Nearly Zero Energy Hotels
- Pilot cases in France

ENERGIES 2050 – Stéphane POUFFARY, Founder and Honorary President – stephane.pouffary@energies2050.org

11/09/2015, neZEH workshop in CLIMAMED 2015, Juan-les-Pins, France
ENERGIES 2050, together for a sustainable future

Our commitment for a new development model

CONCEIVE AND IMPLEMENT TO TESTIFY OF THE POSSIBILITIES

FEDERATE TO ACT

MUTUALIZE AND SHARE THE KNOWLEDGE TO MULTIPLY THE MEANS OF ACTION

NGO ENERGIES 2050

contact@energies2050.org

www.energies2050.org
ENERGIES 2050: together for a sustainable development

- Implementing **demonstrative and replicable projects**, accompanied with technical studies and research
- Organizing and participating in **workshops, round-tables, conferences**
- Publishing **articles, research and project results**
- Education and training
- Communicating to a wide audience, to **inform, federate, mobilize**
ethiCarbon®: an international carbon solidarity initiative
Presentation plan

1. Nearly Zero Energy Building (nZEB): the French definition
2. Selection process of the pilot hotels in France
3. The specific energy context of the PACA region and Corsica
4. The Hotel BEST WESTERN Ajaccio Amirauté (Ajaccio, Corsica)
5. The Hotel des Gorges du Verdon (Palud-sur-Verdon)
6. Some examples of support mechanisms (on January 2014)
7. Promoting pilot hotels: integrating the nearly Zero Energy approach in the marketing strategy
Nearly Zero Energy Building (nZEB): the French definition

In France, nZEB are called “Bâtiment Basse Consommation” (BBC), an energy performance label that has been established within the French building code (RT2005, RT2012).

For existing buildings, and for the case of hotels (non-residential buildings), the target to be achieved is a reduction of energy consumption by 40% compared to the same building equipped with referenced insulation materials and energetic systems.

The required levels of consumption to have the BBC label are adjusted depending on the geographic zones and altitude.
Selection process of the pilot hotels in France

2 pilot hotels have been selected in France, according to the following process:

- Call for candidates launched beginning of 2014
- Pre-selection of 7 hotels (based on their candidacy, and interviews)
- Implementation of 5 pre-audits to assess the potential of energy savings and use of renewable energy sources, as well as motivation
- Selection of 2 hotels (based on the results of pre-audits):
  - Hotel BEST WESTERN Ajaccio Amirauté (Corsica)
  - Hotel des Gorges du Verdon (Provence-Alpes-Côte d’Azur Region)
The specific energy context of the PACA region and Corsica

Challenges

• 2 Touristic regions: the need to take into account important variations in the energy demand (in the PACA region, the population on the coast is doubled during the summer period!)

• PACA region: a dead end in the energy network

• Corsica: energy issues of an insular situation

Opportunities

An important potential for wind and solar energy
Hotel BEST WESTERN Ajaccio Amirauté (Corsica)
### General information

<table>
<thead>
<tr>
<th>Category</th>
<th>Coastal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Resort</td>
</tr>
<tr>
<td>Beds (no of beds)</td>
<td>129</td>
</tr>
<tr>
<td>Main facilities</td>
<td>Bar-lounge</td>
</tr>
<tr>
<td></td>
<td>Spa</td>
</tr>
<tr>
<td></td>
<td>Swimming pool</td>
</tr>
<tr>
<td>Hotel rating (stars)</td>
<td>4</td>
</tr>
<tr>
<td>Environmental labels</td>
<td>European Ecolabel</td>
</tr>
</tbody>
</table>

### Energy Efficiency targets to be achieved at the neZEH status

<table>
<thead>
<tr>
<th>Estimated energy savings at neZEH status</th>
<th>27 % (compared to previous state)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated share of RES</td>
<td>10 % (at the neZEH status)</td>
</tr>
</tbody>
</table>
Engagement for sustainability

EU Ecolabel
- Energy
- Waste
- Products
- Water consumption

Engaged in a network to promote cycling tourism
Energy audit
Energy audit

Repartition of primary energy by use:

- 17% Heating
- 13% Hot water
- 12% Lighting
- 18% Air conditioning
- 10% Ventilation
- 2.5% Auxiliary
- 2.1% Elevator
- 22% Secondary uses

Important improvements to make mainly on the openings.

Main consumption items:
- Air conditioning
- Heating
- Hot water
Reaching neZEH
Reaching neZEH

Solutions already planned
• Cover for the swimming pool
• Keep replacing lights by LED
• Numerical management system

Solutions proposed
• Outside insulation
• Changing openings
• Solar panels
• Improving ventilation system
<table>
<thead>
<tr>
<th>Energy efficiency measures</th>
<th>Energy use</th>
<th>% Savings</th>
<th>Investment</th>
<th>ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvements on the building</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Installation of double glazed windows PVC performance</td>
<td>Heating/ air</td>
<td>1%</td>
<td>153 000 €</td>
<td>209</td>
</tr>
<tr>
<td>2. Wall insulation in unheated circulations</td>
<td>conditioning</td>
<td>2%</td>
<td>119 303 €</td>
<td>13</td>
</tr>
<tr>
<td>3. Exterior insulation</td>
<td></td>
<td>3%</td>
<td>255 500 €</td>
<td>93</td>
</tr>
<tr>
<td>Improvements on technical equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Setting up a recovery Boostherm on the chiller</td>
<td>Heating/ air</td>
<td>0%</td>
<td>15 000 €</td>
<td>74</td>
</tr>
<tr>
<td>5. Install a double flow VMC</td>
<td>HVAC</td>
<td>12%</td>
<td>80 000 €</td>
<td>14</td>
</tr>
<tr>
<td>6. Install a balancing valve on the heating system and balance the network</td>
<td>HVAC</td>
<td>1%</td>
<td>4 000 €</td>
<td>7</td>
</tr>
<tr>
<td>7. Install a balancing valves on the DHW network and balance the network</td>
<td>HVAC</td>
<td>1%</td>
<td>4 000 €</td>
<td>7</td>
</tr>
<tr>
<td>8. Establishment of a BMT</td>
<td></td>
<td>8%</td>
<td>81 600 €</td>
<td>21</td>
</tr>
<tr>
<td>9. Regulation of indoor units</td>
<td></td>
<td>4%</td>
<td>10 200 €</td>
<td>7</td>
</tr>
<tr>
<td>Renewable energy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Install a solar thermal system for DHW production</td>
<td>RES</td>
<td>6%</td>
<td>80 400 €</td>
<td>14</td>
</tr>
</tbody>
</table>

