Umanotera, 2011)
- Responsible Tourism Award (Virgin Holidays Sustainable Travel Award, November 2012)
- Traveller’s Choice Award (Tripadvisor, December 2012)
- Certificate of Excellence (TripAdvisor, May 2013 and again in January 2014), etc.

The Bohinj ECO Hotel was also presented in the »A world you like. With a climate you like.« European Commission’s communication campaign on climate action that aimed to show solutions and best practices applied by citizens, businesses and authorities across the European Union; a video clip is available at: http://www.youtube.com/watch?v=JeNfrk8qvF4
Challenges encountered

Lessons learned
The greatest obstacle for innovators in Slovenia is the bureaucracy system, which is a stop sign for foreign investors. It takes a lot of persistence and knowledge to see (even the best and most beautifully constructed) projects through.

Concerning the use of LCA methodologies, a lack of and access to the data is a major obstacle.
Potential for learning or transfer

Energy efficient construction requires a greater initial investment, but the costs are returned within the first few years. This is the most critical success factor for the venue, since it has brought not only lower monthly bills (which enables to invest into new projects and constantly increase service quality), but furthermore worldwide recognition, differentiation on the market and the best possible guests (loyal, nature-loving, health-sports driven, people who share the same values and are interested in local heritage).

A public authority could learn the following from this good practice: This good practice demonstrates a good example how the principles of sustainability and life-cycle methodologies (i.e. life-cycle sustainability assessment, eco design and life-cycle thinking) can be implemented in practice. Therefore, by following this good practice, legislation in the field of construction could be modified in a stepwise manner in terms of requesting from investors to implement a higher extent of green technologies, efficient use and recycling of resources, energy savings etc.
Thank you!

Questions welcome

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