



Housing in JESSICA Operations

June, 2013

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The contents of this report were delivered by PricewaterhouseCoopers EU Services EESV together with LSE and ARUP.

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List of Abbreviations

BNG	Bank Nederlandse Gemeenten
CEB	Council of Europe Development Bank
CECODHAS	The European federation of public, cooperative and social housing
CHP	Combined Heat and Power
CDP	CDP Investimenti Sgr S.p.A.
COCOF	Committee for the Coordination of the Funds
CFV	Centraal Fonds Volkshuisvesting
DG-REGIO	Directorate General for Regional Policy of the EC
EC	European Commission (“The Commission”)
EE/RES	Energy Efficiency and Renewable Energy Sources
EIB	European Investment Bank
EIF	European Investment Fund
ELENA	European Local Energy Assistance
EOI	Expressions of Interest
ERDF	European Regional Development Fund
EPC	Energy Performance Certification
ECS	Energy Service Contracting
ESCO	Energy Service Company
ESF	European Social Fund
EU	European Union
EU15	EU member countries that joined prior to 2004
EU12	EU member countries that joined in 2004 and 2007
FIA	Fondo Investimenti per l’Abitare (FIA)
FEI	Financial Engineering Instruments
HEI	Higher Education Institutions
HF	Holding Fund
HLM	Habitation à Loyer Modéré

HMR	Housing Market Renewal
HQE	Haute Qualité Environnementale
HSSG	Horizontal Studies Stakeholder Group
HUDA	Housing and Urban Development Agency
IEA	International Energy Agency
INTERREG	Innovation and Environment Regions of Europe Sharing Solution
INPP	International Public Partnerships
IRR	Internal Rate of Return
JESSICA	Joint European Support for Sustainable Investment in City Areas
KfW	Kreditanstalt für Wiederaufbau (KfW) Bankengruppe
LEEF	London Energy Efficiency Fund
MA	Managing Authority
MHC	Municipal Housing Company
MS	Member State
NEM	New East Manchester Ltd.
NGO	Non-governmental Organisation
NWDA	Northwest Development Agency
OP	Operational Programme
SEAP	Sustainable Energy Action Plan
SEEDA	South East England Development Agency
SF	Structural Fund
SGEI	Service of General Economic Interest
SIF	System of Integrated Funds
PPP	Public Private Partnership
PV	Photovoltaic
ROP	Regional Operational Programmes
RBS	Royal Bank of Scotland
ROI	Return on Investment
RSL	Registered Social Landlords

TA	Technical Assistance
UDF	Urban Development Fund
URBACT	European exchange and learning programme promoting sustainable urban development
URC	Urban Regeneration Company

Executive Summary

Urban areas play a crucial role in increasing the European Union(EU)'s worldwide competitiveness, as they are home to the majority of jobs, firms and higher education institutions and are decisive in bringing about social cohesion. Over half of all European Regional Development Fund (ERDF) Operational Programmes (OPs) contain an explicit urban dimension, while around one quarter of all OPs have introduced specific urban priority axes. In the 2007-2013 ERDF OPs, three groups of measures with a specific urban focus can be identified. These aim at the regeneration of deprived and disadvantaged urban neighbourhoods, the promotion of sustainable urban development and the promotion of a more balanced and polycentric development.

Housing is a very complex and cross-cutting issue linked to all aspects of sustainable urban development such as social inclusion, poverty reduction and the promotion of energy efficiency and environmental performance of urban areas. However, despite its major role in sustainable urban development, the housing component has not been addressed in most of JESSICA Operations¹ implemented to date. It should be remembered that even though the housing sector fits perfectly into the objectives of the JESSICA initiative², (which are to promote sustainable investment, growth and jobs in Europe's urban areas), outside the exceptions allowed under Article 7 of the ERDF Regulation³, pure housing investments are only possible with additional co-investment outside the OP resources.

The purpose of this study is therefore to provide clear information and guidance to the relevant stakeholders in the different Member States (MSs) on how they can use JESSICA instruments to finance housing projects integrated into sustainable urban development objectives. A conceptual model explaining how to deliver projects with similar characteristics has been developed through each case study. In most cases, the current four-layer structure of JESSICA operations, with Managing Authorities (MAs), Holding Funds (HFs), Urban Development Funds (UDFs) and project implementation, appears to be suitable once adapted with minor modifications for financing housing projects.

This suggests that, in the short-term, the starting point for any action aiming at increasing JESSICA's involvement in housing projects should be to use the mechanisms already in place in those countries in which a HF, if required, has already been established and financial intermediaries have already been identified. In the longer term, it would be possible to take advantage of the lessons learned and extend a proven operational model.

This Study focuses in particular on the identification of the potential opportunities to embed housing within JESSICA operations. Housing policy is part of Structural Fund (SF) priorities in many countries as it impacts other relevant issues like the fight against poverty and social exclusion, the enhancement of local employment, and the promotion of energy efficiency and renewable energy sources (EE/RES).

This study aims to clarify how housing operations can best be implemented under the JESSICA initiative, building on existing approaches and identifying specific financial instruments compatible with the JESSICA framework. The study has the following structure:

- **Part 1:** The wider policy context;
- **Part 2:** Housing in the 2007-2013 programming cycle and transition to the next cycle;
- **Part 3:** Embedding support for housing in JESSICA operations;
- **Part 4:** Specific issues for in-depth analysis;
- **Part 5:** Conclusions and recommended Action Plan.

The *first part* of the study focuses on the policy environment for social and affordable housing in the individual MS and the influence of the EU policies on housing within national policies.

¹ "JESSICA Operation" can be considered as an Operation, in the sense of Article 2(3) of the General Regulation and implemented in the framework of an OP, which supports urban projects through Urban Development Funds.

² Joint European Support for Sustainable Investment in City Areas (JESSICA) is an initiative of the EC in co-operation with the EIB and the CEB, intended to promote sustainable investment, growth and jobs in Europe's urban areas.

³ Regulation (EC) No 1080/2006.

One topic is the importance of ‘mix’: Post-war regeneration and development often produced dreary single-tenure housing estates far from employment and services. The failure of this sort of development was costly in both social and financial terms, and today several experts and policy makers agree that urban development should ideally be characterised by mix in the broadest sense—that neighbourhoods should be socially mixed, with a mix of land uses and a mix of housing tenures, and that they should be well located for services and transport facilities. It is this sort of ‘integrated’ urban development that JESSICA explicitly seeks to foster.

In terms of EU policy, the general principle is that housing policy is a national competence, not an EU one. Nevertheless, there are several areas where EU policy impacts on national housing policy:

- *Competition policy*: In relation to housing, State aid rules declare that MSs can only subsidise social housing for low-income or vulnerable groups—not for all households. Under the new regulations, State aid to social landlords will not have to be notified to the Commission. There are of course other State aid considerations which although not relating directly to housing are relevant when designing the financial and organisational structure of JESSICA initiatives.
- *Urban policies*: A long series of ministerial pronouncements and agreements has reiterated and elaborated on the desirability of integrated urban development and local participation in decision-making, and on the importance of liveability and place. Mixed-use and mixed-tenure urban development projects which include housing but also commercial uses may allow JESSICA to support housing indirectly. Targeting Urban Development Funds at the non-housing elements of developments would nevertheless indirectly facilitate investment in housing.
- *Environmental and energy policies*: The main climate change and energy target with direct implications for housing is known as the ‘20/20/20’ target, first agreed by EU ministers in 2007. It aims at achieving a 20% reduction in greenhouse gases compared to 1990 at the EU scale, for 20% of energy consumption to come from renewable resources, and for a 20% reduction in primary energy use compared to projected levels by 2020. In order to achieve these savings it will be necessary to carry out wide-scale renovations of existing buildings, including housing, to improve their energy efficiency.
- *Social cohesion policies*: The EU has devoted increasing attention to the issue of Roma, culminating in the 2011 publication of a framework for Roma integration strategies. Roma make up a sizeable part of the populations of Bulgaria, Hungary, Romania and the Slovak Republic, but are numerically insignificant in many MSs. Among their most serious problems are the poor quality of their housing and the high cost of domestic energy expenditure.

With regard to national policies towards social housing, the main findings were as follows:

- *Ownership of social housing*: Social housing is generally owned by municipalities or non-profit providers such as housing associations. In most EU12 countries, much or all municipally-owned housing was sold or given to tenants at the end of the communist era. There is a general trend towards declining municipal involvement and increasing reliance on non-governmental actors, including non-profit organisations but also for-profit developers. The ownership structures of social and affordable housing are important because, in most cases, social landlords are the ultimate beneficiaries of Urban Development Funds for housing.
- *Rents or prices*: Social housing in most countries is rented at below-market rates (or occasionally sold at discounted prices) to eligible households. In many EU countries, rents are based on the historic cost of constructing the building or estate; there is sometimes also an element that goes into a fund for future repair and maintenance. In other countries, rents relate to the value of the dwelling and current costs including refinancing. In some parts of Germany and Ireland, rents vary with tenant incomes.
- *Subsidies*: Below-market rents and prices inherently mean that the housing will require some form of subsidy. Such subsidies can come from direct government grants, tax breaks,

rent pooling (where income from higher-priced rental units subsidises more affordable ones), the provision of cheap or free land to social landlords, or in the form of planning obligations where private developers must provide some social housing.

The *second part* of the study focuses on European Union regulations and on how they apply to housing measures funded by the ERDF and JESSICA. In the current programming period there are only two areas where such investment is permitted (see Table 3 and Table 4 in more detailed):

- (1) Funds may be allocated to housing improvements designed to enhance energy efficiency or install renewable energy in existing housing up to a maximum of 4% of the total ERDF allocation;
- (2) Funds may be allocated to build new housing for or improve the existing housing of marginalised communities, including but not limited to Roma as a further 2% of the total ERDF allocation or, alternatively, a maximum of 3% of the ERDF allocations to the OPs concerned.

In support of social cohesion, MSs are allowed to carry out energy-efficiency improvements in both social and owner-occupied housing. However interventions in favour of marginalised communities can only take place in housing that is owned or purchased by government or non-profit providers.

In addition to energy-focused improvements to housing, there are a number of energy-focused actions not considered to be housing expenditure but from which the housing sector can benefit. Housing may also benefit indirectly from ERDF-funded investments in large urban development projects as it is a component thereof.

We investigated the extent to which MSs have already incorporated housing in this programming period's OPs. In general, we found that although the regulations permit the use of up to 6% of ERDF funding on housing (4% for energy-efficiency and 2% for marginalised communities), most MSs have actually spent very little of the available resources on housing. This is the case even in the EU12, where housing expenditure has been eligible since 2007. This is largely due to the fact that the regulations permitting housing investment came into effect after the OPs were finalised, and MSs did not revise them. However, some OPs were flexible enough to cover housing investment under the existing formulation.

In order to understand how the MSs have incorporated housing in their programmes, we carried out a number of case studies. We first looked at countries which have used ERDF grant resources or through Urban Development Funds to support housing investment.

We also looked the legislative proposal for cohesion policy period 2014-2020, which were adopted by the EC on 6 October 2011. These will be discussed by the Council and European Parliament during 2012-2013. The new Regulations should enter into force in 2014. From the 11 newly introduced thematic objectives⁴, one is focusing on *“supporting the shift towards a low-carbon economy in all sectors, such as supporting energy efficiency and renewable energy use in public infrastructures and in the housing sector”*⁵. In part 2.3 we introduced the major challenges and opportunities housing shall face following the debate on housing on the next programming period.

⁴ These 11 thematic objectives are:

1. Strengthening research, technological development and innovation
2. Enhancing access to, and use and quality of information and communication technologies
3. Enhancing competitiveness of SMEs, the agricultural sector and the fisheries and agriculture sector
4. Support the shift to a low- carbon economy in all sectors
5. Promote climate change adaptation, risk prevention and management
6. Protecting the environment and promoting resource efficiency
7. Promoting sustainable transport and removing bottlenecks in key network infrastructures
8. Promoting employment and supporting labour mobility
9. Promoting social inclusion and combating poverty
10. Investing in education, skills and lifelong learning
11. Enhancing institutional capacity and an efficient public administration.

⁵ COM(2011) 614 final.

The *third part* of the study investigated project typologies in which JESSICA could potentially invest according to the existing regulatory framework and of JESSICA's own requirements.

JESSICA has already developed a limited 'typology' of UDFs focusing on different aspects of urban development projects, namely energy efficiency, infrastructure, environmental issues, smart cities and area-based brownfield redevelopment. The business strategies of most of these models appear to be compatible with the integration of housing development projects. However, as discussed in this report, housing development projects can assume a plethora of different forms, address different objectives in different contexts and involve different actors. As a result, they require relevant and specific financing and governance structures.

We identified three project typologies, namely (1) 'energy efficiency and low-carbon refurbishment of existing housing', (2) 'multi-purpose development projects encompassing a housing element' and (3) 'construction or renovation of housing for marginalised communities'.

The definition of marginalised communities, while originally focused on Roma, can also include projects addressing the needs of vulnerable populations, which are characterised by low educational attainment levels, high unemployment rates and limited employment opportunities. The analysis of the projects included in our database highlighted the fact that the provision of housing for marginalised communities is generally financed through grants. Such projects usually have limited revenue streams to repay loans and to ensure an adequate return on investment, which is an essential condition for JESSICA.

This study therefore focuses on the identification of the most appropriate financing instruments and governance structures to be put in place in order to implement JESSICA operations focusing on the first two typologies:

- (1) energy efficiency and renewable energy refurbishment of existing housing;
- (2) multi-purpose developments encompassing a housing element.

In order to achieve this result, this study has analysed a wide range of housing development projects implemented across the EU and focused on four case studies whose financial and governance arrangements were deemed to be compatible with JESSICA. In order to ensure the compatibility of the proposed conceptual models with JESSICA functioning mechanisms, the models adopt a four-level governance structure including MAs, HFs (optional), UDFs and Projects. Although the structure is kept constant, the actors taking part at each level were different across the various projects examined. The aim was to demonstrate that JESSICA mechanisms are compatible with existing structures in different countries and that it seems possible to build on them to implement JESSICA operations in those countries.

In the *fourth* part specific issues for in-depth analysis is raised and in the *fifth* part the study concludes with the Action Plan which suggests that, in the short-term (until 2015), the starting point for any action aiming at increasing JESSICA's involvement in housing projects should be to use the mechanisms already in place in those countries in which a HF has already been established and financial intermediaries have already been identified. In the longer term (after 2015), it would be possible to take advantage of the lessons learned in those countries where JESSICA structures were already in place and extend a proved operational model to other EU countries.

1 The wider policy context

While acknowledging that pure housing investments through ERDF can only be made in certain cases (see Article 7 of the ERDF Regulation (EC) No 1080/2006 as amended in 2009 and 2010), the thinking behind the current study is to help enable JESSICA to be used for the provision of new and improved social and/or affordable housing in connection with urban redevelopment projects in MSs. The feasibility of the approach in each country, and the best way to structure the JESSICA instruments, will be conditioned not only by EU regulations but also, importantly, by the historic, institutional and financial realities of each country's housing system.

