

POLICY RECOMMENDATIONS

Energy efficient urban areas and neighbourhoods – A contribution to liveable and competitive cities



Introduction

The European Council adopted the European Energy and Climate objectives 'EU 20-20-20' in 2007:

- Reducing CO₂ gas emissions by 20 %,
- Reaching a share of 20 % of renewable energy and
- Increasing energy efficiency by 20 % by 2020.

These objectives are presented as a core aim within the new post Lisbon Strategy 'Europe 2020' which builds the framework for European policies until 2020. This strategy is implemented by the recasted Energy Performance of Buildings Directive (EPBD), the 'Energy 2020' strategy and the 'Energy Efficiency Plan 2011' with the proposal for a new Energy Efficiency Directive. Cities with their vast housing stock and infrastructure will play an important role in achieving these European energy and climate objectives as they account for around 80 % of the EU's total final energy consumption and the entire building sector in the EU for 40 %.

Challenges

In addition to the strategies and directives on the EU level, cities are also urged to take action due to rising energy prices affecting their residents caused by the global rise in energy demand and limited available energy resources. Also heating up cities due to the emergence of longer heat waves in summers as result of climate change plays a major role affecting negatively the urban climate and the demand for cooling. These developments can lead to a decrease of the attractiveness and the quality of life for residents and businesses as well as to an increase in the costs of economic activities and for living.

These challenges have to be addressed and transformed into opportunities. Cities and their neighbourhoods have to become more energy efficient, in particular with regards to their housing stock and a long-term affordable and climate-friendly energy supply based on renewable energy sources has to be enabled and facilitated. Cities have to be adapted to the emerging effects of climate change. This requires appropriate political objectives and policies from local to EU level.

Opportunities

However, the challenges of increasing energy efficiency, securing of a long-term affordable and climate-friendly energy supply and adaptation of cities and their neighbourhoods to the impacts of climate change are not only a cost factor. They can also be turned into opportunities:

Contribution to climate protection

A substantial contribution to reducing urban CO₂ emissions can be achieved through saving energy, improving energy efficiency, in particular in the housing stock, and switching from fossil fuels to renewable energy sources.

Creation and maintaining jobs

Planning and implementation of measures to increase energy efficiency and switching from fossil fuels to renewable energy sources will require fundamental investment from the European down to the neighbourhood level. This however also means jobs and income generation, as this is usually carried out by service providers and businesses from the city and the region in planning, production,

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installation and maintenance services. This strengthens the regional economy along the value chain and can increase business tax revenues.

Creation of attractive and competitive locations

Through the implementation of energy and climate adaptation measures in conjunction with the economic, social and ecological renewal of neighbourhoods and a long-term affordable and climate-friendly energy supply, a major contribution can be made to creating attractive and competitive cities and neighbourhoods for residents and entrepreneurs.

Cost savings and enhancing purchase power

Energy savings through economically feasible energy and climate adaptation measures (return on investment through saved energy cost and reduced operating costs over a certain time period) can lead to lower energy costs for both private and public households. In the medium and long term this can strengthen their purchasing and investment power.

Time to act

In the context of the Urb.Energy project within the framework of the Baltic Sea Region Programme 2007 – 2013, 15 partners from Germany, Poland, Lithuania, Latvia, Estonia and Belarus developed and implemented approaches of energy efficient refurbishment for residential buildings combined with integrated urban development concepts and innovative financing instruments for the modernisation of neighbourhoods and the climate-friendly energy supply.

In the process they encountered some important obstacles, including the heterogeneous flat-ownership structures and the deficits of organisation and management. This impeded reaching agreement and implementing energy efficiency measures in the housing stock.

Insufficient funding schemes and a lack of loans with appropriate conditions in terms of credit period, interests and securities for apartment and property owners, made financing energy efficiency measures highly problematic in the new Member States. Often the legal framework, providing for secure agreements, is not adequate and in some cases not even the land, on which the property is built, belongs to the flat owners and their associations. The lack of integrated policies and concepts and insufficient organisational structures made it difficult to promote the energy, economic, social and ecological renewal of neighbourhoods that is both coordinated and target-orientated. To overcome these obstacles, the Urb.Energy partners present the following recommendations based on five key elements:

