NEARLY ZERO ENERGY HOTELS

Position paper – ITALY

(WP2 EXPERIENCE AND VIABILITY OF NZE REFURBISHMENT PROJECTS – D2.7, position paper)

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THE EU INITIATIVE NEARLY ZERO ENERGY HOTELS (neZEH)

neZEH's scope is to accelerate the rate of refurbishment of existing hotels into Nearly Zero Energy Buildings (nZEB), providing technical advice to hoteliers for nZEB renovations, demonstrating the sustainability of such projects, challenging further large scale renovations through capacity building activities, showcasing best practices and promoting the front runners. The project covers seven (7) EU countries: Greece, Spain, Italy, Sweden, Romania, Croatia, France and has a wide EU level impact.

The expected results are:

- An integrated set of decision support tools to assist hoteliers in identifying appropriate solutions and designing feasible and sustainable nZEB projects;
- A dynamic communication channel between the building sector and the hotels industry, which will enable the exchanging between demand and supply side and the endorsement of the nZEB concept;
- Demonstration pilot projects in 7 countries to act as "living" examples; aiming to increase the rate of nZE renovation projects in the participating countries
- Practical training, informational materials and capacity building activities to support nationally the implementation and uptake of nZEB projects;
- Integrated communication campaigns to increase awareness for the NZEB benefits, to promote front runners and to foster replication; challenging much more SMEs to invest in refurbishment projects in order to achieve nZE levels.

In the long term, the project will assist the European hospitality sector to reduce operational costs, to improve their image and products and thus to enhance their competiveness; contributing in parallel to the EU efforts for the reduction of GHGs.

neZEH started at May 2013 and will end at April 2016 and is co-financed by the Intelligent Energy - Europe (IEE) programme.

PROJECT PARTNERS

Technical University of Crete, Renewable and Sustainable Energy Systems Lab (ENV/TUC) *Project Coordinator*	Greece
World Tourism Organization (UNWTO)	EU/Int.
Network of European Regions for a Sustainable and Competitive Tourism (NECSTouR)	EU
Federation of European Heating, Ventilation and Air-conditioning Associations (REHVA)	EU
Agency of Braşov for Energy Management and Environment Protection (ABMEE)	Romania
Creara Consultores S.L. (CREARA)	Spain
ENERGIES 2050 (ENERGIES 2050)	France
Energy Institute Hrvoje Požar (EIHP)	Croatia
Istituto Superiore sui Sistemi Territoriali per l'Innovazione (SITI)	Italy
Sustainable Innovation (SUST)	Sweden

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1. INTRODUCTION

The European initiative Nearly Zero Energy Hotels (neZEH), aims at accelerating the rate of the refurbishment of existing buildings into Nearly Zero Energy Buildings (NZEB), focusing on the European accommodation industry, especially the Small and Medium properties which represent 90% of the European hospitality market.

neZEH[1] is an initiative co-funded by the Intelligent Energy Europe programme (2013-2016, proposed and implemented by a consortium[2] of 10 partners from 7 European countries (Croatia, France, Greece, Italy, Romania, Spain and Sweden), including 2 European associations and one UN specialized agency.

Sixteen hotels across the 7 neZEH countries have committed to become neZEH Pilot Hotels. These hotels are to become inspiring frontrunners to the European hotel industry as examples of good practice to achieve NZEB performance levels. The neZEH initiative provides sound and adapted guidance for the EU accommodation industry to reach neZEH levels, and offers a free online neZEH tool for a wide use of SME hotels, across the EU Member States.

As additional support to SME hotels, in the 7 neZEH countries national position papers were compiled. The elaboration of a national position paper in each neZEH partner country has the very important aim to present to policy makers a document reflecting the opinion and needs of small medium hotel owners in terms of financial and other tools needed to support high efficiency energy retrofit measures in their sector.

In order to have a realistic and comprehensive overview of hoteliers' needs and opportunities in this field, SiTI drafted the Italian position paper taking advantage of the expertise of policy makers, a local financial institution, associations supporting local businesses, national and local hotel associations, hotel owners and also other relevant actors in the field of energy efficiency. The contacted actors were already part of SiTI network and most of them were involved in neZEH Local Committees.