The evolution of European housing and urban regeneration policy since World War II

This section presents an overview of European housing and urban regeneration policy since World War II. In terms of the link between regeneration and housing six main strands can be identified:

- Post-war investment in massive new construction together with the repair and replacement of damaged and deteriorated housing,
- Slum clearance programmes with construction of new housing both on site and in peripheral estates,
- Large-scale rehabilitation of existing dwellings and neighbourhoods,
- Redevelopment of redundant industrial, transport and utility sites,
- The repopulation of central city areas, and
- Replacement and refurbishment of 1960s mono-tenure social housing usually with mixed-use and mixed-tenure development.

In the immediate post-war years, housing policy in both eastern and western Europe focused on providing adequate housing for all. This involved the development of new sites, usually on the periphery of cities together with the clearance of damaged or derelict buildings in city centres to make way for single-tenure housing estates where employed households could live close to their work (van Kempen et al, 2005; Whitehead, 2003). New residents in the modern tower-block estates that sprang up in cities across Europe often regarded them as a huge improvement on their earlier living conditions.

In each country this large-scale new development was accomplished within the financial and institutional framework that concentrated on affordable, usually public housing. There was no specific funding for regeneration—the emphasis was on reducing density. New estates were often badly served by services, retail outlets, etc.

The second strand involved large-scale slum clearance programmes removing the private housing built during the previous century to accommodate urban workers which no longer met the standards required. Initial programmes were concentrated on clearance and aimed to provide land for employment and commercial as well as housing purposes, with some of the population being moved to the margins of urban areas. Although the clearance itself was directly subsidised, industrial development often proved to be financially unviable because of declining demand for urban industrial land leaving land derelict. Clearance was also unpopular with households who wanted to stay in their own homes and neighbourhoods. New development depended upon the existing housing subsidy framework which still did not support wider regeneration objectives.

In the 1970s a third strand emerged when some countries replaced clearance and renewal by area rehabilitation programmes. These included funding for improving neighbourhoods more generally as well as for the physical fabric of the housing stock; new housing was also built. Greater emphasis began to be placed on providing appropriate services and on the reuse of brownfield sites rather than peripheral greenfield developments.

The fourth and fifth strands of housing involved urban regeneration and reflected concern about the hollowing out of urban areas and the segregation that this generated between poorer central areas and richer suburbs. Much of the policy was directed at large-scale brownfield sites that required decontamination and major remediation before they could be used for any new purpose. The areas where these developments took place were often poorly maintained with inadequate services, but sometimes provided low-cost housing for migrants and poorer households. The objective in these old industrial areas was not just to ensure economically viable land uses but also

to build long-term sustainable communities. These requirements have generated a range of partnership approaches. The partners include public, non-profit and private stakeholders including retail, commercial and service industries that could provide employment for the population. The provision of both market and affordable housing is seen to be essential to successful regeneration of these areas, and this depends on the government's ability to link regeneration and housing subsidies together to produce financially viable development.

Although these large-scale projects gain most of the limelight, far more housing has been provided in smaller urban developments which themselves can change the nature of local neighbourhoods. In the 1970s and 80s a trend towards city-centre living was observed. This trend gathered strength in the 1990s as middle-income households, particularly singles and couples, moved into refurbished housing that had previously housed low-income households, and then into unused commercial and industrial space. This phenomenon was initially market-led rather than policy-led, although policies have evolved to support change of use and many local authorities became enthusiastic promoters of this return to urban living.

Finally, by the twenty-first century many large mono-tenure social housing estates across Europe were in need of their own rehabilitation and regeneration. These estates had come to be regarded as problems rather than solutions. Although in the form of high-rise buildings, they often used land inefficiently, were in locations with few services and provided a poor living environment for their tenants. They have often become characterised by high levels of crime, unemployment and other social ills, which have been exacerbated by the increasing concentration of low-income and vulnerable households in social housing. In many cases substandard construction and increasing standards have led to severe maintenance problems and the need for large-scale improvement investment. In many countries addressing these issues has become a much higher priority than building new housing on large cleared industrial sites, using many of the same partnership techniques to generate mixed-use, mixed-tenure and mixed-income outcomes.

The relative importance of these three last strands, all of which remain important parts of current policy, depends on the nature of past investment, the extent of deindustrialisation and the relocation of what industry remains—and also, notably, on demographics. Thus in Eastern Europe the emphasis tends to be on ensuring the sustainability of a proportion of the housing stock in areas that can provide higher levels of service and access to employment. In countries with increasing populations the emphasis tends to be more on bringing housing development back into central urban areas and increasing the density of provision. Policy, financial and institutional arrangements reflect these different priorities.

The EU12 MSs differ from the 15 previously existing MSs in that they tend to have bigger social housing estates, some of which comprise whole new cities, because of the extent of war damage and the Communist approach to investment. These estates continued to be built almost up to the end of the 1980s, while construction of such estates in the West ceased at least a decade earlier. In many EU12 countries these units are now in private ownership, having been given for free or at nominal cost to existing (often low-income) residents, who now cannot afford to maintain their dwellings. Equally, there are often no appropriate legal arrangements that can help ensure the upkeep of the buildings and common parts. One outcome of this form of privatisation has been that the large heating plants that heated entire blocks or estates in communist times have been abandoned in some cities. Consequent problems of energy efficiency arise as each dwelling must thus have its own boiler. Another consequence lies in the fragmented uptake of energy efficiency subsidies (Tosics, 2006).

In some countries (e.g. Eastern Germany) social dwellings have been demolished in large numbers in a revival of earlier clearance approaches in part because of lack of demand, and in part because of the high costs of improving the dwellings. Across Europe urban renewal programmes which aim to introduce mixed use and mixed tenure have also tended to involve large scale demolition of lower density poor quality housing to be replaced by higher quality but denser units.

1.1 Housing and EU Policy

Within the EU, the fundamental principle is that housing policy is a national competence. However over the past 20 years EU policy and case law in several areas has had an increasing impact on national housing policies, both through restrictions on the involvement of government agencies in housing (the ‘State aid’ debate), and through incentives to target housing investment in particular areas. The following discussion covers four areas of EU policy and their effects on social and affordable housing provision:

- Competition policy and State aid,
- Social cohesion policy,
- Urban policy,
- Environmental and energy policy.

1.1.1 Competition policy and State aid

According to the Treaty of Lisbon, the governments of MSs are granted significant discretion in organising ‘services of general economic interest’ (SGEI). In doing so, however, the governments must avoid creating unfair competition with other nonsubsidised or nongovernmental economic actors.

In several EU countries, particularly Scandinavia and the Netherlands, there is a long ‘universalist’ tradition in social housing—that is, access to the housing has been open to all households regardless of income. Early in the century questions were raised about the use of State aid for social housing in Sweden (2002) and the Netherlands (2005). In 2005, the Dutch and Swedish systems were challenged by developers and the European Property Association respectively, the first in European Court of Justice, who said that state subsidies for housing for middle-income households and those able to pay market prices were anti-competitive and violated EU rules. The ‘Altmark’ ruling held that subsidies to social housing were only allowable if the following criteria were met:

- the social housing providers had a public service obligation – based on ‘...providing housing for disadvantaged citizens or socially less advantaged groups, which due to solvability constraints are unable to obtain housing at market conditions...’,
- the amount and type of subsidy was set out in advance in an objective and transparent way,
- the subsidy was limited to the amount necessary to cover costs incurred in the delivery of public service obligations, and
- costs were calculated on the basis of what a ‘well-run enterprise’ would spend (CECODHAS 2010a).

The two governments and the social housing providers in those countries have therefore had to redesign their systems in order to comply with this court ruling. In Sweden the decision was made that the municipal housing companies would continue to provide housing for all. This means that local municipalities are not permitted to provide any subsidies or other advantageous treatment not available to private competitors. The Netherlands took another route, choosing to limit access to social housing to vulnerable groups by introducing an income ceiling and directing the social housing providers to focus on meeting the housing needs of the most vulnerable. This case is still ongoing as several parties have appealed the decision of the Court of Justice.

The effects of the ruling are not limited to these two countries. As of 2009, all MSs were to have reported on how they interpreted the State aid decision in their own circumstances. It is clear that most are not complying strictly with the terms of the ruling. In particular, the calculation of subsidy (which is not necessarily financial but could include fiscal incentives or subsidy in kind) is difficult, particularly in the case of integrated urban regeneration projects of which housing is only one element. In the context of JESSICA the ruling implies that if there is some subsidy involved in financing new housing, that housing must meet the public service obligation.

1.1.2 Social cohesion policies

The EU's 2010 Joint Report on Social Inclusion and Social Protection (DG Employment and Social Affairs 2010) focused on policies to fight housing exclusion, presenting a collection of EU-wide statistical indicators measuring housing affordability and quality. These showed that there are serious problems of housing affordability in many MSs with Bulgaria being the worst affected as 70% of its poor households pay over 40% of net income for housing (CECODHAS 2010a). One element of this cost burden is energy expenditure, so programmes to enhance energy efficiency in new and existing housing will serve both environmental and poverty-reduction goals.

In terms of housing, the report concluded that 'concentrations of housing exclusion and homelessness can only be addressed through housing and urban regeneration programmes to promote sustainable communities and social mix' (DG Employment and Social Affairs 2010).

Social cohesion policy was also affected by the designation of 2010 as 'European Year against Poverty and Social Exclusion and Housing for the Marginalised Communities'. To mark this, the European Parliament widened the eligibility for SFs to include 'housing expenditure for marginalised communities'. This was first envisioned as applying to the EU 12 only, targeted mostly at the Roma population, long discussions in the European Parliament it was opened to any marginalised community in the EU 27.

Of particular relevance with respect to social cohesion is the EU policy to assist Roma in achieving adequate housing. According to estimates, there are some 10-12 million Roma in Europe, of whom about 6 million live in EU countries (EC 2011b). They generally fall far below the EU average on a range of socio-economic indicators including education, income and quality of housing; they also suffer from prejudice and intolerance. They are unequally distributed within Europe: they make up over 7% of the population in Bulgaria, Hungary, Romania and Slovak Republic, but only one-tenth of one percent in many countries including Denmark, Poland and Estonia.

The EU has devoted increasing attention to the problems of Roma. Under Directive 2000/43/EC, MS must give Roma (like other EU citizens) non-discriminatory access to housing and other public services. The Commission published a Communication in 2011 containing a framework for Roma integration strategies up to 2020 (EC 2011b).

1.1.3 Urban policies

Over the past decade ministers in charge of urban development in the EU MSs have elaborated on an increasingly detailed set of agreements on the urban dimension of the European policy. The key steps are:

- Lille 2000: Lille Action Programme,
- Rotterdam 2004: Urban Acquis,
- Bristol 2005: Sustainable Communities,
- Leipzig 2007: Leipzig Charter on Sustainable Cities,
- Marseilles 2008: Common Reference Framework.

All these documents are political agreements which do not contain specific action points, as urban policy is a matter for national governments. There is a great deal of overlap and repetition, as they serve as an articulation of political will more than as a detailed framework for action.

The 'Lille Action Programme' was based on a report prepared by the Committee on Spatial Development in the autumn of 2000. The main aim was to help MS, the Commission and cities to give the nine policy objectives defined at European level more tangible form:

- A better acknowledgement of the role of towns and cities in spatial planning;
- A new approach of urban policies on national and community levels;
- Improving citizens' participation;
- Action to tackle social and ethnic segregation;
- Promotion of an integrated and balanced urban development;
- Promotion of partnership between public and private sectors;
- Diffusion of best practices and networking;

- Promotion of the use of modern technology in urban affairs;
- A further analysis of the urban areas to deepen the knowledge of interlinked phenomena in the cities.

The Rotterdam urban ministerial meeting in 2004 laid the cornerstone in the definition of European urban policy. Ministers agreed the 'Urban Acquis', a set of common principles for sustainable policy. The 17 principles, in five categories, are a set of high-minded and rather general statements with which few could disagree—for example, 'national regional and local sectoral policies should be better integrated' (Principle C) or 'Policies for cities must be long-term' (Principle E). Despite their generality, they do articulate a common set of inputs to urban development in Europe. In accordance with prevailing thinking, they emphasise partnership working and local participation, the integration of spatial and economic development, and the importance of liveability and place.

The 'Bristol Accord' (2005) set out a more specific EU urban agenda, emphasising the goal of sustainable communities. The agreement said 'the Commission is putting urban policy at the heart of its programmes to promote jobs and growth' (ODPM 2006, p6). While the 'Urban Acquis' set out essential inputs to urban policy, the Bristol Accord describes the sorts of results that policy should achieve. Sustainable communities should, for example, be: 'active, inclusive and safe' (Characteristic 1); 'environmentally sensitive' (Characteristic 2) and 'well designed and built' (Characteristic 7).

It is worth quoting Characteristic 7 in full, as its contents are most relevant to the housing components of urban renewal. It says that sustainable cities should be '(7) Well-designed and built—featuring quality built and natural environment'.

Sustainable communities are expected to offer:

- A sense of place—a place with a positive 'feeling' for people and local distinctiveness,
- User-friendly public and green spaces with facilities for everyone including children and older people,
- Sufficient range, diversity, affordability and accessibility of housing within a balanced housing market,
- Appropriate size, scale, density, design and layout, including mixed-use development, that complement the distinctive local character of the community,
- High quality, mixed-use, durable, flexible and adaptable buildings, using materials which minimise negative environmental impacts,
- Buildings and public spaces which promote health and are designed to reduce crime and make people feel safe,
- Buildings, facilities and services that mean they are well prepared against disaster—both natural and man-made,
- Accessibility of jobs, key services and facilities by public transport, walking and cycling'. (ODPM 2006, p.20)

In the 'Leipzig Charter' of 2007, the EU makes a key statement about the importance of cities, recognizing the major social, cultural and economic roles that cities play. In their Leipzig meeting, ministers agreed to start discussions in their own countries about how to specifically incorporate urban issues into national, regional and local policy. The Leipzig Charter recommends that MSs and individual cities:

- Make greater use of integrated urban development policy approaches, in particular to create and ensure high-quality public spaces, modernize infrastructure networks, improve energy efficiency, and adopt proactive innovation and education policies.
- Pay special attention to deprived neighbourhoods, in particular to upgrade the physical environment, strengthen the local economy and labour market, adopt proactive education and training policies for children and young people, promote efficient and affordable public transport (Leipzig Charter 2007).

The main messages of this document are the importance of policy integration and the specific focus on deprived neighbourhoods.

EU urban development ministers met in Marseille in 2008 to discuss 'The sustainable and cohesive city'. They agreed to circulate indicators and examples of good practice, and to develop evaluation tools to describe the impact of the policies and measures taken.

One important strand of EU urban policy is planning for 'smart' green cities. This implies, among other things, that housing should be located so as to reduce the need to travel to places of employment and services, and should be integrated with public transport. The energy-efficiency programmes targeted at decreasing the use of energy by individual dwellings are thus reinforced by broader policies that could reduce overall energy demand.

During the period 1994-1999, the European Community implemented the URBACT I initiative. This provided ECU 891 million of European funding through the ERDF (82%) and European Social Fund (ESF- 18%) to address urban problems. Some 118 programmes were funded, mostly in cities in part 1 and part 2 areas. This was followed in 2000-2006 by URBACT II, with a budget of EUR 728mn (ERDF only), which financed 70 programmes. Both these sets of programmes were considered experimental. In addition, during the 2000-2006 programme cycle urban projects were undertaken through specific priority axes and measures in several OPs.