- a. **Integrated urban development concepts** on city and neighbourhood level. These link, balance and coordinate the comprehensive economic, social and ecological renewal of the city and their neighbourhoods to secure them as a liveable, attractive and competitive environment. Energy efficiency and climate adaptation serve as integrating and cross cutting themes within the concept, interlinking the comprehensive upgrading of the neighbourhood with the energy efficient renewal.
- b. **Cross-sectoral working groups and organisational structures capable of making reliable and accountable decision making procedures** (good governance) for the successful development and implementation of integrated concepts and measures for the modernisation of neighbourhoods in which relevant private and public stakeholders are engaged.
- c. **Financing schemes** to secure the economic feasibility of measures for private property owners to

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- invest in the rehabilitation and increase in energy efficiency of their properties.
- d. **Mobilisation of private stakeholders** to contribute and assist in the development and implementation of concepts and actions for the modernisation of neighbourhoods as the municipality can not cope with the challenges and implement the necessary measures on its own.
- e. **Political commitment** within the mayor's office and the municipal council, having energy efficiency and an affordable, climate friendly energy supply in combination with the modernisation of neighbourhoods as a high political priority.

Recommendations

Based on the experience of the Urb.Energy partners, the following five main recommendations help municipalities to address the obstacles mentioned above and to increase the energy efficiency of cities and their neighbourhoods and to develop an affordable and climate friendly energy supply in combination with the modernisation of city districts, in particular the use of energy-efficient urban redevelopment to initiate a process of modernisation.

1. Development of target and action-orientated integrated urban development concepts with energy efficient refurbishment as an integral component

✓ Integrated planning approach

Integrated urban development concepts (IUDCs) consider the development of the city and their neighbourhoods comprehensively to enable their all-embracing development for the benefit of the residents and users. Thus, IUDCs should be a regular part of the urban territorial planning framework based on the Charter of Leipzig. Neighbourhood development concepts should complement city-wide concepts, making the specifications more precise on the neighbourhood level. City-wide development concepts should be coordinated with regional development concepts, particularly in the area of energy supply.

✓ Energy efficiency as a cross-sectoral theme

In IUDCs all relevant aspects for sustainable urban development are to be addressed. Hereby, energy efficiency turns into a cross-cutting and integrating theme. Particular relevant issues to be addressed within the modernisation of neighbourhoods are for example: the energy sensitive rehabilitation of buildings, modernisation of technical infrastructure (energy supply, sewage and waste disposal, street lighting), energy saving mobility, a healthy urban climate and attractive public space, affordable and climate-friendly energy supply, use of renewable energy and promotion of business opportunities in the field of energy.

✓ Thorough analysis of the current situation, potentials and deficits

In order to address the specific local conditions, a thorough analysis of the energy, economic, social, ecological and urban situation in terms of potentials and deficits has to be carried out. To address the foreseeable energy situation, in particular the energy supply and consumption of the neighbourhood have to be determined. It has to be established which energy suppliers are available, the quantity of energy that comes into the neighbourhood and where it is consumed (sector and area based). Based on this, the potential opportunities for saving energy in the neighbourhood – both in terms of new technology and economics – have to be identified as well as the interaction between climate/

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energy-related measures on the building and neighbourhood level and the adaptation of the energy supply. When identifying technical measures, social and economic conditions have to be taken into account in order to develop socially acceptable and economically feasible measures.

✓ Target and action oriented

IUDCs include coordinated and achievable goals based on the analysis of the current situation. Goals can for example include targets for the reduction of CO₂ emissions, the rate of energy-saving renovation of buildings and the integration of renewable energy sources in the energy supply. To achieve the goals the IUDC should contain an action plan with priority and feasible measures in direct support of the goals and measures to initiate the implementation of technical measures by the private stakeholders and the adaptation of the energy supply. Therewith the framework for action for the public and private stakeholders is set up.

Concerning energy efficiency measures in flats and buildings, comprehensive and complete packages provide from a technical and engineering point of view highest impacts and synergies and lowest risks of causing structural damages. However, if limited capacity and resources cause financial constraints, in particular for individual building owners, the implementation of comprehensive packages of refurbishment measures could start with low cost measures which provide high energy saving potentials in relation to invested costs to achieve short-term successes.

✓ Identifying the neighbourhoods in need of an integrated urban development concept including energy efficient refurbishment

Before a neighbourhood-related IUDC with energy efficient refurbishment is developed, neighbourhoods are to be identified as priorities that are in need of energetic, economic, social, ecological and urban renewal. This ensures that the available resources are used as efficiently as possible.