On one side, SiTI exploited the information collected in the first 18 months of neZEH, during which meetings with relevant stakeholders were organized. On the other hand, specific questions aimed at the finalization of this position paper were addressed to the involved actors. The chosen approach to interview these actors was to send emails presenting neZEH and the aim of the position paper, enclosing a short list of questions (personalized according to their expertise) to be answered via email or in person. Dealing with hotel owners, they were contacted both via email with a questionnaire, sent to all the members of tourism local associations locally involved in

[1] "A nearly Zero-Energy Hotel (neZEH) is a hotel that uses very low amount of energy and which covers this very low amount of energy to a significant extent by renewable energy sources produced on-site or nearby"

[2] Technical University of Crete, Renewable and Sustainable Energy Systems Lab (TUC) - *Project Coordinator*, World Tourism Organization (UNWTO), Network of European Regions for a Sustainable and Competitive Tourism (NECSTouR), Federation of European Heating, Ventilation and Air-conditioning Associations (REHVA), Agency of Braşov for Energy Management and Environment Protection (ABMEE), Creara Consultores S.L.(CREARA), ENERGIES 2050, Energy Institute Hrvoje Požar (EIHP), Istituto Superiore sui Sistemi Territoriali per l'Innovazione (SiTI), Sustainable Innovation (SUST)

neZEH, and in person, with interviews to the applicants to the neZEH call for pilots.

The contacted **policy makers** are:

- Città di Torino – Assessorato Ambiente (TAA)
- Fondazione Torino Smart City (FTSC)
- Regione Piemonte – Direzione Innovazione Ricerca e Università, Settore Sviluppo energetico sostenibile (RPE)
- Regione Piemonte – Direzione Promozione della Cultura, del Turismo e dello Sport (RPT)

The contacted **local financial institution** is:

- Finpiemonte S.p.A. (FP)

The contacted **associations supporting local businesses** are:

- Unioncamere Piemonte (UCP)
- Camera di Commercio di Torino (CCT)

The contacted **hotel associations** are:

- Confindustria Alberghi (CIA)
- Unione Industriale di Torino (UIT)
- Federalberghi Piemonte (FAP)
- Federalberghi Italia (FAI)
- Federalberghi Torino (FAT)

The contacted **other actors** are:

- Federesco (federation of Italian ESCo companies) (FE)
- Edilportale (the most famous Italian web portal for building professionals) (EP)

The quality of the answers allowed drafting a comprehensive overview of the current hotel sector needs and characteristics (codes in brackets are used in the following paragraphs to properly attribute each contribution).

Beside experts' opinions, the position paper is also based on national reports and laws, here listed:

- Aprile M., *Caratterizzazione energetica del settore alberghiero in Italia – Report RSE/2009/162*, March 2009
- D.D. 4 marzo 2013, n. 156, Agevolazioni per la realizzazione di interventi di risparmio energetico negli edifici esistenti – BANDO "risparmio energetico – edizione 2013"
- Decreto Legislativo 4 luglio 2014, n. 102, „Attuazione della direttiva 2012/27/UE sull'efficienza energetica".
- Decreto-Legge 31 maggio 2014, n. 83, „Disposizioni urgenti per la tutela del patrimonio culturale, lo sviluppo della cultura e il rilancio del turismo".
- Documento di Economia e Finanza (DEF) 2014, Ministero dell'Economia e della Finanza, Aprile 2014.
- Federalberghi, *Datatur 2014 - trend e statistiche sull'economia del turismo*, Roma, Edizioni ISTA, 2014
- Piano d'Azione Italiano per l'Efficienza Energetica 2014 (PAEE), Enea, Luglio 2014.

- Strategia Energetica Nazionale: per un'energia più competitiva e sostenibile (SEN), Governo Italiano, Marzo 2013.

Finally, this document is based on EU level position paper available at neZEH web page provided by project partners Federation of European Heating, Ventilation and Air-conditioning Associations (REHVA) and World Tourism Organization (UNWTO): "Nearly Zero Energy Hotels for achieving low carbon growth in Europe – EU level position paper".

2. RATIONALE

2.1 **Tourism is a key industry sector for Italy. The Italian hotel sector represents, alone, the 18% of the EU hotel building stock and it directly contributes 4% to Italian GDP**. At the global scale, during the last fifty years, tourism has experienced continued expansion to become amongst the largest and fastest-growing economic sectors. International tourist arrivals worldwide are expected to increase by 3,3% per year between 2010 and 2030 to reach 1,8 billion by 2030. In Europe, arrivals grew by 3% in 2014 covering 51.4% of the total world tourist arrivals[3]. A similar trend about foreign tourism was registered in Italy, where in 2014 international stays grew by 2,2%.

2.2 **Buildings consume 40% of the total of energy and emit 36% of greenhouse gases** in the EU, so the building sector is a key priority of the EU's energy efficiency related policies. Two key directives target buildings energy efficiency: the Energy Performance of Buildings (EPBD recast)[4] and the Energy Efficiency Directives (EED)[5] that are to be implemented by every EU Member State. The long-term aim is to transform the European building stock into nZEBs by deep renovation of the existing building stock and ensuring that all new buildings are nZEB. Although not fully defined in the final agreement, this is in harmony and priorities of the COP21[6], where the neZEH project organized and participated in different events.