The 2007-2013 programming cycle includes an urban dimension and introduces the JESSICA initiative. From 2009 onwards, in part as a result of the financial crisis, SF regulations were developed to possibly integrate housing into priorities in all of the regional and national programmes.

1.1.4 Environmental and energy policies

The overarching policy of the EU on sustainability matters (including energy use) is known as 'Europe 2020', set out in an official Communication about 'smart, sustainable and inclusive growth' (EC 2010b). The document proposes five measurable EU targets for 2020, each of which should be translated into national targets. These targets concern:

- employment,
- research and innovation,
- climate change and energy,
- education, and
- combating poverty.

One climate change and energy target which has direct implications for housing is known as the '20/20/20' target, which was first agreed by EU ministers in 2007. It aims to achieve the following by 2020:

- A reduction in EU greenhouse gas emissions of at least 20% compared to 1990,
- 20% of EU energy consumption to come from renewable resources,
- 20% reduction in primary energy use compared with projected levels, to be achieved by improving energy efficiency.

The target on reducing greenhouse gas emissions could be increased to 30% if other major emitting countries in the developed and developing worlds were to commit themselves to doing their fair share under a global climate agreement.

The EU's second Energy Efficiency Plan (which updates a document first published in 2006) contains more details about the kinds of energy-efficiency measures that will need to be adopted (EC 2011a). Noting that recent Commission estimates suggest that 'the EU is on course to achieve only half the 20% objective' (p. 2 of the EEP, EC, 2011a). The plan details where such energy savings will need to be made. It says 'The greatest energy saving potential lies in buildings' (p. 3 of the same document), and therefore focuses on instruments to incentivise the renovation of both public and private buildings. This plan does not contain legally binding national targets, but the Commission will assess its results in 2013 and if progress has been insufficient then the Commission will propose such targets for 2020.

The plan states that the public sector should lead by example, in particular by doubling the rate of renovation of public buildings. The plan does not define 'public buildings', but the term could be

taken to include housing under municipal ownership. Turning specifically to housing, the document notes that ‘nearly 40% of final energy consumption is in houses, public and private offices, shops and other buildings’. In homes, two-thirds of this is for space heating. The plan proposes that MS should address this inefficient energy use by tackling heat use in buildings—possibly including the promotion of new forms of district heating that avoid the problems associated with systems that have been in use in EU12 — and by various legal and regulatory interventions.

Following this plan, in October 2012 the EU adopted the new Directive on Energy Efficiency, which will repeal the Energy End-Use Efficiency and Energy Services Directive and the Cogeneration Directive. The new Directive establishes a common framework of measures for the promotion of energy efficiency within the EU in order to ensure the achievement of the Union’s 2020 20 % headline target on energy efficiency and to pave the way for further energy efficiency improvements beyond that date. It lays down rules designed to remove barriers in the energy market and overcome market failures that impede efficiency in the supply and use of energy, and provides for the establishment of indicative national energy efficiency targets for 2020. With regard to buildings, the Directive requires the development of a long-term strategy for mobilising investment in the renovation of the national building stock, including policies and measures to stimulate cost-effective renovations.

In terms of renovation policies there are also several other relevant directives, in particular the EU Construction Products Directive, the EU Energy Performance of Buildings Directive and indirectly the Air Quality Directive. A number of countries are modifying their legislation to conform to the Energy Performance Directive and, specifically, Construction Products Directives.

1.1.5 Emerging EU policy: housing, urban regeneration and mixed communities

The current EU debate centres around the problems that MSs are facing in improving housing and urban systems in a period of lower growth and changing urban dynamics. An increasingly important strand of policy development lies in the emphasis on mixed use and mixed communities.

In the housing context, although there are many, especially economists, who are unconvinced, current thinking is that ‘mix’ is the best way to provide affordable and social housing and to ensure financially viable regeneration. Indeed, a recent conference of European housing researchers took this idea of mix as its theme (<http://www.enhr2011.com/>). The principle of mix is based on a range of housing types and tenures within sustainable communities. The housing should be mixed tenure (i.e., social and private renting plus owner-occupied housing should not be separated from each other) to ensure social mix; mixed-use (in developments that include commercial and other employment uses as well as residential) to ensure economic opportunity; and well provided with local services and support (to reduce exclusion). This suggests that housing investment is an essential element in any urban regeneration programme—either in the form of the rehabilitation of substandard existing housing or the provision of new housing if the project includes substantial areas of new construction. Social housing providers are also seen to have a role to play in providing services and in neighbourhood management.

The housing element of a regeneration programme could involve provision of new housing or the incorporation (and improvement) of existing housing in urban-regeneration areas. It also involves partnership among a range of stakeholders and funding in many forms from many different sources. The challenge is to support this approach with the help of Urban Development Funds without breaching EU rules which limit subsidies to housing for the poor.

ERDF funds must be complemented by other sources (match funding which can be either public or private resources) of which the total should contribute to financing terms lower than market rates and conditions for particular projects. This is a complex issue because this new mode of financing must fit within already established national systems of funding, subsidy and partnership for the provision of housing investment and urban regeneration more widely. More specifically it requires an identified revenue stream to repay and therefore recycle the JESSICA contribution. Before addressing the specifics of project-based financing we therefore set out some of the major trends in national housing policies and particularly the financing of social and affordable housing - the area where the EU, the EIB and the CEB might have a role in supporting investment.

1.2 A comparison of national social and affordable housing policies across EU MSs

Before outlining the main attributes of policy aimed at providing affordable housing, the first part of this section defines affordable and social housing and provides a typology of attributes.

1.2.1 Definitions and roles of social and affordable housing

In the immediate post-war period, most Northern and Eastern European countries directly subsidised housing, sometimes provided for all types of household and sometimes just for lower-income and vulnerable groups. This tended to be called ‘public’ or ‘municipal’ housing, reflecting both ownership and financing. The systems in France and to a lesser extent the Netherlands were the main exceptions, as significant proportions of their subsidised rental stocks were owned by private non-profit housing organisations although funding and guarantees were still provided by the public sector.

Starting in the 1970s, as policies of privatisation and in particular the introduction of private financing sources were introduced, these terms were often replaced by the term ‘social rented housing’ (often shortened to social housing), reflecting the increasing range of providers and funding sources that might be involved. Later as social housing became more concentrated on lower income and more vulnerable groups the broader term ‘affordable housing’ was introduced. This term covers all subsidised housing whose rents or prices are below market levels. It became more widely used after the turn of the century as EU countries introduced policies to address the increasing problems of housing affordability for employed households (Monk and Whitehead, 2007). ‘Affordable’ or ‘social’ owner-occupied housing tends to sell at below-market prices to defined subgroups and furthermore, regulations often limit the price and market for resale. Such housing usually benefits from government subsidy.

In the current context, ‘social housing’ usually denotes housing let at sub-market rents by social landlords to lower income and vulnerable households – although in some countries the sector may still aim at universality (Scanlon and Whitehead, 2011). Table 1 provides an overview of how social housing is defined in EU countries. The broader term ‘affordable housing’ usually encompasses not only social housing but also low-cost homeownership and lettings at below market rents (although higher than social rents) to lower-income employed households. The latter categories are sometimes called ‘intermediate housing’.

Within this general typology, social and affordable housing can be defined in many ways, and practice varies by country (Table 1). Definitions usually relate to:

- the type of organisation that owns the housing,
- whether it is rented or sold at sub-market rents or prices,
- whether the housing benefits from state subsidy,
- how the housing units are allocated.

Ownership

Social rented housing is generally owned by municipalities or non-profit providers, in particular housing associations. Most countries have both types of provider, but the split varies. In Hungary and Sweden, all social housing is municipally owned, while in Denmark and the Netherlands nearly all is owned by housing associations, although in the Netherlands these have traditionally been guaranteed by municipalities. In France, private social-housing providers known as HLMs have a long history; some are owned by municipalities. The UK has a roughly 50:50 split between municipal and housing-association ownership. In Germany in particular private landlords also provide social housing under license though the landlords are usually obliged to operate it as social for a limited period only. In most of the EU12 countries the very large municipal sectors have been broken up and sold or given to tenants. The Czech Republic and Poland are particular exceptions with continuing large municipal holdings (Department of Communities and Local Government, 2007).

The general trend is thus towards declining direct municipal involvement in social housing and an increased reliance on non-governmental actors, including non-profit organisations but also for-profit developers. However in many Western European countries municipalities continue to have

responsibility for ensuring adequate accommodation and often remain the providers for the most vulnerable households (Levy Vroelant, 2008). Some countries, notably Germany and increasingly the UK, include profit-making entities that provide housing at sub-market rents under license as social landlords.

The owners of ‘affordable’ owner-occupation units are the residents themselves, rather than designated social landlords, although these landlords may hold part of the equity or act as freeholders. Affordable or intermediate rented housing is usually owned by social landlords or sometimes by employers. In most countries this intermediate sector is nonexistent or makes up only a tiny percentage of the housing stock. Spain is exceptional in Europe in that most of its social housing is owner-occupied rather than rented (Hoekstra et al 2010).

Rent/price determination

In many countries the definition of social housing is that it is rented at below market prices (implying subsidy to the tenant) or sold at a discount to designated eligible groups, often with continuing conditions on resale. In a small number of cases social owners rent or sell properties at market levels. We exclude these from our definition of social housing, as well as for-profit housing let at market rents to tenants who receive income-related subsidies and owner-occupied units purchased at market prices without constraint on resale.

Rents and prices will often be related to financial costs as providers are expected to break even (Whitehead and Scanlon, 2007). In most European countries rents for social housing are based not on supply and demand but directly on the historic cost of construction, although they sometimes include a fund for future repair and improvement. Sometimes these rents are set at estate level and sometimes at a broader area level; among non-profit organisations the most common practice is to base rent calculations across the whole stock owned by the landlord. Only in the Netherlands and the UK are rents related to market values rather than costs. In rare instances (notably in Germany and Ireland) rents vary with tenant incomes. Rent determination regulation is a major factor affecting financial viability and the capacity to use private funds to support investment (Whitehead, 2008).

Of particular importance is how rent increases are determined. These may be decided at one extreme by central government (England, France and Hungary) or at the other by negotiation between landlords and tenants (Sweden). A particular issue is that political pressures may intervene to keep rents low, reducing the landlords’ incentive to maintain and improve stock as well as their borrowing capacity.

The use of subsidy

Below-market rents and prices inherently involve an economic subsidy even if no direct financial payments to landlords are involved. This subsidy can come from:

- other tenants through rent pooling across the relevant housing stock;
- landowners- in the UK and Ireland, for example, developers provide new social or affordable housing as a condition of planning permission for housing development, usually transferring ownership to a social landlord;
- other agencies, e.g., employers in France; or
- local and national government either in direct financial form or in the form of cheap land.

Table 2 provides a typology of government policies to support the supply of new and improved social housing, including various types of subsidy and tax concession. Each form of subsidy has different implications for the viability and financing of new investment.

Governments tend to regard social housing as including all dwellings which receive or have received revenue or capital subsidy for their purchase, construction, improvement and/or management and maintenance. In the Netherlands in particular, housing associations are now expected to be financially self-sufficient but nevertheless formally remain subject to government regulation because they benefitted from past payments and maintain a social aim. On the other hand, in Germany and to a much lesser extent France some social provision is time limited – after the limits expire properties can be sold into the market and no continuing allocation rules apply. In this case the properties exit the social/affordable sector. Similar principles apply to owner-occupied

housing which is sold without resale constraints (e.g., in the UK once 100% of a shared-ownership property has been purchased then resale constraints no longer apply).

An important issue especially in Eastern European countries is how to classify formerly government-owned housing that has been transferred into private ownership or into the private rental market without resale conditions. Although privately owned, this housing stock is still affected by many quality and social problems. Particularly in Eastern Europe but also elsewhere there are continuing issues with the maintenance and improvement of ex-social housing properties whose occupants are on low incomes, or where there are market failures associated with property rights and built form which result in perverse incentives and under- investment in improvement.

Subsidies may be provided to the new owners of formerly social housing to address energy efficiency issues. Normally the subsidies are available to all occupants of formerly subsidised dwellings, even those no longer owned by social landlords. However in Eastern Europe many of these dwellings were originally part of large-scale district heating schemes that have since collapsed. As yet few relevant policy instruments have been developed to address this or the utility-price increases associated with the privatisation of energy companies—which impact particularly on low-income households in poorly insulated homes.

Itard and Meijer (2008) give an overview of energy-efficiency renovation schemes in northern European countries. The countries surveyed (which include Sweden, the UK, France and the Netherlands) provide incentives to owners (owner-occupiers or landlords) for renovation in the form of subsidies and tax reductions. They also conduct publicity campaigns to inform homeowners about the benefits of such investment. In general, total renovations of existing housing must comply with the energy-efficiency standards for new buildings. There are fewer requirements for small-scale improvements except, for example, that components (boilers etc.) must meet current local standards.

Owner-occupiers often have little experience with energy-efficient products and processes, which can be a significant problem because many of them maintain their own homes. In the case of rental housing, the landlord bears the cost but the tenant reaps the benefits in terms of reduced energy expenditure. In many countries rent regulation limits the extent to which landlords can recover this cost from tenants. In the social rented sector in particular, it may be impossible or undesirable to increase rents, suggesting that these investments will only occur if subsidies are made available. In any case, analysis of these investments has shown that often they cost more than the resultant savings, even taking subsidies into account. Ownership structure is also important. In cases where multi-unit apartment blocks are under single ownership renovations are much easier to accomplish than where the units are separately owned, as is now the case in most CEE countries. Even in these countries, where energy-efficiency policies are more developed than in CEE nations, renovation tends to be piecemeal. There has been little monitoring of results in terms of actual energy usage, and little systematic policy analysis.

Allocation rules

Social and affordable housing inherently involves administrative allocation rules particularly because rents and prices are below market levels. These rules can prioritise particular types of household: those on low incomes; those that live in the neighbourhood already; those employed in particular jobs, etc. (Whitehead and Scanlon, 2007). Allocation may also depend on length of time on the waiting list. Where the market allocates housing, this housing should be defined as private -- even when residents receive demand-side housing subsidies.

The general principles by which housing is allocated are normally set by central and sometimes local government, taking account of human rights requirements and other international legislation. Household eligibility is often determined by municipalities or boards of directors of local stakeholders (e.g., in France). Allocations of households to individual dwellings are then made by the owners (OECD, 2011; Scanlon and Whitehead, 2011).

Allocation rules directly affect the financial viability of social-housing schemes and the rents that are required to ensure break-even. In turn the form and generosity of income-related benefits affects the level and security of rental streams, and may give landlords an incentive to concentrate on groups in receipt of such benefits.

Most of the examples included in the discussion above are from Western European experience. This is because relatively little provision of social housing remains in most East European countries and there are few policies aimed at providing new social sector supply. However the legacy of past social housing provision, together with problems of access to adequate housing in any tenure for marginalised groups and low-income households, are major sources of concern in terms of future provision. The experience of Western Europe is therefore of particular relevance to the development of social and affordable housing policies in the future.