**TOTAL PRIMARY ENERGY REDUCTION**

<table>
<thead>
<tr>
<th>Energy efficiency measures</th>
<th>Energy use</th>
<th>% Savings</th>
<th>Investment</th>
<th>ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Install a solar thermal system for DHW production</td>
<td>RES</td>
<td>6%</td>
<td>803 003 €</td>
<td>45.9</td>
</tr>
</tbody>
</table>

**TOTAL RES INCREASE**

<table>
<thead>
<tr>
<th>Energy efficiency measures</th>
<th>Energy use</th>
<th>% Savings</th>
<th>Investment</th>
<th>ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Install a solar thermal system for DHW production</td>
<td>RES</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hotel des Gorges du Verdon (Provence-Alpes-Côte d’Azur Region)
# General information

<table>
<thead>
<tr>
<th>Category</th>
<th>Mountain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Spa</td>
</tr>
<tr>
<td>Beds (no of beds)</td>
<td>70</td>
</tr>
<tr>
<td>Main facilities</td>
<td>Restaurant, Spa, Pool area</td>
</tr>
<tr>
<td>Hotel rating (stars)</td>
<td>4</td>
</tr>
<tr>
<td>Environmental labels</td>
<td>European Ecolabel, Ecolabel européen, Clé Verte, Clé Verte restaurant, Hôtel au naturel, Qualité tourisme, Maître-restaurateur, Collège culinaire de France, Bon pour le Climat</td>
</tr>
</tbody>
</table>

**Energy Efficiency targets to be achieved at the neZEH status**

| Estimated energy savings at neZEH status | 35 % (compared to previous state) |
| Estimated share of RES                 | 16 % (at the neZEH status)        |
Pre-audit

Important improvements to be made on heating

Full energy audit planned for October 2015
Some examples of support mechanisms (on January 2014)

Certificates for Energy Savings “White Certificates”
This measure concerns specifically energy suppliers which are obligated by this law to generate energy savings through end users.
CEE certificates are attributed to concrete investments in equipment and energy efficient materials.

Decision-making aids (with financial support)
The National Agency for the Environment and Management of Energy (ADEME) supports, financially and technically, owners and managers who want to implement studies to improve the energy performance of their buildings.
These aids cover the following studies and council tools: Energetic orientation council; Pre-diagnosis (Prédiagnostic); Energy audit (Audit énergétique); Feasability study (Etudes de faisabilité)
Some examples of support mechanisms (on January 2014)

**Eco-energy loan**
The eco-energy loan is managed by BPI France (Banque Publique d’Investissement - Public Investment Bank) and is supported by the Ministry of sustainable development, environment and energy. The eco-energy loan supports micro-companies, very small companies and small or medium companies to implement programmes for improving their energy efficiency. This loan is dedicated for investments made in **lighting, heating and air-conditioning, electric motorisation and refrigeration**.

**Participative loan for Hotel Renovation**
This programme, proposed by BPI France (Public Bank of Investment), aims to support hotel operators in renovating their hotel. The final objective is for them to beneficiate from the new ranking norms in the hotel sector, which are established by Atout France*.

The particularity of this loan called “participative loan” is that the funds attributed are assimilated to the hotel’s own funds and not to the debt funds. It is a way for companies to consolidate their financial structure and can help them in accessing other loans for example.
Promoting pilot hotels: integrating the nearly Zero Energy approach in the marketing strategy

Front runners Marketing Guidelines
- to present different methods and steps to adapt the neZEHZ Hotels' marketing strategy

On the left: the public transportation exists. On the right: the request for watered recovery.

This encourages the clients to sort their own waste, to save energy in the bedrooms and enjoy an organic breakfast in the morning.

Furthermore, the hotel uses biodegradable materials, compost in the food waste and recycled flow reducers on the taps and showers. All the information about the hotel and its units environmental approach can be found at its website: a website section dedicated for the ecology.

Message encouraging guests to use their instead of elevators – Hotel Duerer, France.

The architecting hoteling itself
The visual impact is certainly one of the most important tools concerning marketing. Making the hotel's approach immediately visible to customers through the building, furniture, external sources of renewable energy referring to a constant way its commitment in having an environmental and energy efficiency.

Decoration and small panels revisiting the environmental commitment of the entire hotel, Italy – a "Climate hotel"
Promoting pilot hotels: integrating the nearly Zero Energy approach in the marketing strategy

Marketing tools
- Leaflet
- Videos
- Press kits
Promoting pilot hotels: integrating the nearly Zero Energy approach in the marketing strategy

Press campaigns

Corsica Sera
Next steps

Assisting hotels in applying for EU and International contests

Training of the staff

Inspiring a second wave of hotels to become neZEH!!

Be a part of it! Join the neZEH network!

www.nezeh.eu
Thank you for your attention

For more information:

Association ENERGIES 2050
688, chemin du Plan
06410 Biot
France

contact@energies2050.org