2.3 **The neZEH initiative provides SME hotels with the opportunity to achieve nZEB performance levels,** by specifying an acceptable level of energy performance for them to be a nearly zero energy hotel (neZEH), as well as offering tailored technical assistance for deep energy renovation of the buildings and showcasing best-practice examples. An important specificity of the accommodation sector is that hotels represent specific buiding types, where a significant part of the total energy use relates to service functions not taken into account in the NZEB performance calculation methodology (hosting and non-hosting functions). The neZEH initiative is addressing this gap by considering and proposing policies related to the distinctive features of accommodation sector at EU level, and within national NZEB policies.

2.4 **The neZEH policy paper aims at addressing the tourism - energy - buildings nexus for EU Policy makers.** It provides some insights of the state of play of the SME-size

[3] UNWTO Tourism highlights, 2015 edition
[4] Directive 2010/31/EU
[5] Directive 2012/27/EU
[6] http://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf

accommodation industries in relation to the building energy efficiency requirements stated in the EPBD and the EED. It identifies existing challenges and missing supporting measures for the improvement of hotels energy performance, based on countries in which the neZEH Consortium has carried out pilot projects in SME hotels. Ultimately, it provides EU level policy makers identified challenges and gaps, and suggests a set of possible policies and measures.

3. EXISTING NATIONAL AND REGIONAL POLICIES ON NZEB AND ENERGY REFURBISHMENT OF HOTELS

A brief overview of the existing policies, here given, allows spotting the existing gap between the high potential of energy saving in hotel buildings and the legal support currently available for energy retrofit interventions.

3.1. FINANCIAL SUPPORT MEASURES FOR HOTELS

Energy efficiency in hospitality sector is taken into account from a general point of view in the energy efficiency policies (i.e. hotels are not object of specific policies) and from a more focused standpoint in policies for tourism.

3.1.1. ENERGY EFFICIENCY POLICIES

The main incentives scheme available nationwide promoting the uptake of energy efficiency in existing private buildings, including hotels – but not focusing just on them – are:

- **Tax deduction** for energy efficiency improvement actions. 65% deduction of gross tax (progressively reduced in 2017) for projects obtaining an EP_H at least 20% lower than the reference values;
- **The thermal account** incentivizing the generation of thermal energy from Renewable Energy Sources and small scale energy efficiency projects;
- **White certificates**, that are tradable securities certifying the achievement of energy savings in the final uses of energy through energy efficiency measures and projects.

Among them, according to National Energy Strategy (SEN) 2013, the most effective measure for residential sector and services is tax deduction.

Other available funding supporting energy efficiency in buildings are:

- **European Structural Funds 2014-2020;**
- **National Fund for Energy Efficiency;**

- **Funds for hotels refurbishment**, to be adopted in October 2014, included in DEF 2014.

At the regional level (Piedmont), another instrument is currently available for buildings refurbishments: the call 2013 promoted under the framework of R.L. 23/02 gives interest rate subsidies for energy efficiency measures on existing buildings.

From the experience in interviewing hoteliers, their knowledge about the regional and national funding opportunities emerged to be good and up to date (they ask for information about the European funding schemes). Unfortunately, the availability and the widespread information of local funding possibilities didn't boost the number of applicants taking advantage of these opportunities. Among hoteliers, two main restraints in applying for funding for buildings' energy efficiency were detected: the very technical language (understandable just by energy experts) used in policies texts and the extremely long bureaucratic process required by the applications rules [RPE, UIT].

Moreover, a critical review from the policy makers standpoints about the available funding possibilities for energy retrofit pointed out that current policies have promoted preferential energy efficiency measures, which turned out to be not so successful in reducing energy consumption (e.g. PV panels, heat pumps). A wider range of option should be financed [RPE].

3.2. TOURISM POLICIES

Dealing with specific policies for tourism, the recently released D.L. 83/2014, named „**artbonus and tourism decree**", envisage a 30% tax credit for hotels' refurbishments. However, it is still not clear whether and how tax deductions and funding related to the energy efficiency policies will interact with the tax credit included in the quoted tourism decree.

At the current stage, no coordination among policies in the two fields is detected by the involved stakeholders. Indeed, current energy efficiency national plans are transpositions of European Directives, in which the focus is on intervention typologies rather than on building functions [UIT]. Coordination between buildings' energy efficiency and hotels sector policies is among the priorities to be addressed to policy makers.

3.2.1. PRIVATE CREDIT

Beside the access to public support measures, also getting credit from the bank is very hard. When asking for loans for this kind of intervention, banks ask for additional real warranties [FP, UIT].

3.3. TECHNICAL ASSISTANCE FOR HOTELS' REFURBISHMENT PROJECTS

Technical knowledge and assistance for hotel owners is a key issue toward the implementation of energy retrofit projects and, among the interviewed stakeholders, it is also one of the most mentioned issues preventing the implementation of energy retrofit projects.