1.2.2 National policy interventions to provide affordable housing

Policy interventions and subventions in the field of affordable housing differ between countries in a range of important dimensions. Most importantly in each country there is a history of intervention in the housing market which helps to determine the current state and funding of the sector and the feasible options for change. Of particular importance in this context are the generally accepted means of financing and subsidising investment in new building and the existing stock, as each country has its own more general regulatory and financing framework in which specific instruments can operate more or less effectively. But equally important is the role of regulation in requiring that standards are met. If such regulation is well designed and effectively enforced the costs are borne by those who must comply and by landowners rather than final consumers. Examples include the use of building regulations to require energy efficiency, and employing land-use planning regulations to require developers to provide affordable housing requirements--as long as it is still possible for them to make normal profits (Crook and Whitehead, 2002).

Historically subsidy and funding systems were strongly interlinked as both came directly from the government. There were three main approaches to support:

1. the provision of revenue subsidies, including in particular interest rate subsidies which reduce the annual cost of provision and therefore rents;
2. upfront capital grants which reduce the need to borrow or otherwise fund the capital costs of investment – thus reducing outgoings and rents; and
3. the provision of subsidy in kind, normally in the form of free or cheap land which again reduces the need for funding and reduces costs and outgoings.

In terms of financing new social housing there are three main sources of funds: government funding, borrowing on the private market and equity finance. These sources may be combined. Social landlords can recycle past funding by selling assets and/or borrowing against the rising value of their stocks. Social landlords' traditional reliance on the public sector reduced their risks and therefore costs but limited the incentives towards efficient provision. Since the 1970s and the deregulation of finance markets as well as the integration of housing finance within the more general financial system, much more complex arrangements have become the norm. These match the greater complexity of regeneration and mixed use/mixed tenure projects and include in particular the use of PPPs and separate funding mechanisms for the investment stage and for running costs.

New build, regeneration and improvement

In most EU countries relatively few units are being added to the affordable housing sector each year and the size of the sector is usually declining. In some countries, notably in Eastern Europe there is no new social-housing construction at all. Where there is an emphasis on new build, land regulation is often used to require 'mixed communities', so developments include a mix of tenures (social rented, low-cost homeownership and market housing).

Many of the social housing estates built after the second world war have reached the end of their useful lives –and in some cases population movement and economic decline also make it imperative to reduce the overall stock of housing. Not only in Eastern Europe but also in some Western countries, notably the Netherlands, the UK and France, there have been problems maintaining and improving large post-war estates. These often stemmed from a dearth of rental income arising from rent control policies. Governments across Western Europe have instituted large scale subsidy programmes, usually in the form of capital grants, to bring their social housing stock up to decent standards. The Decent Homes Initiative in the UK is regarded as a highly successful and efficient programme which has raised housing and energy standards particularly in the local authority but also in the housing association sector. The initial programme is now complete but has been replaced by a backlog programme including investment in energy efficiency

(HCA, 2011). These programmes involve PPPs as well as grants and can perhaps provide exemplification of the types of programme that could be transferred to other countries with JESSICA involvement. The main concern however in terms of cross country transfer must be who benefits and who pays. Under Decent Homes the investment was heavily subsidised and rents were not raised to cover the costs of energy efficient investment, while tenants benefitted from energy savings.

The majority of large-scale mixed-use regeneration projects involve the demolition of mainly poor-quality housing including that which is too expensive to maintain, improve or heat. The buildings that replace the demolished properties will normally be mixed tenure and mixed use, helping ensure sustainable communities and energy efficiency. They will also aim to ensure higher rental streams. In Western Europe, funding for such initiatives normally comes from both private and public lenders, supplemented by direct subsidies to improve neighbourhoods. In Eastern Europe there is more likely to be some European funding involved although there are tight restrictions on the types of housing investment that can attract EU funding. More generally mixed-use regeneration projects can be made viable by including employment-generating activity as well as new housing at much higher densities than what it replaces. There is thus the possibility of employing JESSICA for both employment and energy efficiency initiatives as well as to integrate marginalised communities.

The most obvious immediate problem is determining how to improve and retrofit existing affordable and other housing that does not meet current quality and energy efficiency standards. This is a particular issue in much of Eastern Europe, where housing with poor quality and expensive heating was transferred to occupants who lacked the resources to undertake necessary work and without adequate clarification of property rights over common parts. While the need is great, the governments may lack the capacity to allocate funds effectively and to ensure that these funds lead to sustainable improvements. It is not simply funding that is required, but changes in regulation, property rights and responsibilities. However the potential benefit is that the households do benefit from the cost-savings stream from energy savings which can at least in principle help to repay JESSICA loans.

Refurbishment of existing structures is often preferred to demolition and rebuild. Refurbishment is generally considered to be a more environmentally sustainable approach, residents often prefer it, and it may anyway be legally required in the case of historic buildings or areas. However despite the fact that it is a less dramatic intervention than demolition and new build, it is not necessarily cheaper—on the contrary, it is often more expensive. There may thus be a tension between maximising the amount of new housing that can be created for a given amount of subsidy, and creating an environmentally and socially sustainable outcome.

Financing and subsidy arrangements

The general trend across Europe has been away from revenue and interest-rate subsidies, particularly because these can be open-ended, in favour of capital grants that can both be cash-limited and targeted more effectively at particular groups and localities (Table 2). In general, the reduction in subsidy has led to a fall in investment in social housing. The exception here is undoubtedly France where a continued emphasis on subsidised debt finance has enabled development to be maintained (OECD, 2011).

Over the last twenty years, as financial markets have been deregulated and opportunities for borrowing have grown, social landlords have increasingly been expected to borrow on the private market (although often benefiting from explicit or implicit government guarantees as well as the security of rental income achieved with the help of income-related support for tenants).

The market for large-scale borrowing by social landlords undertaking new or improvement investment has been most developed in the Netherlands and in England. In both countries risk premia have been reduced to minimal levels and there have been many providers of debt finance. Whether this situation will be maintained in the face of the continuing financial crisis is as yet unclear. But rental revenues remain relatively secure so perhaps the longer term future is reasonably positive. More generally, the capacity to raise debt finance depends heavily on the certainty of the rental stream, on the one hand, and the capacity of social landlords use the value of existing stock as collateral. Both of these conditions depend on the specific legal framework of each

country. Where these rights are restricted it may be difficult or impossible to raise debt on the private market.

Exploiting the potential from housing subsidy and finance

There are a number of ways to exploit the potential offered by housing subsidies and past investment:

- Over time as rents rise and interest payments fall, the rents on older properties can be used to cross-subsidise new building and regeneration. This cross-subsidy may take place at the level of the individual estate, the owner or at national level. This is possible in countries that have had a long history of social housing unless rents of individual units are kept at historic cost.
- Existing units can be sold to either their tenants or to equity financiers (as in Germany) to provide funding which can be made available to replace the stock at least in part (although the funds are often siphoned off for other uses as happened in both the UK and in Germany). Proceeds from sales of new buildings to low-cost homeownership purchasers can immediately be recycled to provide additional investment (as in the UK for shared ownership).
- Many European social housing providers hold unencumbered capital assets on which no return is required. They also own land and other assets. These assets can be used as collateral to enable social owners to raise finance for new investment. Regeneration projects may also allow the land and physical assets to be used more efficiently, especially where the projects involve increasing the density of provision.
- Many social sector providers particularly in the Netherlands, the UK and Scandinavian countries have significant reserves built up from subsidies and from rental income. These assets enable them to hold rents down. They also present opportunities to enable additional investment, particularly by providing internal subsidies in the early years which can be reimbursed as rents rise into the longer term and surpluses are made.
- In addition to the direct commitment of equity, the asset base can be supplemented by debt finance in order to lever in private funding to social investment. In this context, the increasing capital values of social housing stock have enabled social landlords to borrow against these higher values to allow additional investment. This approach is prevalent in West European countries where PPPs are well advanced. In Eastern Europe there has been less opportunity to create such financial structures because of the rapid disinvestment in socially owned property. Valuation principles – which usually provide that the value of a building should be based on existing use values including the effects of rent controls - can also reduce the capacity to borrow against the available capital.

JESSICA instruments need to be tailored to the ownership structure and financing practices of each country if they are to support additional housing and mixed-use investment. This almost certainly means that the best opportunities will be in countries that still have a significant social sector in place and use relatively simple government financing arrangements – but also where rents can rise with standards. Here JESSICA⁶ can enable additional investment in energy efficiency standards within the existing stock as well as new investment in urban regeneration including housing for marginalised communities.

Rents and capital values

Perhaps the most important factor affecting the feasibility of employing PPPs and debt finance is the system of rent determination and security of tenure. In particular, if the owner of a dwelling has no or limited rights to sell the property, and rent levels and/or increases are controlled, then the capital value of the dwelling is constrained to the discounted value of future rents. As the dwelling acts as security for debt finance, any limits on this value will also limit the amount of debt it can secure. This may be further reduced by lenders' assessment of the risk of limits on future rent changes and/or changes in income support and housing allowances. In this context it is extremely important to remember that affordable housing is not just an asset which can be used to support further investment, but is also home generally to relatively deprived households. How this tension is addressed varies greatly between countries. In some cases, government policy means that it is impossible or extremely expensive for social landlords to raise equity from the private sector. In

⁶ If there is no market failure, there is no scope for FELs using ERDF resources.

these cases JESSICA can provide a useful source of funding at below market rates. Thus the maturity of the local market as well as policy interventions influence the value of using JESSICA for social investment in housing.

Table 1 Definitions of social and private renting and their relationship - Examples across the EU

Country	Social renting definition	Private renting definition	Social rent determination and relationship between social and private rents (not adjusted for quality)
Austria	Constructed by municipalities or non-profit housing associations	All other types	Cost based Social rents average around 85% of market
Belgium	Constructed or owned by public institutions	Owned by private persons	No direct relationship
Czech Republic	No official definition. Some municipal housing (20% of stock) let at regulated rents but not income targeted.	Not owned by municipalities or co-operatives.	Rents on old leases regulated.
Denmark	Properties let by non-profit housing associations	All properties not let by housing associations	Estate cost based
Germany	For dwellings constructed in or after 1949: Those in receipt of government aid (social obligation usually time limited)	All other dwellings	Mirror rents – i.e. rents related to market rents but smoothing out volatility and other market failures
Finland	Properties owned by communities or non-profit organisations and financed with a state-subsidised loan	All unsubsidised units whether owned by private individuals and organisations or public communities	Cost based Social rents average around 90% of private
France	Wholly based on ownership – HLMs and other agencies	All other rented housing	Cost based Social rents average around 63% of private
Italy	Defined as social if rent set by region and allocations determined by municipalities	Market rents and allocation	Cost based Average social rents 30% of market
Malta	Owned by government with subsidised rents	All other rented property	
Netherlands	Subsidised dwellings rented out by HAs and municipalities at sub-market rents	All other properties	Value based Average around 50% of private
Poland	Dwellings owned by municipalities, Low-Cost Housing Societies and public employers	All the rest	Cost rents

Sources: CECODHAS 2007; Dol and Haffner 2011.

Note: Countries with no or tiny social rented sectors include: Bulgaria, Cyprus, Estonia, Greece, Hungary, Lithuania, and Latvia. Privatisation in many EU12 countries has reduced the social sector by over 90% since 1990. In Cyprus and Greece there is no history of social housing.

Table 2 Government policies to support supply of new and improved social housing (not exhaustive)

Subsidies	Tax concessions	Regulations
<ul style="list-style-type: none"> • Subsidised loans for developers of social housing – this was the traditional approach but has been phased out in most countries, e.g. in Scandinavia. • Grants for construction or renovation of social housing – which may be a fixed amount or a residual payment based on expected future rental income. In most countries such housing remains social in perpetuity, but in some its ‘social’ status is time-limited (Germany; France). Some countries fund owner-occupied social housing as well as rental. Many have specific grants for improvement and for energy efficiency. • Central and local government guarantees for housing association loans (France, Netherlands). • Government guarantees of rent or mortgage payments from low-income households. • Provision of land for social housing at zero cost or below market value. In some cases instead of direct transfer of the land the authority takes an equity stake in the project equal to the land’s value. This is particularly relevant for shared-equity housing homeowners. • Give grants to bring empty homes back into use as a quid pro quo for allocation rights. • Income related subsidies for the payment of rent. 	<p>Income tax</p> <ul style="list-style-type: none"> • Exemption of providers of social housing from income tax. • Tax relief on investment in construction of social housing for rent or sale, to be set against income from all sources. • Tax relief for interest from mortgage-backed securities used to fund low-interest mortgages or low-income housing. • Tax relief to support investment in energy efficiency etc. <p>VAT</p> <ul style="list-style-type: none"> • Lower rate of VAT for social housing providers on new building and improvement. 	<ul style="list-style-type: none"> • Rent controls on existing and new social dwellings - often in the form of cost-based rents. • Controls on rent increases relating to inflation, costs, incomes or other tenures. • Requirements that new and improved dwellings meet energy efficiency and other regulations. • Allocation rules which ensure allocations to particular, usually vulnerable but also employment related groups. • Regulations requiring developers to include a certain percentage of affordable housing in new developments. The regulations may apply to developers of commercial as well as residential buildings.

Source: *Holmans et al (2002); Whitehead & Scanlon (2007).*

2 Housing in the 2007-2013 programming cycle and transition to the next programming cycle

On one hand, the aim of this part of this chapter is to describe the structure of the regulatory framework. On the other, it is to analyse how MSs have used their allocated budgets and the opportunities offered by the regulations under the housing theme. We also give recommendations on how to incorporate and further develop housing within JESSICA operations in the remaining part of the current cycle and the next programming period.

2.1 EU regulatory framework in housing

Cohesion policy has had a central role in the EU response to the economic crisis, as shown by a series of amending regulations. The key amending regulations are listed in Tables 3 and 4, and their substance is described below. We examine the objectives of the amendments, the eligible interventions in terms of housing investment, and other eligibility issues and challenges.

Chronology of changes to the regulatory framework

2007

In 2007, at the beginning of the current programming period, the SFs first allowed European regions and cities to support the renovation of existing residential buildings. At first, Article 7 of Regulation (EC) 1080/2006 (ERDF regulation) allowed only those MSs that had acceded to the EU on or after 1 May 2004, the EU12 countries, to use ERDF funding for housing, and in particular to refurbish multi-family and social housing dwellings. The maximum permitted allocation to housing expenditure was either 3% of the ERDF allocation to the OP concerned, or 2% of the country's total ERDF allocation. Despite some significant achievements in the field of refurbishment in EU12, much of its housing still requires improvement. Most of the housing-related ERDF allocations in EU12 countries went to the upgrading of concrete panel blocks of flats.