2. Implementation of governance structures

✓ Cross-sectoral working group

To be able to put the integrated, target and action orientated approach into practice, a cross-sectoral working group should be set up or built upon an existing structure. The working group should consist of the key public *and* private stakeholders that are needed for the development and implementation of the IUDC including energy efficient refurbishment. They should meet in regular time intervals to discuss interim results and develop and agree on objectives and actions. Transparent rules concerning decision-making should be set up. A political mandate for the working group is highly recommended.

✓ Responsible organisation for the process

An administrative body with sufficient capacity in terms of staff and experience (if necessary supported by a private agency e.g. a local energy organisation) should be appointed to organise the development process and the day-to-day management of the implementation of the IUDC with energy efficient refurbishment. Without a responsible institution the development and implementation of the IUDC with energy efficient refurbishment as a focal point will most likely fail.

✓ Involvement of city council

To secure political support, the city council should be informed about the development of the IUDC

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with energy efficient refurbishment at the very beginning i.e. before the development process has started. An official resolution is recommended. During the development process the city council should be regularly informed about interim results and their approval and commitment to the final concept and actions should be obtained.

3. Securing financial resources

✓ Development of financing schemes

To make it economically feasible for property owners with financial constraints to invest in the rehabilitation and energy efficiency of their property, adequate financing schemes on national, regional and even local level have to be developed. Low interest loans in combination with direct grants for energy efficient refurbishment measures for single propriety owners, that are reluctant or have difficulties in obtaining a loan, and/or tax reductions are useful to reduce the investment costs and the instalment of the loan: Lower loans/grants for standard measures, higher loans/grants for more effective, yet cost intensive measures. The entry conditions into the funding schemes should be made simpler, i.e. single energy efficiency measures should be made eligible for funding when they provide a high energy saving effect. Property owner associations should be eligible to receive financial support and the potential beneficiaries of funding opportunities should be made aware of the schemes available.

✓ Encouraging private investments

If the land that a property is built on or its leasehold does not belong to an apartment or building owner, they can be reluctant to invest in the property. The land deeds in the hand of them or their association encourages them to invest in the property. This also enhances their credit worthiness and increases their chances to obtain bank loans as they would have assets that can be used as a loan security. The legal status of buildings and apartments, grounds and outdoor facilities should be clarified at an early stage. Municipalities should set a good example by increasing the energy efficiency of their own apartments and buildings. They should also invest in upgrading "visible" public space and infrastructure to encourage and initiate private energy related refurbishment processes.

✓ Securing financial support for the process

To successfully develop an IUDC including energy efficient refurbishment, sufficient resources (finances, personnel, know-how) have to be in place for the development and later for the implementation of the IUDC. This is also the case for external support, for instance to organise the participation process and to obtain expert input.

✓ Opening up funds from regional to EU level

Regional, national and EU programmes e.g. Operational Programmes of ERDF and ESF and financing instruments like ELENA and JESSICA, should be checked to see if the development of the IUDC with energy efficient refurbishment, the implementation of actions as well as the management and organisation structures for the energy efficiency modernisation process can be funded. This should be done at an early stage to be able to assess the financial options for the implementation of energy efficient refurbishment measures. The municipality should try to proactively engage the regional or national (Managing) Authority of ERDF and ESF funds to identify fundable actions through regional operational programmes.

4. Raising awareness and mobilising stakeholders

✓ Organisation of legal representation of single property owners

Heterogeneous property owner structures and numerous single property owners hinder the development and implementation of measures. The formation of legal property owner associations, cooperatives or local housing councils should be initiated that work as representatives of the single property owners during the development and implementation of the IUDC and its measures. They should have decision-making power so that individual owners can not block decisions. Additionally they should have a legal status allowing them to receive loans and financial support via structural funds to contract investment measures for the owners. National governments should create the legal framework for such associations and cooperatives.

✓ Stakeholder analysis

To involve the necessary stakeholders in the development of the IUDC including energy efficient refurbishment, a stakeholder analysis should be carried out to identify the relevant stakeholders and their interests. Relevant stakeholders may include different local administrations, property owners, housing corporations and associations, tenants, energy providers, grid companies and the multipliers of these groups.

✓ Involvement of stakeholders

To develop and coordinate objectives and actions that are supported by the stakeholders and correspond to their needs, the stakeholders and their multipliers should be involved in the development of the IUDC according to their interests from an early stage. Adequate, group-orientated participation measures should be applied to recognise their interests and create a climate of confidence and cooperation.