No technical assistance at the public level is available nowadays and hoteliers willing to refurbish their hotels needs to directly contact an audit firm/ESCo/design firm to have suggestions on how to optimize their energy performance. Moreover, in small-medium hotels run by privates (mainly families) - representing the majority of the Italian hotel stock – the selection criteria for design companies/building professionals to be charged of a retrofit project/realization is often acquaintance rather than field of expertise, entailing design solutions with traditional features instead of daring new experimentations. Indeed, these professional figures are on average not updated to the most recent energy requirements or technologies and relies on the application of traditional (safe/well known) solutions, blindly trying to fit with energy requirements that they perceive as binding and overestimated [RPE].

In this framework, support measures aiming at provide technical assistance to hoteliers are somehow proposed by the recent Italian law D.L. 102/2014, in which regional funding programs for energy audits in SME are introduced. Particularly, being energy audits the first step of a refurbishment projects, funding will be given to applicants only once the energy saving measures suggested by the audits are implemented and measured or certified.

3.4. CAPACITY BUILDING AND AWARENESS RAISING MEASURES FOR HOTELIERS

Attention for buildings energy efficiency is still very low among hoteliers. As reported by several interviewed stakeholders [CCT, FP, RPE], the main focus of hoteliers' businesses is still related to tourism in the strict sense, meaning that they are more willing to attend courses and invest money on marketing issues rather than sustainability. As a proof, in public seminars about energy efficiency and environmental impact of business activities organized by local business associations, on average only 20% of the invited attendants take part to the lessons. On the opposite, marketing and security requirements seminars are very popular and appreciated among hoteliers.

Raising the attention to energy efficiency among the general public is one of the goals recently set at the Italian legislative level in D.L. 102/2014. Indeed, Article 13 is fully dedicated to information and training of buildings' occupants and professionals: ENEA (National Agency for new technologies, sustainable energy and economic development) together with ESCOs, energy services', costumers' and regional associations, have to develop a 3 years education and training program to promote and facilitate a smart and efficient use of energy.

4. COMMON FEATURES OF SME HOTELS IN EUROPE

Tourism is the third-largest industry sector of the European Union. Eurostat highlights that the number of nights spent in tourist accommodation in the EU continued to grow in 2014, by 1.6 %, reaching 2.7 billion, hotels being the most popular type of accommodation with 64% of the nights.

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The tourism sector is composed of several industries and by 1.8 million businesses, 99.5% of which being SMEs and 91% being micro enterprises[7], especially family business. The sector is very fragmented and not well federated. Hotels and similar accommodation numbered more than 200,000 establishments in the EU-28, according to Eurostat data[8].

Because the sector is mainly made of M-SMEs and fragmented, accessing information for better understanding and/or responding to energy or building directives is rather complex. The size of the companies, the industry business model (own and operate – or operate only), the technical support and financial implications add to the difficulties for accommodation industry SMEs to engage.

The neZEH initiative has been prepared to address this gap through its approach with pilot countries/hotels, aiming to better inform SMEs and help them to understand the challenges that the accommodation industry faces in relation to energy performance measures. neZEH provides an integrated approach to pilot SMEs for responding to the existing challenges.

- The highest priority for SME hotels is to reduce their operational costs and boost their competitiveness. However, in the majority of the neZEH countries, reducing energy-related operational costs requires significant investment in energy efficiency renovation.

- SME Hotels lack technical knowledge and awareness of buildings energy efficiency issues; they do not have skilled personnel to deal with technical building maintenance or energy management issues.

- The majority of SMEs cannot prepare their own refurbishment plans, are lost when it comes to look for incentives related to energy measures, and do not have access to private loans in the current economic environment.

- Resource efficiency/sustainability certification schemes are the most common approach SME Hotels can relate to, for understanding neZEH level requirements.

- SME hotels do not have the capacity to leverage available support policies and do not know how to use available existing support schemes for investing in efficiency. Furthermore, they lack information on how to plan and implement energy efficiency investments.

[7] HOTREC, Green Paper on the safety of tourism accommodation services-HOTREC contribution, November 2014
[8] Eurostat, http://ec.europa.eu/eurostat/web/tourism/data/database

- SME Hotels have difficulties in understanding the full economic benefit of investing in energy retrofit in cooperation with private energy consultancy companies.

- SME hotels business models can make it difficult to achieve neZEH status. Many EU hotels do not own the buildings in which they operate.

The implementation of energy performance measures by the accommodation industry presents opportunities to boost its competitiveness, but this is not always well understood and the capacity to engage is sometimes limited. Such measures require attention and support from relevant policy makers at the local level.