Box 1. Eligibility of expenditure Art 7.(2) REGULATION (EC) No 1080/2006

Art 7(2) Expenditure on housing shall be eligible only for those MSs that acceded to the EU on or after 1 May 2004 and in the following circumstances:

- a) expenditure shall be programmed within the framework of an integrated urban development operation or priority axis for areas experiencing or threatened by physical deterioration and social exclusion;*
- b) the allocation to housing expenditure shall be either a maximum of 3 % of the ERDF allocation to the OPs concerned or 2 % of the total ERDF allocation;*
- c) expenditure shall be limited to:*
 - multi-family housing, or*
 - buildings owned by public authorities or non-profit operators for use as housing designated for low-income households or people with special needs.*

2009

In 2009, cohesion policy responded to the economic crisis as part of the follow-up to the European Economic Recovery Plan. In terms of this study, the most important change was the amendment (*Regulation (EC) No 397/2009*⁷) of the ERDF regulation to allow all MSs to spend up to 4% of their total ERDF allocation on energy efficiency improvements and renewable energy sources (hereafter EE/RES) in existing housing. For instance, national, regional or local authorities could now use ERDF co-financing for installation of double glazing, wall insulation or solar panels in housing, or replacement of old boilers with more energy-efficient ones. Although there is no 'new money,' the amendment has opened up the possibility of investing up to about EUR 8bn in European housing.

⁷ Previously MS could only use ERDF allocations for EE/RES measures in public buildings (not housing): e.g. improvement of EE/RES installation on buildings and grid connections.

⁸ REGULATION (EC) No 397/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 May 2009 amending Regulation (EC) No 1080/2006 on the ERDF as regards the eligibility of energy efficiency and renewable energy investments in housing.

Whether this possibility will be realised depends on the extent to which MS choose to re-allocate their funds and prioritise housing measures.

Box 2. Article 7 of Regulation (EC) No 1080/2006 is hereby amended as follows in Regulation (EC) No 397/2009:

In each MS, expenditure on energy efficiency improvements and on the use of renewable energy in existing housing shall be eligible up to an amount of 4 % of the total ERDF allocation. MS shall define categories of eligible housing in national rules, in conformity with Article 56(4) of Regulation (EC) No 1083/2006, in order to support social cohesion.

2010

In 2010, the ERDF regulations were further amended (*Regulation (EU) No 437/2010*⁹) to allow the replacement of existing houses as well as the construction of new ones in both rural and urban areas for 'marginalised communities' in all MSs. These changes, like those in 2009, do not increase funding or affect the Community budget, but they do enable MSs to shift their priorities in order to finance measures in this field.

Box 3. Article 7(2) of Regulation (EC) No 1080/2006 is hereby amended as follows in Regulation (EC) No 437/2010:

(a) for the MSs that acceded to the EU on or after 1 May 2004 and within the framework of an integrated urban development approach for areas experiencing or threatened by physical deterioration and social exclusion;
(b) for all MSs only within the framework of an integrated approach for marginalised communities.

Also in 2010, an amendment of Article 44 of the General Regulation enabled JESSICA initiative to finance housing in integrated JESSICA projects in all 27 MSs. The Article states that '*as part of an OP, the SFs may finance expenditure in respect of an operation comprising contributions to support funds or other incentive schemes providing loans, guarantees for repayable investments, or equivalent instruments, for energy efficiency and use of renewable energy in buildings, including in existing housing.*' Where UDFs also support, together with other urban projects, projects related to energy efficiency and use of renewable energy in buildings, including in existing housing, such projects should be included in integrated plans for sustainable urban development. However, where funds or other incentive schemes invest exclusively in projects for energy efficiency and use of renewable energy in buildings, including in existing housing, it is not obligatory to include them in integrated plans for sustainable urban development.

The study also looked at two guidance notes on housing produced in the context of the Coordination Committee of the Funds (COCOF), a standing committee of the EC established to discuss issues relating to the implementation of Structural and Cohesion funds:

- *COCOF Guidance Note on eligibility of energy efficiency and renewable energies interventions under the ERDF and Cohesion Fund (2007-2013) in the building sector including housing (COCOF 08/0034/04).* This makes it clear that ERDF resources can be combined using grants and Financial Engineering Instruments (FEIs) such as JESSICA to open up new opportunities in the housing sector, stating that 'the possibility of combining grants and repayable financing opens up new opportunities to address a wide range of market gaps, namely through incentives to investments with long-term break even financial returns or to beneficiaries with low financing capacity'; and
- *COCOF Guidance Note on the implementation of integrated housing interventions in favour of marginalised communities under the ERDF (COCOF 10/0024/01).* It is a guidance for national authorities, implementing bodies, project promoters and beneficiaries in setting up integrated housing interventions in favour of marginalised communities, including marginalised Roma communities, under the Regulation (EC) No 1080/2006 (ERDF Regulation), as amended by

⁹ REGULATION (EU) No 437/2010 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 May 2010 amending Regulation (EC) No 1080/2006 on the ERDF as regards the eligibility of housing interventions in favour of marginalised communities.

Regulation (EU) No 437/20101, and Article 47 of Regulation (EC) No 1828/2006 (the Implementing Regulation), as amended by Regulation (EU) No 832/2010.

The current regulatory position

Table 3 and Table 4 below show the potential for measures in housing funded by the ERDF in the EU15 and EU12. Integration means that housing measures should be seen in the context of sustainable urban development.

Amended Article 7 states that EE/RES measures can be undertaken in MSs (defined categories of housing) in order to support social cohesion. MSs themselves are permitted to define social cohesion. In the EU15 MSs, expenditure on these categories of housing measures is restricted to 4% of the total ERDF allocation. A further 2% of the allocation may be spent on the renovation or replacement of housing for marginalised communities within the framework of an overall socio-economic policy for these communities. Both these types of measures can be used in urban or rural areas.

In the EU12 MSs the same limits apply, except that in these countries the 2% allocation for marginalised communities can also be used for the renovation of common parts in existing multi-family housing or the delivery of modern social housing through the renovation or change of use of existing buildings owned by public authorities.

Table 3 Eligible ERDF funded housing interventions (EU15)

Year	Regulation	Allowable housing measures under ERDF	Allocation	Integration	Area focus
2009 (EU27)	Article 1 of Regulation (EC) No 397/2009 Amendment (a new addition of Article (1a)) to replace Article 7 (2) of Regulation (EC) 1080/2006)	EE/RES in existing housing	Up to 4% of the MS's total ERDF allocation	MS shall define categories of eligible housing in national rules, in conformity with Article 56(4) of Regulation (EC) No 1083/2006 ¹⁰ , in order to support social cohesion.'	Urban or rural areas
2010 (EU27)	Article 1 of Regulation (EC) No 437/2010 Amendment to Article 7(2) Regulation (EC) 1080/2006	Renovation and replacement of housing for marginalised communities . Measures may include: 1. renovation of the common parts of existing multi-family housing 2. renovation and change of use of existing buildings owned by public authorities or non-profit operators for use as housing designated for low- income persons or people with special needs.	Maximum of 3% of the ERDF allocation to an OP, or 2% of the total ERDF allocation	Within the framework of an integrated approach for marginalised communities (including education, health, social affairs, employment etc.)	Urban or rural areas

¹⁰ Article 56(4) Regulation (EC) No 1083/2006: 'The rules on the eligibility of expenditure shall be laid down at national level subject to the exceptions provided for in the specific Regulations for each Fund. They shall cover the entirety of the expenditure declared under the OP.'

Table 4 Eligible ERDF funded housing interventions (EU12)

Year	Regulation	Allowable measures	Allocation	Integration	Area Focus
2007 (EU12)	Article 47 of Regulation (EC) No 846/2009 Amendment to Article 7(2) of Regulation (EC) 1080/2006 and to Article 47 of Regulation (EC) 1828/2006	<p>Renovation of common parts in existing multi-family housing including:</p> <ul style="list-style-type: none"> - refurbishment of the following main structural parts of the building: roof, façade, windows and doors on the façade, staircase, inside and outside corridors, entrances and their exteriors, elevator; - technical installations of the building; - energy efficiency actions. <p>Delivery of modern social housing of good quality through renovation and change of use of existing buildings owned by public authorities or non-profit operators.</p>	Maximum of 3% of the ERDF allocation to an OP or 2% of the total ERDF allocation	Provision of good quality accommodation for lower income groups, including recently privatised housing stock, as well as accommodation for vulnerable social groups	Deprived urban areas (areas experiencing or threatened by physical deterioration and social exclusion) ¹¹

¹¹ Article 47 of Regulation 1828/2006 specifies that 'In determining areas referred to in Article 7(2) (a) of Regulation No 1080/2006, MS shall take into consideration at least one of the following criteria: (a) a high level of poverty and exclusion; (b) a high level of long-term unemployment; (c) precarious demographic trends; (d) a low level of education, significant skills deficiencies and high dropout rates from school; (e) high level of criminality and delinquency; (f) a particularly rundown environment; (g) a low level of economic activity; (h) a high number of immigrants, ethnic and minority groups, or refugees; (i) a comparatively low level of housing value; (j) a low level of energy performance in buildings.'

<p>2009 (EU27)</p>	<p>Article 1 of Regulation (EC) No 397/2009</p> <p>Amendment (a new addition of Article (1a)) to replace Article 7 (2) of Regulation (EC) 1080/2006)</p>	<p>EE/RES in existing housing</p>	<p>Up to 4% of the MS's total ERDF allocation</p>	<p>Eligible categories of housing defined by national authorities in order to support social cohesion</p>	<p>Urban or rural areas</p>
<p>2010 (EU27)</p>	<p>Article 1 of Regulation (EC) No 437/2010</p> <p>Amendment to Article 7(2) Regulation (EC) 1080/2006</p>	<p>Renovation and replacement of housing for marginalised communities. The housing or buildings must be owned or bought by public authorities or non-profit operators and remain in their ownership for at least five years</p>	<p>Maximum of 3% of the ERDF allocation to an OP or 2% of the total ERDF allocation (not in addition to above)</p>	<p>Within the framework of an integrated approach for marginalised communities (including education, health, social affairs, employment etc.)</p>	<p>Urban or rural areas</p>

The SFs regulation regarding eligible expenditures¹²

As Table 4 shows, the EU12 countries were initially permitted to use SFs for the renovation of the common parts of multi-family residential buildings and the delivery of good quality social housing through renovation and change of use of existing buildings owned by public authorities or non-profit operators. From June 2009, Article 47 of Regulation (EC) No 846/2009 amending Article 47 of the General Regulation and Article 1 of Regulation (EC) No 397/2009 amending Article 7 of the ERDF Regulation confirms the use ERDF co-financing for national, regional and local schemes related to the insulation of walls, roofing and windows, solar panels, and replacement of old boilers throughout the EU MSs. MSs are responsible for defining the categories of housing which may benefit from this measure, bearing in mind the overall objective of supporting social cohesion. This can be interpreted as a signal that measures should be targeted at housing owned or rented by low-income households (CECODHAS, 2011)¹³.

From the 2007-2013 programming period according to the General Regulation (Regulation (EC) 1080/2006) and the Implementing Regulation (Regulation (EC) 1828/2006) in the EU12, the reimbursement of ERDF-eligible expenditure was based on real cost, meaning that to receive one euro in the form of grants, the project promoter had to present evidence of at least one euro of justified paid eligible expenditure¹⁴. The justification of expenditures was based on invoices or other accounting documents and all supporting documents had to be kept available for at least three years after the closure of the programme.

Article 1 of Regulation (EC) No 397/2009 (amendment of regulation (EC) 1080/2006) aims to provide easier access to ERDF co-financing by increasing the allowable share of energy efficiency investment in the total allocation, as well as simplifying the management, administration and control of ERDF operations. This is particularly helpful considering the heavy administrative burden associated with the use of ERDF funds. It widened eligible expenditure to include indirect costs, flat-rate costs and lump sums, and substantially reduced the required paperwork under specific conditions¹⁵:

Box 4. Article 7 of Regulation (EC) No 1080/2006 is hereby amended as follows in Regulation (EC) No 397/2009:

In the case of grants the following costs shall be expenditure eligible for a contribution from the ERDF, provided that they are incurred in accordance with national rules, including accountancy rules, and under the specific conditions provided for below:

- a. **indirect costs**, declared on a flat-rate basis, of up to 20 % of the direct costs of an operation;
- b. **flat-rate costs** calculated by application of standard scales of unit cost as defined by the MS;
- c. **lump sums** to cover all or part of the costs of an operation.

The options referred to in points (i), (ii) and (iii) may be combined only where each of them covers a different category of eligible costs or where they are used for different projects within the same operation.

The costs referred to in points (i), (ii) and (iii) shall be established in advance on the basis of a fair, equitable and verifiable calculation.

The lump sum referred to in point (iii) shall not exceed EUR 50 000.'

¹² Regulation (EC) No. 397/2009 amending the Regulation (EC) No. 1080/2006 as regards the eligibility of energy efficiency and renewable energy investments in housing.

¹³ CECODHAS (2011), The impact of SFs on affordable housing – Success stories and recommendations for the future, available on the website:
http://www.housingeurope.eu/www.housingeurope.eu/uploads/file_/housing_structural_funds3_web.pdf

¹⁴ For this objective, the following ceilings apply to co-financing rates:

- 75 % of public expenditure co-financed by the ERDF or the ESF. The ceiling can be raised to 80 % where the eligible regions are located in a MS covered by the Cohesion Fund, and even to 85 % in the case of the outermost regions;
- 50 % of public expenditure co-financed in the outermost regions (a new additional allocation from the ERDF to compensate for excess costs).
http://europa.eu/legislation_summaries/agriculture/general_framework/g24231_en.htm.

¹⁵ ERDF 2007 – 2013 Calculating Overhead Costs, ERDF-GN-38 Issue 3 July 2011.

The following example shows how UK adopted the eligibility rules on the basis of their national eligibility rules:

Indirect costs are defined as those costs not directly linked with the project but necessary for its successful implementation. They can be declared on a flat-rate basis and this rate will be the ratio between indirect costs and direct costs, up to a maximum of 20%. When this option is chosen, a full audit trail of all the expenditure used to establish the applicable flat rate will need to be retained for the full record retention period of the programme (in the UK, currently estimated to be 2025). This methodology is considered to be appropriate for complex organisations or projects where demonstration of the detailed audit trail for indirect costs would cause a disproportionate administrative burden. Projects where the demonstration of indirect costs can easily be established should use the real cost methodology.

Flat-rate costs are calculated by applying standard scales of unit costs as defined by MS. This methodology is only applicable in national programmes where the deliverers are chosen via open tender and payment is by results rather than by expenditure.

Lump sums can cover all or part of the costs of an operation, up to a limit of EUR 50,000. This methodology is only appropriate for very small projects. The lump sums must be covered by an agreement on the activities or outputs covered, and payment must depend on the completion of these activities.

These three options may be combined only when each of them covers a different category of activities or when they are used on different projects within the same operation.

Challenges arising from the SF Regulations

Field of EE/RES

Although the SFs have helped MAs support refurbishment in field of energy efficiency and renewable energy since the beginning of the current programming period in EU12 and since 2009 in all MSs, there is still much to be done to improve housing conditions in Europe. Most examples of ERDF-funded housing projects involve the upgrading of concrete multi-family apartment buildings in social or recently privatised housing in the EU12, as well as large-scale investments in social housing in France. Since it is up to MSs to define the eligible categories of housing, some countries could decide to further support energy efficiency improvements in parts of the private housing market. Because MSs must ensure that the measures support social cohesion, this suggests that social and/or cooperative housing will be the main types of beneficiaries. To date there are rarely any clear national guidelines except that beneficiaries should be low income and in mixed developments¹⁶.