✓ Awareness raising and information campaigns

To activate the stakeholders to improve energy efficiency, which would then encourage private investments, a communication strategy should be developed demonstrating how the target groups will be informed about benefits and economically feasible energy efficiency measures. This should include information about financing opportunities in particular for single property owners.

✓ Establishment of independent, local energy rehabilitation organisations

To activate and inform the stakeholders and to raise their awareness about feasible energy efficiency measures and funding opportunities (public or private), local energy agencies, associations or cooperatives should be established. These would actively inform the stakeholders and serve as information points for individual owners, tenants and others. They should be registered as legal entities in order to be able to receive funds. They should work together and support the responsible institution in the development and implementation of the IUDC with energy efficient refurbishment. In order to ensure the professional implementation of the energy efficient refurbishment measures, in particular in the housing stock, the capacities of relevant stakeholder groups should be trained to accompany and manage the planning, implementation and supervision of the energy efficient refurbishment measures.

5. EU and national strategies and programmes for integrated urban development with climate adaptation and energy efficiency as an integral component

✓ Development of an urban energy and climate agenda on EU-Level

The European Commission and its Member States should develop a climate adaptation and energy efficiency strategy for cities as an integral part of the European Cohesion Policy. This would provide effective guidance to EU institutions and Member States on taking advantage of the potentially wide ranging benefits from adapting cities and their neighbourhoods to climate change. The strategy should form the basis and design of EU, national and regional (operational) programmes and structural funds in which climate adaptation and energy efficiency policies and actions are encouraged and eligible.

✓ Promotion of integrated urban development approaches including energy efficient refurbishment

The European Commission and its Member States should promote integrated urban development approaches as a central requirement of all EU, national and regional policies and programmes for urban areas. The EU should provide funding for the creation of structures that are able to organise modernisation processes on the neighbourhood level. In particular this means the possibility of financing integrated concepts for the energy related modernization of neighbourhoods via the structural funds and to financially support the establishment of specific organisational structures in order to facilitate self organisation and private investment (e.g. residential area agencies, property owner associations, local housing councils, energy rehabilitation organisations). Additionally national and transnational cooperation, networking and capacity-building for sharing and disseminating experiences, knowledge and good practice, improving performance in integrated climate adaptation and energy efficiency led urban development for attractive and competitive cities should be supported.

✓ Strengthening of comprehensive planning systems

On Member State level, in particular in the new Member States, a legal framework for a comprehensive planning system should be established or strengthened with focus on integrated urban planning approaches as a general base for administrative and individual actions. In addition national and regional territorial planning systems should follow the integrated approach and address urban policy issues.

Urb.Energy Recommendations

To increase the energy efficiency of cities in combination with the modernisation of their neighbourhoods and to develop an affordable and climate friendly energy supply, the Urb.Energy partners give following 4 key recommendations:

1. Promotion on EU and national level of integrated urban development approaches with energy efficient refurbishment as an integral component

From the EU via the national to the regional level, the integrated urban development approach with energy efficient refurbishment as an integral component has to be promoted. The EU, its Member States and the regional entities should have an integrated approach and include energy efficiency as a central requirement in all their urban policies and programmes. They should also provide funds for the development and implementation of related concepts and actions. The exchange of experience between the relevant stakeholders should be fostered.

2. Development on local level of integrated urban development concepts with energy efficient refurbishment as an integral component

Cities have to establish integrated and project-orientated development concepts on a city wide and neighbourhood level to enable their all-embracing development for the benefit of their residents and users. All relevant aspects of sustainable urban development have to be addressed, with the function of energy efficiency as a cross-cutting and integrating theme.

3. Development of financing schemes to secure the financial resources

On a national, regional and local level financing schemes and legislative framework have to be developed and optimised to make it economically feasible for private property owners to invest in the rehabilitation and energy efficiency of their property. Direct grants in combination with low interest loans and/or tax reductions for energy efficient refurbishment measures are useful to reduce the investment costs and/or the pay back rate. As first step a focus should be placed on low-cost measures as part of a comprehensive integrated strategy.

4. Involvement of stakeholders to raise their awareness and mobilise them

To activate the private stakeholders to improve energy efficiency and implement related refurbishment measures that would encourage private investments, the stakeholders and their multipliers have to be involved in the development of concepts and actions according to their interests. This would ensure that objectives and actions are developed that are supported by the stakeholders and correspond to their needs.