5. SPECIAL CHARACTERISTICS AND NEEDS OF THE LOCAL HOSPITALITY SECTOR AND THE HOTEL BUILDINGS IN ITALY

The scenario depicted at the European level (paragraph 4) perfectly fits with the Italian situation. Evidence is provided in the followings, where a description of the Italian hospitality sector features and needs is given.

5.1. MAIN FEATURES OF THE HOTELS SECTOR IN ITALY

The almost 34.000 Italian hotels represent about the 18% of the European hotels stock [Datatur 2014] and around 45% of the total amount of Italian accommodation structures (which include also hostels, camping, B&B and residences) [RSE/2009/162]. Among them, 3 stars hotels represent the majority of the structures (53,5%) and beds (51,5 %), and 4 stars hotels are the 15,9% of the hotel structures and have the 32,7% of the beds capacity [Datatur 2014].

The average dimensions of Italian hotels are related to their class, as shown below (Table 1).

Table 1. Average Italian hotels dimensions

Hotel class	Average beds n° [Datatur 2014]	Average rooms n° [RSE/2009/162]
1 star	23	10-15
2 stars	32	
3 stars	64	30
4 stars	138	65
5 stars	163	90

Most of hotels are located in the Northern part of Italy, but in the last decade an increasing number of hotel businesses was registered in Southern regions. In general, hotels in South Italy have higher class and bigger dimension than hotels in the North [Datatur 2014].

5.2. ENERGY EVALUATIONS OF THE HOTEL SECTOR

Electricity and natural gas are the more widespread energy carriers in the hotel sector, followed by oil and GPL [RSE/2009/162], but how these energy sources are used in hotels cannot be summarized in few figures, if a realistic overview is required. Indeed, evaluations on the energy performances of hotels are closely related to their characteristics and services.

In the followings, results of studies analysing the average energy consumption of specific hotel typologies and locations are presented.

1) From a statistical survey[9] on a selected group of 4 stars hotels, open all-year, with conference room, restaurant and laundry and an average dimension of 150 rooms, the energy uses for heating, cooling, domestic hot water and equipment and lighting for Northern and Central Italy were obtained (Table 2) .

Table 2. Energy uses of the investigated hotels

Energy use	Northern Italy	Central Italy
Heating [MWh/room*a]	3,5	2,5
DHW [MWh/room*a]	4,4	3,8≤x≤4,3
Equipment&lighting [MWh/room*a]	5<x<11	

2) A survey[10] on 4-5 stars hotels all around Italy, open all year, with an average dimension of 100 rooms (4700 m^2) provided information about the average electricity uses, about 7,7 MWh/room*a.

3) A study[11] on Sicilian (South Italy) hotels' thermal and electrical energy consumption provide figures, shown in table 3, about the average energy consumption of 3 and 4/5 stars hotels.

[9] Chose, *Energy Savings by CHCP plants in Europe, Energy Audits – Italy*, 2001.
[10] Studio Roberto Fortino e Associati, *Ospitalità Risparmio Energetico e Ambiente – I consumi energetici e la gestione delle risorse energetiche negli hotel*, 2005.
[11] Beccali M., La Gennusa M., Lo Coco L., Rizzo G., An empirical approach for ranking environmental and energy saving measures in the hotel sector, *Renewable Energy* 34 (2009) 82-90.

Table 3. Energy uses of the investigated hotels

Energy use	**3 stars hotels**	**4-5 stars hotels**
Heating [MWh/room*a]	4,2≤x≤5,3 (of which 60% for DHW)	
Electricity [MWh/room*a]	4,6	8,6
Equipment&lighting [MWh/room*a]	5<x<11	

4) A study[12] presenting results of building energy simulations of 2 reference hotels (3 stars and 48 rooms – 4 stars and 112 rooms) gives figures about reference energy consumption for heating, DHW, cooling and electricity for different hotel types in Northern, Central and Southern Italy, reported in table 4.

Table 4. Energy uses of the Reference hotels

Business – North Italy	Business – North Italy		Business – Centre		Tourism – Centre/North Italy		Tourism & Business – South Italy	
	3 stars	4 stars	3 stars	4 stars	3 stars	4 stars	3 stars	4 stars
Heating [MWh/room*a]	3	3,7	1,3	1,7	1,8	2,1	0,4	0,7
DHW [MWh/room*a]	4,8	4,8	4,8	4,8	3,8	3,8	3,8	3,8
Cooling [MWh/room*a]	1,3	1,3	2	2	2	1,9	2,7	2,7
Equipment & lighting [MWh/room*a]	3,3	5,2	3,3	5,2	3,2	5,1	3,2	5,1

5.3. HOTEL SECTOR ECONOMICAL SITUATION

The Italian negative economic trend of 2013 (-1,8% GND from 2012 to 2103), is replicated also in the hotel sector, where tourists' presence is generally decreasing: in 2012 hotels' guests decreased of 1,7% and a similar tendency is detected for 2013. The aggregated data about hotel guests, however, have to be split between the analysis of the domestic tourism, decreasing of 5%, and the foreigner tourism, increased of 2,2%. The gap between these categories reflects once more the difficult Italian economic situation [Datatur 2014].