Other energy interventions that benefit housing

In addition to the allocations for energy-focused improvements to housing there are energy-focused actions not considered to be housing expenditure but from which the housing sector can benefit. These include¹⁷:

- Services which are part of an integrated urban development plan in Article 8 of 1080/2006 such as energy audits (also elaborated in Article 3(l) of Directive 2006/32/EC), monitoring and evaluation the energy performance of buildings (including those serving housing purposes) organised by the public authorities; elaboration of local energy-efficiency strategies or action plans.
- Capacity-building for staff, for instance in co-owners associations or municipalities; information campaigns for consumers on the rational use of energy, energy saving, renewable energies and climate change.

¹⁶ UK example - <http://www.communities.gov.uk/documents/regeneration/pdf/19272161.pdf>; and http://england.shelter.org.uk/__data/assets/pdf_file/0009/132030/Factsheet_Immigration_and_housing.pdf

¹⁷ Guidance note on eligibility of energy efficiency and renewable energies interventions under the ERDF and the Cohesion Fund (2007-2013) in the building sector including housing (COCOF 08/0034/04/EN). http://www.eib.org/attachments/jessica_energy_en.pdf

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- Different forms of investment supplying energy via networks to a defined geographical area. These investments might encompass district heating systems, cogeneration units, renewable energy parks (solar, wind), and energy-transport networks.

Marginalised communities

The Commission does not provide a definition for marginalised communities. The regulation explicitly mentions Roma but does not limit the definition to this group. In the Commission's view, the MSs should target those populations most in need of help, and are therefore encouraged to identify clearly the populations they consider to be marginalised. Marginalisation can be established by looking at a combination of relevant indicators such as measures of high long-term unemployment, low level of education attainment, discrimination, (extremely) poor housing conditions, and disproportionate exposure to health risks and/or lack of access to health care (EUROSTAT, 2010).

Several countries of the EU12 have large Roma populations. They often suffer from very poor housing conditions but generally own their own homes rather than living in social or public housing. However, the Commission's guidance states that housing or buildings that are the subject of eligible expenditure must be owned by public authorities or non-profit operators or acquired by them for that purpose' and subsequently remain in such ownership for at least five years.

2.1.1 Technical directives on the energy performance of buildings

The most important project-specific technical directive for housing is Directive 2010/31/EU on the energy performance of buildings, which is a recast of the original Directive 2002/91/EC.

The recast contained two amendments that are relevant for housing measures:

- the application of minimum requirements for the energy performance of any large existing buildings that are subject to major renovation--this will be relevant to measures in existing large blocks of apartments;
- the requirement for the production of an Energy Performance Certificate (EPC) whenever a building is sold, constructed or rented out.

The purpose of EPCs is to increase information on the energy efficiency of buildings. Their impact on the housing market has not yet been quantified, although they are expected to influence individual behaviour and increase the demand for energy efficiency investments in housing. MSs are free to set the minimum requirements in the above two clauses.

2.1.2 State aid rules

As with all SFs, any use of Urban Development Funds for housing will be governed by the EU regulations on State aid. This is a complex field of EU law whose main aim is to ensure that direct or indirect recipients of government subsidies do not have an unfair advantage in intra-community trade over organisations or firms that do not receive such subsidies—in short, to ensure fair competition. In general, state subsidies (State aid) are prohibited unless there is a specific exemption allowing them. According to Recital 26 of Regulation No 1828/2006, contributions to FEIs from an OP or other public sources, as well as the investments made by FEIs into individual projects, are subject to the State aid rules. Housing and housing providers were not among the original targets of the competition rules, but the Commission has interpreted them such that they apply to housing as well.

In terms of EU competition rules, governments are allowed to subsidise those services that they classify as ‘Services of General Interest’ (SGI). The Commission has defined SGI as ‘services, both economic and non-economic, which the public authorities classify as being of general interest and subject to specific public service obligations’—broadly speaking, public services.

Until fairly recently it was assumed that social housing was not subject to the European legal framework regulating economic activities. Only in the late 1990s and early 2000s did some MSs, including the Republic of Ireland, the UK, Italy, the Netherlands, Germany, Sweden and the Czech Republic, start to report their systems for funding and subsidising housing to the EC, with a view to obtaining legal certainty about their right to develop and modernise the sector. In some of these countries (Ireland in particular) social housing represented a very small proportion of the housing stock and accommodated only very low-income families. Other MSs, notably Sweden and the Netherlands, operated a ‘universalist’ system with social housing open to households of all income groups.

EU15

A series of legal rulings gradually clarified the position of the Commission: that MSs could only subsidise social housing if access was limited to low-income or vulnerable households and that the amount of subsidy had to be no more than what was strictly necessary. In response to the notification by the Dutch government and complaints to the Commission in 2005, the EC ruled that because its housing associations rented housing to high-income groups, it was a ‘manifest error’ to call Dutch social housing a service of general interest. In 2002 the European Property Federation filed a complaint with the Commission against State aid granted to Swedish municipal housing companies or MHCs (social housing providers owned by municipalities), alleging that State aid should not be permitted as the MHCs competed directly with private landlords. Around the same time, a consortium of French and Dutch banks filed a similar complaint challenging a French state-subsidised savings system for funding social housing. The outcomes of these complaints reinforced the limits on the activities of subsidised social-housing providers.

*Dutch case study: The Netherlands existing and special project aid to housing corporations
Analysis of the EC Decision (State aid No E 2/2005 and N 642/2009)¹⁸*

The social housing sector in the Netherlands is proportionally the largest in Europe (Wassenberg, 2009). One third of the population lives in dwelling owned and managed by the housing associations or '*woningcorporaties*', known as *wocos*. Wocos are non-profit organisations but operate like businesses, which raise legitimacy questions (Boelhouwer, 2007). In particular, there has been concern about whether their activities complied with EC competition rules. Their basic mission is to acquire, build and rent out dwellings mainly for disadvantaged citizens and socially less advantaged groups, but they engage in other activities as well, such as constructing and renting out commercial premises etc. In addition, wocos are active in the construction of owner-occupied homes, and accounted for 14 % of new construction in 2007.

In 1995, housing associations officially became independent from state subsidies. No government money goes to housing associations and government intervenes only if housing associations infringe the rules that govern their behaviour (Wassenberg, 2009). Nonetheless, they still benefit from other forms of support from the government:

- State guarantees for their borrowings from the Social Housing Guarantee Fund (Waarborgfonds Sociale Woningbouw). Wocos are estimated to benefit from EUR 300 million yearly in the form of lower financing costs due to the state guarantee.
- Support from the Central Housing Fund (*Centraal Fonds Volkshuisvesting*, hereinafter 'CFV'). The aid from the CFV is financed from a general levy on all the wocos and not from general taxation. In other words, the CFV basically redistributes funds from financially healthier wocos towards weaker ones if and to the extent needed.
- Sale of public land by the municipalities at a price below market value. This form of support is available to wocos for certain specific projects.
- Right to borrow from the Dutch Municipality Bank (*Bank Nederlandse Gemeenten*, hereinafter 'BNG'), a special-purpose public bank with an exceptionally good credit rating. Only public bodies, mainly municipalities and the wocos, can borrow from the BNG.

On 14 July 2005 the EC expressed doubts with regard to the compatibility of the Dutch social housing support systems with State aid rules. The fact that more than 30% of the housing stock was owned by bodies that received State aid seemed out of line with the idea of housing targeted at the 'most vulnerable' households.

*Case E 2/2005 'Existing law and financing methods for Dutch Housing Corporations'
(C(2009)9963 final, Decision on 15 December 2009)¹⁹*

Following the Commission's investigation, the Dutch authority changed the social housing system to become more transparent and focused on a clearly defined target group of socially less advantaged persons. (Commercial activities can no longer benefit from aid. In commercial housing markets, social housing companies will need to compete on the same conditions as other operators.) The Commission's investigation found that the aid is in line with the State aid rules, and in particular the Commission's Services of General Economic Interest (SGEI) decision in 2005²⁰.

Case N 642/2009: The 'Special project aid'

In 18 November 2009, the Dutch authorities notified a new aid scheme for the revival of declining urban regions, named 'special project aid'. The purpose is to improve the liveability of the most deprived urban communities which were selected on the basis of socio-economic indicators such as the level of income, unemployment, literacy, crime rate, etc. Due to the disadvantaged nature of these areas, the Dutch authorities consider that additional resources have to be employed to regenerate them and prevent the worsening of existing social problems. The programme provides

¹⁸ http://ec.europa.eu/eu_law/state_aids/comp-2009/n642-09-en.pdf.

¹⁹ <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/1928>.

²⁰ Official Journal L 312, 29.11.2005, p. 67–73.

direct grants to wocos for major urban renewal programmes, investing EUR 750mn over the next 10 years in 40 targeted areas.

The new rules were implemented with a new ministerial decree from 1 January 2010 and a new Housing Act from 1 January 2011. Aid will be made available to the wocos under certain conditions where the two main conditions are:

- The target group of socially disadvantaged households will be defined as individuals with an income not exceeding EUR 33,000. This definition covers approximately 43 % of the Dutch population. The ceiling will be indexed every year.
- The maximum monthly rent in social housing will amount to EUR 647.53. This ceiling is subject to annual indexation.

According to CECODHAS²¹, it means that only single-income households with a gross annual income of less than EUR 33,000, senior citizens with a very small pension and people on benefits will be eligible for public-sector rented accommodation. The average price for a single-family house in the Netherlands is EUR 209,000 and rented housing costing more than EUR 647.53 a month is in very short supply, making up just 6% of all rented accommodation. People with middle incomes who live in public-sector rented accommodation now are already less inclined to move to slightly more expensive accommodation, which would free up room for first-time renters.

Draft decision on State aid

In September 2011, the Commission published a draft decision clarifying State aid rules, which mentions social housing in particular. This decision contains three points that facilitate the provision of subsidies to social housing. First, there will no longer be a single EU definition of social housing; it is up to individual MSs to define the mission of social housing and the obligations of social landlords. Second, MSs in future will no longer have to notify the Commission of any State aid given to social landlords to cover the cost of executing their social-housing mission. Finally, recognising the long-term nature of housing investments, the public-service obligations of social housing providers can last for more than ten years (the maximum period in other fields). There are no thresholds for compensation or turnover. The decision came into effect in April 2012.

EU12

The EU12 represent a special case. In most of these countries, pre-1989 social or public housing consisted mainly of large-scale estates constructed of large-panel prefabricated buildings. Most of these neighbourhoods were privatised in the 1990s, with the dwellings given or sold at token prices to their residents. These generally low-income households thus assumed the responsibility for upkeep and repair of poorly constructed buildings that had received little or no maintenance since they were built. They now need thorough structural and energy-efficiency modernisation.

In 2005, the Czech Republic reported to the Commission its modernisation programme, consisting of the refurbishment of selected estates including improvement of energy efficiency, urban renewal and ghetto prevention. The State aid reported (EUR 63mn over a 4-year period) consisted of subsidised loans and bank guarantees to enable the co-owners to finance improvements. If the principles developed for Western Europe had been strictly applied in this case the aid would not have been eligible, as the buildings were no longer in social ownership. However, the EC concluded that such aid was compatible with the provisions of the EU Treaty.

The special provisions that permit EU12 to give State aid for the renovation of privately owned former social housing apply to JESSICA-financed energy-efficiency projects for such housing. However, the Commission's January 2011 guidance on housing for marginalised communities (COCOF 10/0024/01) makes clear that investment in housing for marginalised communities can only be permitted if 'the housing or buildings that are giving rise to eligible expenditure (are) owned by public authorities or non-profit operators or acquired by them for that purpose' and subsequently remain in such ownership for at least five years.

²¹ Comité Européen de Coordination de l'Habitat Social, the Brussels-based European organisation for public and social housing providers.

Practicalities

There are two ways in which JESSICA interventions could come under the purview of State aid rules. First, if JESSICA is used to set up a funding mechanism in partnership with a commercial bank or other financial intermediary, the selection of and assistance to this organisation must be congruent with State aid rules. State aid will be present if the financial intermediaries who participate in the scheme obtain conditions more favourable than those in the open market. If financial intermediaries are not selected through a public tendering process this in itself could constitute State aid, as there is a risk that competition could be affected. The competition regulations require that financial intermediaries be selected by open and transparent tendering procedures which apply objective criteria. Article 43(4) of Regulation No 1828/2006 further stipulates that management costs may not exceed a specified percentage, unless the competitive tender demonstrates that a higher percentage is necessary. If the specified percentages reflect market rates, then paying management costs to commercial banks would not be considered a State aid. The MS must ensure that there is an appropriate sharing of risk between the State and the financial intermediaries—if the State alone assumes most or all of the investment risk then banks would benefit from a competitive advantage which would be subject to notification under competition rules. If commercial banks act only as financial intermediaries for the disbursement of funds—rather than benefiting them from the aid—then this may avoid the issue of State aid.

Subsidies to direct beneficiaries must also be assessed in light of State aid rules. For energy-efficiency renovations, the beneficiaries may be government or non-profit social landlords (in non-EU12 countries) and/or homeowners' associations or management organizations in EU12 countries. For housing for marginalized communities, the beneficiaries will be public or non-profit social landlords. In cases where the direct Final Recipient is a social landlord, the State aid (in the form of below-market interest rates) will not need to be notified to the Commission.

For other beneficiaries, the *de minimis* rule²² may apply (limit EUR 200,000). If the *de minimis* rule does not apply, then the amount of aid should be calculated according to Article 4 of Regulation No 800/2008. This states that where aid is awarded in a form other than a grant, the aid amount to the beneficiaries shall be the grant equivalent of the aid.

Another potential Final Recipient of JESSICA loans for housing renovation investments is a state, state-owned or private company that borrows funds for investments to improve energy efficiency in multi-unit blocks (the Energy-Service Company or ESCO model). ESCOs borrow funds in order to implement energy-saving projects for their clients (homeowners or landlords), but the ESCOs themselves are considered to be the beneficiaries. The borrowing of such companies often exceeds the threshold for the *de minimis* rule, so the provision of loans to them on preferential terms may require notification to the Commission. Given the complexity and the frequent changes of the rules governing State aid it is strongly recommended that MAs take specialist legal advice on the admissibility of the particular legal and financial framework of their JESSICA project(s).

²² The *de minimis* rule exempts aid of less than EUR 200,000 from the requirement that the EC be notified in advance. (Regulation (EC) No 1998/2006 of 15 December 2006 on the application of Articles 87 and 88 of the Treaty to *de minimis* aid.) http://ec.europa.eu/competition/state_aid/legislation/sgei.html.

2.2 How MSs have exploited the opportunities offered in the regulatory framework to incorporate housing in their OPs

2.2.1 EE/RES components within existing housing

As shown in the previous Section, the new regulation provides that MS may use up to 4% of their total ERDF allocations on energy efficiency improvements and the use of renewable energy in existing housing. As a rough estimate, this 4% rule would permit MSs to allocate up to EUR 7.8bn on housing from (as shown in Table 5). However these are maxima and how much is actually used will depend on other priorities as well as the complexity and benefit/cost assessments of the programmes. In fact most MSs have spent very little of the available resources on housing. This is the case even in the EU12, where housing expenditure has been eligible since 2007. This is largely due to the fact that the regulations permitting housing investment came into effect after the OPs were finalised, and MSs did not revise them. However, some OPs were flexible enough to cover housing investment under the existing formulation.