[12] Aprile M., *Caratterizzazione energetica del settore alberghiero in Italia – Report RSE/2009/162*, March 2009.

Such a background justifies both the mistrust of hoteliers in the economical convenience of investing in retrofit measures and the difficult to get credit from the banks for this kind of intervention.
Moreover, at the current stage, most of hotels have to address their investment to be in line with the security requirements recently imposed, rather than on energy retrofit measures.

5.4. SPECIAL NEEDS OF THE HOTEL SECTOR

Given the general situation of the hotel sector, depicted in the previous paragraphs, 3 main needs are identified for hoteliers willing to refurbish their structures [FTSC, TAA, CCT, UIT]:

1. Easier access to credit for retrofit interventions;
2. More understandable laws and/or advices from institutions for laws interpretation in practice;
3. First stage qualified technical assistance at the public level, to give hoteliers a general, "independent" and up to date overview of the potential energy savings of their hotels.

Points 2) and 3) could be also summarized in the need for policies promoting a network among hotels and technicians for energy efficiency issues [RPT].

Beside the practical needs for starting hotels' retrofit interventions, the main gap that need to be filled among hoteliers is the awareness of the raising role played by sustainability in tourism activities: the need for "easy language" information campaigns and training seminars was highlighted as a priority by most of the interviewed stakeholders [CCT, FP, UIT, RPE].
On the other hand, also guests have to be taught to appreciate the added value of staying in a sustainable hotel: in order to make the energy retrofit a profitable investment, there is the need to explain to the general public the advantages and the social value of "going for green" [UIT, RPE].

6. COMMON FEATURES OF THE EU TOURISM SECTOR IN ENERGY PERFORMANCES: THE CURRENT POLICY FRAMEWORK

A coherent summary of the needs of the hotel sector in terms of energy efficiency policies in the 7 neZEH countries is provided in the neZEH EU position paper. It identifies the main common criticisms to be addressed by policy makers at all levels (regional/national/European):

- Tourism, energy and infrastructural development (including buildings) are usually related to different government portfolios, at both national and EU levels.
- Member States policy makers, while preparing their National NZEB policies, do not differentiate the specificities of the accommodation sector and the involved building type.
- At National level, there is a lack of interaction between policies and sectors linked to the energy efficiency of hotel buildings.
- At EU, National and Regional/local levels, better coherence is required for support policies/incentives for deep energy refurbishment in hotels.

7. NEZEH POLICY RECOMMENDATIONS FOR REGIONAL AND NATIONAL POLICY MAKERS

Assessing and listing the advantages of investing in green retrofit of hotels is the necessary first step toward any definition of successful policies in this field (very few businessmen would ever apply to a public program only for personal believes). From the interviewed hoteliers and stakeholders, the main pros of becoming a nearly Zero/high performing hotel emerged clearly:

- reduction of the hotel's operational costs, thanks to the consistent energy demand decrease;
- Improved image of the hotel and improved market positioning, meeting the new interest of tourist for sustainability;
- Increase comfort as an added value for hotels' guests.

In order to take advantage of the listed benefits, hoteliers need to be supported by local and national policies to start the refurbishment process, overcoming all the limits previously stated. Recommendations, based upon the needs identified at the EU and Italian level, tackle three main areas: policies for tourism, technical assistance and awareness raising

7.1. IMPROVED EUROPEAN, NATIONAL AND REGIONAL POLICIES FOR TOURISM

ISSUE 1: Member States policy makers do not differentiate the specificities of the accommodation sectors - which are primarily buildings and SMEs- while preparing their National NZEB policies.

National NZEB definitions do not sufficiently recognize the specificities of the accommodation industry. They should address the particular building features, uses and operating models, since hotels cannot be considered as typical non-residential buildings; their business models usually include a number of energy intensive operations associated with their customers' comfort and expectations, which are therefore closely linked with their competitiveness and viability. In order to develop viable scenarios for hotels, a "modular" benchmarking could be considered to include the non-hosting functions. Furthermore, different targets should be set for new and renovated buildings.

Different measures could be promoted in different climate zones within a particular country; data at a national and regional level should be evaluated to prioritize the available measures, according to their cost-efficiency depending on the climate zone.

RECOMMENDATION 1: Policy makers should better define guidance for NZEB for refurbished buildings – SME Hotels.

ISSUE 2: National Policy Makers lack of interaction between the policy sectors related to energy efficiency of hotel buildings.

The ministries/authorities in charge of tourism are often not aware of the EPBD and EED related obligations which apply to hotel buildings. On the other hand, the ministries/authorities in charge of support policies for buildings energy efficiency are not aware of the special characteristics of the tourism sector neither possible synergies that can be exploited when drafting energy refurbishment plans or defining NZEB criteria.

Better coordination is required between support policies targeting the development of the tourism sector and the improvement of buildings energy efficiency. Existing ESIF funding for infrastructural development in the tourism sector should integrate building energy performance requirements and special incentives should be developed to promote ambitious energy refurbishment of existing hotels.

Concerning this topic, a very important remark emerged from interviews to Italian stakeholders: they pointed out that energy efficiency policies have to take into account the feasibility of the interventions promoted. Setting targets too ambitious, not taking into account economical evaluations or cost-optimal levels of energy performance, may lead hoteliers to give up the sustainability path because they perceive it as unfeasible [RPE]. The priority to be addressed should be retrofitting hotels which have very high potential energy savings rather than “blindly” asking for nearly Zero Energy consumptions [TAA, FTSC].

RECOMMENDATION 2: At National and Regional levels, stimulate a better dialogue between tourism, energy and building policy makers to facilitate SME Hotels engagement towards NZEB regulations at local, regional, national and EU levels.

7.2. CREDIBLE AND INDEPENDENT TECHNICAL ASSISTANCE

Hotels need reliable technical assistance supported by financial incentives to design energy refurbishments and plan the investment financially. As reported in the recent EPBD public consultation report[13] , a major barrier for the insufficient take-up of available financing mechanisms for energy efficiency in buildings (where these are available), is the complexity of the renovation decision as such, which requires only financial insights, but also technical, organizational and legal. Financing mechanisms available are also complex for non-professionals to understand at an adequate level for decision-making.

neZEH recommends the set-up of “one-stop-shop” services in the public or private domains, or energy help desks also for the non-residential building sector (i.e. similar to the “*point renovation info service*” or “*Espace Info Energie*”[14] service of ADEME in France for the residential sector), in order to guide hotel owners through the whole renovation process. These services should provide independent, credible and evidence-based information on the available technical solutions; have knowledge of the available public and private financial support schemes as well as expertise in the design and implementation of hotel refurbishment projects. The fundamental role of local authorities in providing energy advice, due to their involvement in planning and

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building permits, is to be emphasized here[15].

SME hotels with less financial capacity should receive technical assistance to develop individual deep renovation roadmaps, required to achieve the NZEB status in a certain time frame. The roadmaps should specify the individual cost-optimal renovation steps, plan their logical timeline and consider the financial feasibility at the same time. EU funding will be critical for enabling such successful approach, the pool of competencies of the neZEH consortium has been key in providing tailored made technical assistance.

ISSUE 3: In order to reach NZEB and neZEH energy performance, SME Hotels require technical assistance for deep renovation with tailored support from policies and incentives.

There is a need for tailored energy efficiency support policies and financial incentives targeting the accommodation industry to help hotel owners getting started and begin accomplishing NZEB goals. Tailored financial support schemes and incentives have to be provided in order to help SME hotels to overcome the problem of high initial investment costs of ambitious NZEB renovations. For example, these policies should group the needs and capabilities of the different market segments of the accommodation industry (i.e. size, geographical position, seasonality, eco-friendly etc.) in order to reach also SME hotels effectively.

In the countries where incentives and support schemes for energy efficiency investments are developed by different authority levels (national, regional and local) there's a need for better coordination among the involved policy levels (national, regional and sub-regional support schemes) and the authorities in charge of the implementation in order to use synergies.

Policies should also facilitate the development of regional and local financial schemes (e.g. revolving funds, guaranteed or supported loan programmes, EPC schemes), which are able to mobilize private financing. The ongoing programming of the European Structural and Investment Funds (ESIF, 2014-2020)[16] is a huge opportunity to mainstream buildings energy efficiency policies and achieve large scale improvements in the Member States.

RECOMMENDATION 3: (i) Policy makers need to engage for scaling up refurbishment of the EU accommodation industry to meet NZEB performance, and reach neZEH status – the use of European Structural and Investment Funds (ESIF) is a possible option; (ii) Information, technical and financial support could be provided by an innovative approach and the creation of a "One Stop Shop" for SME hotels.