Table 5 Potential outcome of using 4% of total ERDF allocations on housing

	Country	Total ERDF allocation 2007-2013 (Mn EUR)	4% of allocation 2007-2013
1.	Poland	34,000	1,360
2.	Spain	23,617	944
3.	Italy	21,873	875
4.	Germany	17,000	680
5.	Czech Republic	13,708	548
6.	Hungary	13,035	521
7.	Greece	12,359	494
8.	Portugal	11,938	478
9.	Romania	9,431	377
10.	France	8,924	357
11.	Slovakia	6,189	248
12.	United Kingdom	6,138	243
13.	Lithuania	3,551	142
14.	Bulgaria	3,385	135
15.	Latvia	2,530	101
16.	Slovenia	2,038	82
17.	Estonia	1,861	74
18.	Sweden	1,199	48
19.	Belgium	1,185	47
20.	Finland	1,097	44
21.	Netherlands	1,077	43
22.	Austria	936	37
23.	Malta	459	18
24.	Ireland	375	15
25.	Denmark	359	14
26.	Cyprus	306	12
27.	Luxembourg	40	2

Source: http://ec.europa.eu/regional_policy/sources/docgener/informat/info_en.htm

In the Commission's most recent report on the implementation of Cohesion policy programmes 2007-2013 (COM, 2010), interventions to support energy efficiency and renewable energy that can also be related to housing can be found under six budget codes:

- *renewable energy* (codes 39, 40, 41 and 42, which relate to wind, solar, biomass and hydro and other renewable sources);
- *energy efficiency* (code 43) and
- *housing infrastructure* (code 78)²³.

Several MSs have taken the opportunity to invest in energy efficiency in housing, contributing to an increase of the total planned allocations of cohesion policy funds to energy efficiency for 2007-2013 from EUR 4.2 billion in 2008 to EUR 5.1 billion in 2012 (only code 43 above). The regulatory amendment came out during the programming period, and most MSs have not changed their OPs (CECODHAS, 2009a), but in most cases the OPs were written broadly enough to allow the integration of housing. Those MS which have decided to allow projects for EE/RES in housing are mainly those whose OPs centre around issues of EE/RES, environment or climate.

However according to CECODHAS, in Eastern Europe, where housing has been eligible for ERDF funding since 2007, only EUR 802mn had actually been allocated to housing, which represented just 0.77% of the ERDF allocation to the EU12 and only 0.23% of the overall ERDF budget (CECODHAS, 2009a).

Examples from across EU

The following part of the study gives several examples of housing-related programmes and projects mainly funded by the ERDF. Most of the examples found during our analysis do not employ JESSICA, as to date there have been only a few examples of JESSICA-financed projects to improve housing, which will be described below. Therefore unless otherwise stated the housing related programmes assume ERDF support through grants and are given in order to illustrate how MSs have included housing operations in their OPs to date. The first five examples focus on energy efficiency and renewable energy projects, while the final examples look at housing for marginalised communities.

2.2.1.1 United Kingdom

The UK, like most of Western Europe, does not rely heavily on EU funding to finance renovation of its housing stock. EU money represents only a tiny fraction of the many billions of pounds that have been invested in recent years in urban renewal and upgrading social housing estates to meet the so-called Decent Homes Standard. Nevertheless, the change in the rules to allow use of ERDF funds for energy improvements in social housing has the potential to provide a useful supplement to existing resources. The UK experience is interesting because of the wealth of financial expertise that can be applied to the use of innovative financial instruments.

There are a small number of ERDF funded projects in the UK that include some element of housing investment, particularly energy efficiency improvements in social housing (for example the two cases mentioned in CECODHAS Mid-term review in 2010: Retrofit SE in Petersfield and Arbed in Wales). In December 2008 London was the first English region to sign a Memorandum of Understanding for a JESSICA initiative, and to date the city hosts England's only JESSICA scheme with a potential housing element. This scheme, the London Green Fund, is described below.

Operational Programme

The UK has several regional ERDF OPs; the London scheme is covered by the London OP. In the language of the OP, the programme aims 'to promote sustainable, environmentally efficient growth in London, capitalising on London's innovation and knowledge resources'. It focuses on promoting

²³ Regulation (EC) No 1828/2006 of 8 December 2006, Annex II: Categorisation of Funds assistance for 2007-2013
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:371:0001:0001:EN:PDF>

social inclusion through extending economic opportunities to communities, in areas where this is most needed. The OP covers the 2007-13 programming period and does not explicitly mention housing, which only became an eligible expenditure in EU15 in 2009. There are four main priorities:

- Business innovation and research and promoting eco-efficiency;
- Access to new markets and access to finance;
- Sustainable places for business, which includes improving the competitiveness of economically and socially deprived areas of London and securing their long-term regeneration through the development of high-quality working environments and low/zero carbon employment sites and premises;
- TA.

There are three cross-cutting themes alongside the economic development goals:

- Sustainable development;
- Equalities;
- Environmental sustainability.

The JESSICA-financed social housing interventions fall under the heading of promoting sustainable places for business, and contribute to both sustainable development and environmental sustainability.

JESSICA

The London Green Fund, launched in October 2009, is a GBP 100mn HF (EUR 116mn) which is funded by the ERDF (GBP 50mn), the London Development Agency (now called Greater London Authority)(GBP 32mn in cash and land/buildings) and the London Waste and Recycling Board (GBP 18mn cash). The EIB is the HF manager. The Green Fund itself funds two smaller UDFs:

- The Waste UDF(GBP 35mn)
- The Energy Efficiency UDF (GBP 50mn)

The London Plan (the city's existing spatial development plan) and the Mayor's Climate Change Mitigation and Energy Strategy together form an integrated plan for sustainable urban development. The Energy Efficiency UDF is designed to focus on the following types of projects: adapting or refurbishing existing public and voluntary-sector buildings to make them more sustainable and environmentally friendly, and energy-efficiency improvements to existing social housing. If the Investment Board agrees, the UDF's technical focus may evolve over time to include, for example, energy efficiency measures in the private sector or wider support for decentralised energy projects.

While the EIB manages the London Green Fund, each of the UDFs has its own manager. In September 2011 it was announced the Energy Efficiency UDF, to be called the LEEF, would be managed by the Amber Green Consortium, made up of Amber Infrastructure Limited, INPP, Arup and RBS.

RBS will invest up to GBP 50mn, more than meeting the London Development Agency's goal of securing at least GBP 20mn of external co-investing in order to achieve maximum leverage of Urban Development Funds. The consortium has now set up a website: www.leef.co.uk.

The fund has yet to make any investments into projects. It aims to make a minimum of GBP 70mn of investment (predominantly through senior or mezzanine loans) by end-December 2015 to public sector bodies and/or voluntary sector organisations for energy-efficiency measures to their building stock, and/or to private energy-service providers that have been engaged by public or voluntary landlords to do so on their behalf. LEEF is targeting investments of between GBP 3mn and GBP 10mn, but may lend up to GBP 20mn per project. Loans can in some circumstances be available for short or medium (5- to 10-year) terms, and LEEF can design repayment schedules that allow the borrowers to use revenue savings to make loan payments.

LEEF requires the projects it funds to aim to deliver energy savings of at least 20% compared to previous levels, and each GBP 1500 of LEEF investment should achieve a reduction of at least one

tonne of CO₂. LEEF can fund projects anywhere in the 33 London boroughs. It can lend to either public or private-sector bodies (such as ESCOs, which the report will cover separately during the in-depth studies), but the housing projects must involve eligible energy-efficiency work to homes owned by local authorities or housing associations. Eligible renovations include:

- Boiler replacements;
- Ventilation upgrades;
- Building fabric improvements;
- Efficient lighting;
- Controls and smart meters.

Although the fund has yet to commence operations, it provides a useful example in terms of the legal and financial structures employed and its area of operations.

2.2.1.2 Lithuania

Lithuania is one of two countries (alongside Estonia) that have already made significant investments in EE/RES in existing housing using a JESSICA instrument to extend the scope of their ERDF allocation. The Lithuania JESSICA initiative concentrates on the energy efficient renovation of multi-family apartment buildings. The buildings are owner-occupied, but the residents have many of the problems commonly concentrated in social housing: fuel poverty, low incomes, etc..

Operational Programme

Before the JESSICA initiative Lithuania had a national programme for investment in energy efficiency in public buildings and social housing using grant financing (not including ERDF), but no FEIs. They decided to pursue the JESSICA FEIs route because the EIB TA was attractive and the FEIs would allow them to stretch their resources further. The funding agreement between the EIB and the Ministries of Finance and Environment in Lithuania was signed under the National 'Promotion of Cohesion' OP in 2009. The total amount of EUR 227mn under the HF was composed of EUR 127mn from the ERDF and EUR 100mn from the two ministries. This means that the country has allocated approximately 90% of its 4% maximum ERDF allocation to energy efficiency in existing housing.

JESSICA

The HF has currently signed three agreements with separate UDFs under the first call for EOIs, which concentrated on loans to individual homeowners within multi-apartment buildings: with Siauliu Bankas in late May 2010, Swedbank in September 2010, and SEB in February 2011. Each of these agreements was for EUR 6mn. In November 2010 Siauliu Bankas signed an agreement for EUR 15 mn with apartment association beneficiaries. The third call for EOIs is for energy efficient renovation of student dormitories; the amount will be EUR 30 million. At present, EUR 149mn had been drawn down into the HF.

The Final Recipient of Lithuania's JESSICA initiative includes:

- Individual homeowners within multi-apartment buildings
- Apartment associations of multi-apartment buildings
- HEIs and vocational colleges with student dormitories

The types of energy efficient measures that the UDFs fund in existing housing include:

- Replacement of windows
- Replacement of doors
- Insulation of ceilings and roofs
- Insulation of walls
- Installation of solar panels
- Replacement of energy related equipment
- Replacement of elevators and electrical wiring in common areas

The HF has four main targets for the end of 2015:

- Renovation of 1000 multi-apartment buildings
- Renovation of 33 student dormitories in HEIs and 2 dormitories in vocational and training colleges
- 20% energy reduction in these buildings

The types of projects included in the operational agreement between the UDF and HF, and the investment strategy of the HF itself, all focus on generating energy efficiency in multi-apartment buildings.

Individual homeowners are eligible for loans of up to EUR 50,000 at a 3% interest rate (i.e., below the *de minimis* ceiling). When the Final Recipient is the apartment association the loans are disbursed at market rates because investments tend to be above the *de minimis* ceilings. According to Siauliu Bankas the estimated cost to renovate one apartment block containing 60 apartments, each of approximately 50m², is EUR 290,000. After the modernisation of each block the savings aim to be approximately 125 mWh/year.

All Final Recipients can get a 100% grant for project preparation from the Housing and Urban Development Agency (HUDA) until 31/12/2013, after which the grant will decrease to 50%. They can also get a 15% subsidy on their initial loan if the project reaches more than 20% energy efficiency. In addition, there is a proposal to give projects that attain energy efficiency improvements of 40% or more over baseline an additional 15% subsidy which will be financed from the National Climate Change programme. This additional 15% state support has not yet been approved by the government.

There is a two-year grace period (during construction) before apartment owners have to start repaying loans. Low-income households receive a 100% subsidy. (These individuals take out the loans, but the municipality pays for the capital and interest repayments.)

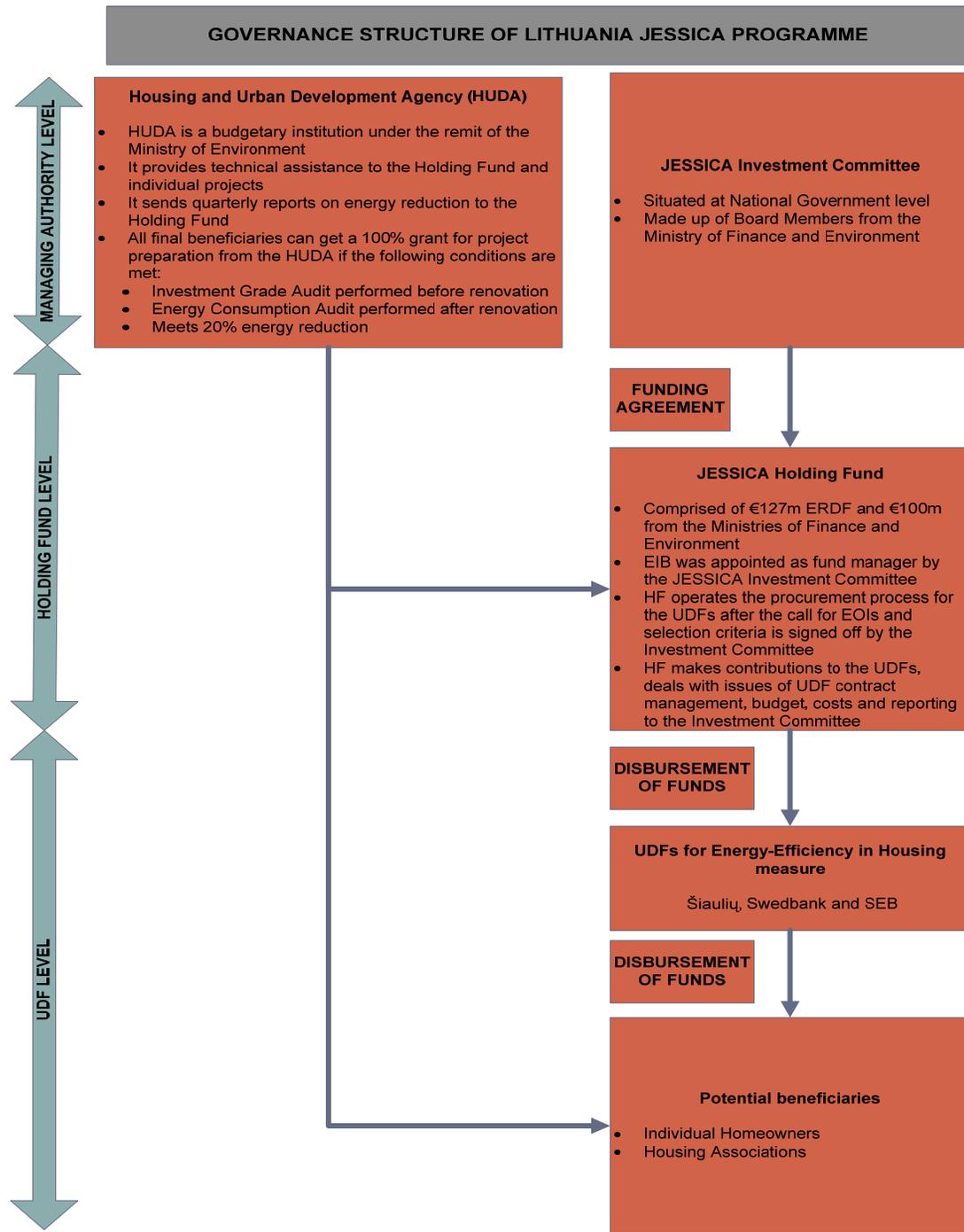
There is no additional public or private co-financing provided, but UDFs are required to guarantee 10 to 20% of the loan amount, which they must pay to the HF in case of default by the homeowner. This means that although the UDF does not take on risk in terms of co-financing projects, it does share part of the risk as guarantor.