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Suggestions about how practically address this issue were given by the Italian stakeholders interviewed for:

- **Financial support**
    - o Fiscal incentives [TAA, FTSC], with incentives proportional to the return of investment and expected increased income of structures undergoing a retrofit intervention [UIT]
    - o Subsidies for design, financial analysis and realization of high energy performance refurbishment projects [RPT]
    - o Tools allowing easier access to credit for investment on energy efficiency measures and use of renewable energy in hotels [FP, FTSC]
- **Technical assistance**
    - o Public energy help desk/consultancy services for hoteliers, for first hand and broad direction suggestions about the refurbishment possibilities available [TAA, FTSC]
    - o Legal help desk for hoteliers, for explanation in practice of public funding opportunities' eligibility criteria and requirements [TAA, FTSC, CCT]

AWARENESS RAISING AND CAPACITY BUILDING

Advocacy and tailored awareness raising campaigns targeting the hospitality industry can help to convince hotel owners about the economic viability of becoming a neZEH. Insufficient awareness about the benefits of investing in energy efficiency, as a result of lack of information and advertising, is also mentioned as a barrier in the EPBD consultation[17]. It is easier to engage hotel owners that are already committed to sustainability in the discussion about investing in deep energy retrofit. Synergies with the existing engagement of hotels in different eco- green hotel certification schemes can be exploited when promoting buildings energy efficiency among hoteliers (i.e. by using the EMAS following hotels).

Suggestions of recommendations coming from the Italian stakeholders include:
- Creation of a nZE/high performing hotels local network, in order to promote a structured offer of new-generation sustainable accommodations [RPE]
- Training courses and seminars for hoteliers, providing basic technical knowledge and presenting the advantages – ECONOMICAL and environmental – of investing in high performing refurbishment projects [CCT, UIT, RPE].

Finally, showcasing existing successful examples of hotels engaging to become NZEB is also important in order to inspire and drive replication. In the 7 neZEH countries, the pilot hotels are already paving the way towards such investments. Awareness raising and capacity building

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activities should definitely include the study of best practice examples. Moreover, the creation of national or European open-source databases with NZEB buildings, including energy and cost data where available, would very much contribute towards this objective.

8. NEZEH POLICY RECOMMENDATIONS FOR REGIONAL AND NATIONAL POLICY MAKERS

Assessing and listing the advantages of investing in green retrofit of hotels is the necessary first step toward any definition of successful policies in this field (very few businessmen would ever apply to a public program only for personal believes). From the interviewed hoteliers and stakeholders, the main pros of becoming a nearly Zero/high performing hotel emerged clearly:

- reduction of the hotel's operational costs, thanks to the consistent energy demand decrease;
- Improved image of the hotel and improved market positioning, meeting the new interest of tourist for sustainability;
- Increase comfort as an added value for hotels' guests.

In order to take advantage of the listed benefits, hoteliers needs to be supported by local and national policies to start the refurbishment process, overcoming all the limits previously stated. Recommendations, based upon the needs identified at the EU and Italian level, tackle three main areas: policies for tourism, technical assistance and awareness raising

8.1. IMPROVED EUROPEAN, NATIONAL AND REGIONAL POLICIES FOR TOURISM

ISSUE 1: Member States policy makers do not differentiate the specificities of the accommodation sectors - which are primarily buildings and SMEs- while preparing their National NZEB policies.

National NZEB definitions do not sufficiently recognize the specificities of the accommodation industry. They should address the particular building features, uses and operating models, since hotels cannot be considered as typical non-residential buildings; their business models usually include a number of energy intensive operations associated with their customers' comfort and expectations, which are therefore closely linked with their competitiveness and viability. In order to develop viable scenarios for hotels, a "modular" benchmarking could be considered to include the non-hosting functions. Furthermore, different targets should be set for new and renovated buildings.

Different measures could be promoted in different climate zones within a particular country; data at a national and regional level should be evaluated to prioritize the available measures, according to their cost-efficiency depending on the climate zone.

RECOMMENDATION 1: Policy makers should better define guidance for NZEB for refurbished buildings – SME Hotels.

ISSUE 2: National Policy Makers lack of interaction between the policy sectors related to energy efficiency of hotel buildings.

The ministries/authorities in charge of tourism are often not aware of the EPBD and EED related obligations which apply to hotel buildings. On the other hand, the ministries/authorities in charge of support policies for buildings energy efficiency are not aware of the special characteristics of the tourism sector neither possible synergies that can be exploited when drafting energy refurbishment plans or defining NZEB criteria.

Better coordination is required between support policies targeting the development of the tourism sector and the improvement of buildings energy efficiency. Existing ESIF funding for infrastructural development in the tourism sector should integrate building energy performance requirements and special incentives should be developed to promote ambitious energy refurbishment of existing hotels.

Concerning this topic, a very important remark emerged from interviews to Italian stakeholders: they pointed out that energy efficiency policies have to take into account the feasibility of the interventions promoted. Setting targets too ambitious, not taking into account economical evaluations or cost-optimal levels of energy performance, may lead hoteliers to give up the sustainability path because they perceive it as unfeasible [RPE]. The priority to be addressed should be retrofitting hotels which have very high potential energy savings rather than “blindly” asking for nearly Zero Energy consumptions [TAA, FTSC].

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