The UDFs are local banks in Lithuania that are responsible for the financial appraisal of projects. HUDA, which is a budgetary institution under the remit of the Ministry of Environment, provides TA to the HF and individual projects. All Final Recipients are eligible for a 100% grant for project preparation from the HUDA until 31/12/2013, after which the rate falls to 50%.

HUDA requires an investment-grade energy audit in order to approve a project. An energy consumption audit is performed after the renovation; both of these are carried out by independent consultants. National legislation in Lithuania details the procedure for doing the project-specific calculation. Once the technical project is approved then the UDF can approve the loan disbursement.

The HUDA also acts as an important marketing channel for the JESSICA initiative. It consults with municipalities, apartment associations, individual homeowners and other stakeholders to gain support for JESSICA operations in housing.

Figure 1 Governance Structure of the Lithuania JESSICA initiative



2.2.1.3 Estonia

Housing accounts for approximately 40% of energy consumption in Estonia and therefore is a key target of any energy-reduction strategy. Approximately 75% of the Estonian population lives in multi-apartment buildings and these are typically of low quality and low energy efficiency. State grants for energy audits and project preparation covering up to 50% of the total cost have been offered since 2003. In addition the state offered grants of up to 10% of the costs of renovation but only after residents had made the capital payments for construction. However these grants only supported works to individual apartments rather than the whole of the building, and 10% proved not to be a sufficient incentive to most homeowners.

Operational Programme

OP 'Development of Living Environment'²⁴ aims at improving the quality of life in Estonia in environmental and social terms. Under this OP, Priority 3 (Development of energy sector): energy efficiency and environmental performance of energy use will be improved through supporting broader use of renewable energy and energy saving in distribution networks and by final consumers, including the housing sector.

Comprehensive reconstruction and renovation works to improve the energy efficiency of block houses erected before 1993, including both the main structures (bearing and envelope structures) and electric systems, heating systems and gas installations.

Eligible parts to improve the energy efficiency of apartment buildings erected before 1993, include:

- renovation of the roof material in conjunction with insulation;
- complete or partial insulation of the facade
- renovation of the cellar ceiling
- renovation of the crawl space/roof ceiling
- replacement of windows (also only in staircases)
- reconstruction of heating systems or installation of new heating systems
- renovation of ventilation systems or building one

JESSICA

The JESSICA initiative offers the opportunity to extend the scope of support to homeowners both in terms of the loan amount and the types of buildings financed.

The Estonian JESSICA initiative has a HF that is not under the EIB's jurisdiction but is operated by KredEx, the Estonian credit and guarantee fund. KredEx was founded in 2001 by the Ministry of Economic Affairs and Communications with a capital fund of approximately EUR 60mn and state guarantee limits for specific sectors including housing, businesses and exports. It is fully accredited to use the ERDF and Cohesion Fund.

The KredEx HF is comprised of EUR 17mn from the ERDF and EUR 29mn from the CEB loan (covered by a State guarantee). The total allocation is EUR 46mn (+15% self-financing gives a total EUR 57mn), as follows:

KredEx Holding Fund	EUR 49mn (+15% self-financing, total EUR 57mn)
<i>ERDF</i>	EUR 17mn
<i>CEB</i>	EUR 29mn
<i>Fund Management</i>	EUR 3mn

There are two UDFs, which are operated by Swedbank and SEB. Swedbank has the larger allocation of EUR 33mn.

²⁴ http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=EE&gv_reg=ALL&gv_PGM=1106&gv_defL=4&LAN=7.

The Final Recipients are Estonian housing associations, co-operatives, communities of apartment owners²⁵. The housing can be in the ownership of private individuals or social or municipal landlords.

The UDFs can fund expenses related to:

- full or partial insulation of frontages of apartment buildings
- reconstruction and insulation of roofs of apartment buildings
- replacement of windows and exterior doors of apartment buildings
- insulation of cellar ceilings of apartment buildings
- insulation of roof ceilings of apartment buildings
- replacement, reconstruction or rebalancing of heating systems of apartment buildings
- replacement of apartment buildings' ventilation system by new heating return system
- mounting facilities for the use of renewable energy in apartment buildings
- partial or complete reconstruction of the control systems and actuators of the lifts of the apartment building
- finishing of public spaces in apartment buildings if an integral part of reconstruction works
- energy audit, designing and owner supervision

The financial target is to finance as many buildings as possible. The energy-related target is to improve energy efficiency by at least 20% in apartment buildings of up to 2000m² and by at least 30% in apartment buildings over 3000m² (according to KredEx). There are no general sustainability indicators.

An energy audit must be carried out where priority renovation works have been detailed, and only those renovation works described in the energy audit can be financed. Borrowers must finance 15% of the project cost (85% is covered by JESSICA) which can be covered by a parallel bank loan from the UDF. Loan interest is fixed for 10 years at 3.9% to 4.4%. The loan maturity is an average of 20 years. There is no maximum loan amount.

KredEx offers a 50% grant for the costs of the energy audit and building project preparation. According to KredEx, a commercial loan for renovation in housing would be fixed for five years or floating continuously with an interest rate of approximately 7-10%. With a JESSICA loan, interest is fixed for 10 years at 3.9-4.4%. The JESSICA loan also offers a contract fee of between 0.5-0.75%, which is cheaper than the 1% required for a commercial loan. JESSICA loans also offer maturity periods of up to 20 years compared to an average maturity of 12 years for commercial loans.

Unlike Lithuania, Estonia has no energy agency, and TA comes from independent energy auditors which must be listed in the register of economic activities. KredEx provides a state grant (from the ERDF) for:

- energy audits (50% of project total with a maximum of EUR 640)
- technical inspection (50% of project total with a maximum of EUR 640)
- building design documents (50% of project total with a maximum of EUR 3,195)

SEB offers TA to municipalities and other public institutions. TA includes contracts with energy efficiency consultants to audit and improve efficiency in public buildings and other projects financed under the program²⁶.

KfW provides TA, which corresponds to any technical support that is necessary to prepare, implement and finance the investment programme, such as:

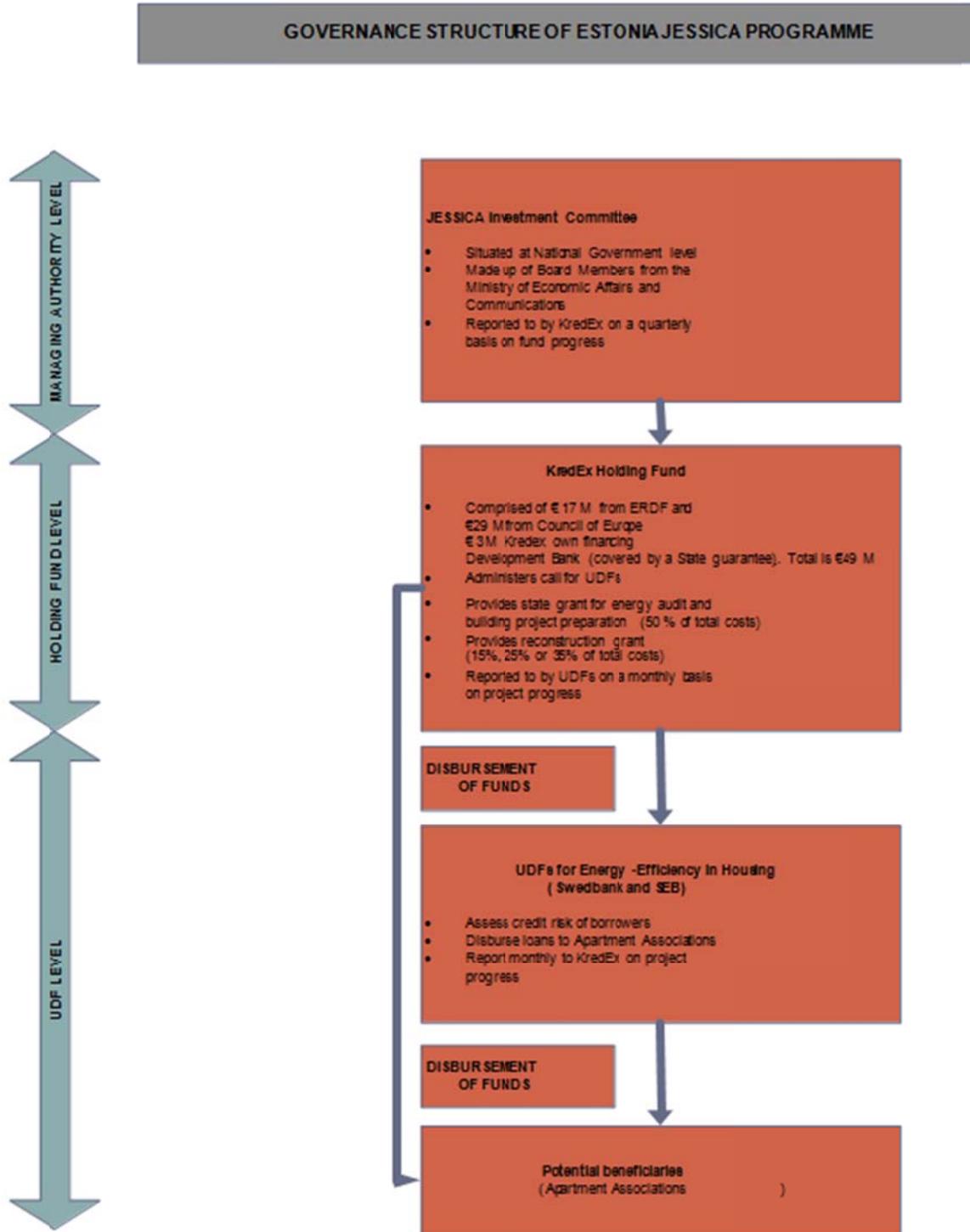
- feasibility and market studies,
- structuring of programmes,
- business plans,
- energy audits,

²⁵ http://www.clearsupport.projektas.lt/wp-content/Clear%20support%20_medziaga/7_CLS_Mirja%20Adler.%20KredEx.

²⁶ <http://sustainableperspectives.sebgroup.com/CarbonChaser/Carbon-Chasing-at-SEB/History/>.

- preparation of tendering procedures and contractual arrangements,
- project implementation units (incl. staff).

Figure 2 Governance structure of the Estonian JESSICA initiative



2.2.1.4 Poland

The following example describes how ERDF funding finances renovation of its housing stock in Poland. This has not been undertaken using JESSICA. Poland's housing stock is one of the smallest in Europe compared to population size, and much of it is of poor quality. Many buildings lack adequate insulation, resulting in high heating costs, which has a strong impact on household energy expenditure.

The government introduced in 2005 the *'Strategy of long-term development of housing for 2005-2025'*, which aims at reaching European standards in the Polish housing sector by 2025, especially in terms of the affordability of owner-occupied dwellings. The aim is to implement energy standards in the construction sector, thermo-modernisation of buildings, and to raise awareness of building owners and users with respect to energy savings. There are no specific refurbishment plans stated in the state housing policy. The approach of the policy is rather market-oriented—that is, the assumption is that owners of buildings and dwellings should themselves maintain their stock. The state provides some support in the form of subsidized loans to low-income families. There is support from municipal budgets for low-income people with respect to rental payments. Every month about 800,000 low-income households receives dwelling subsidy through this programme. This system is financed by the government and controlled by the municipalities, each of which determines the eligibility of households for this grant.

Operational Programme

In Poland the Ministry of Regional Development²⁷ is the MA for 16 different Regional Operational Programmes (ROPs) and for the Infrastructure and Environment OP, which includes housing sector. The latter includes EE/RES actions concerning the housing sector (Table 6).

Table 6 Potential housing measures in Poland²⁸

Operational programme	Measure	Actions supported	Primary beneficiaries	Constraint
'Infrastructure and Environment' OP (EUR 5.7bn)	Production of energy from renewable sources	Installation of solar panels	Entrepreneurs, local government units, public service providers	The minimum project value is EUR 5 mn, which is too high for most RES installations in residential buildings
16 different ROPs (EUR 16.6bn)	Measures under 'Energy' theme: Environment, risk prevention and energy; Regional environmentally friendly energy infrastructure.	Refurbishment	Main beneficiaries: Municipalities Possible secondary beneficiaries: Housing cooperatives, NGOs	Municipalities are responsible for only about 20% of the housing stock, but for the remainder housing cooperatives and communities are not eligible in all ROPs.

The primary beneficiaries in the ROPs are:

- Municipalities (main beneficiaries);
- Social Building Societies (TBS);
- Housing cooperatives;
- Housing communities;
- Other (NGOs, churches etc.).

²⁷ <http://www.mrr.gov.pl/>.

²⁸ http://energy-cities.eu/IMG/pdf/ERDF_financing_EE_in_housing_sector_en.pdf.

It is difficult to evaluate the impact of the SFs on the energy efficiency infrastructure in the housing sector. Until now, most of the projects were carried out under the ‘refurbishment’ axis of one of the ROPs, but renovations of public buildings such as schools and hospitals have been more common than housing projects. While municipalities are the major beneficiaries of the SFs for housing renovation in Poland, they are responsible for only about 20% of the housing stock in Poland. The other potential beneficiaries are not eligible under all the ROPs.

The analysis to date illustrates several issues constraining ERDF investments in housing.(according to Energie-Cités, 2009). These include:

- Although about 1 billion EUR from the ERDF was kept in reserve (until 31 December 2011), there is still a possibility of allocating more funds for housing during this programming period;
- Currently the minimum value for RES measures has to be 20mn PLN (around 5mn EUR). This is considered to be a main obstacle for the use of this kind of funding for RES installations of residential buildings, since the value of such projects is usually much lower;
- Housing cooperatives and low cost housing societies should be included as main beneficiaries to all OPs concerning the housing sector in spite of encountered financing difficulties.

The following is an example of one project that did target housing:

Table 7 Energy efficiency housing project in Poland

Project name	Objective	Eligible area	ERDF Funding
Revitalisation of apartment houses at 45 and 47 Ksiecica Witolda street, Wroclaw	Refurbishment to improve the buildings’ technical facilities. New heating, gas, water supply, sewerage and electricity systems were installed; walls, crawl spaces and window cavities of buildings were insulated. New business units were set up within buildings, providing appropriate conditions and infrastructure for the development of small and medium business.	Multi-apartment block	ROP (ERDF) 75% Total investment: EUR 1.1mn Project duration: 2005-2009

Apart from the SFs, there are many national funds co-financing measures in housing sectors, which to date have been very popular among potential beneficiaries. For example, in 2004 the government introduced a pilot programme providing a grant of 35% of the capital costs of energy efficiency refurbishment projects. Only social housing targeted at vulnerable families is eligible, and about 3000 apartments have benefited of this pilot program.

For renewable energy investments there is a grant available through state-owned foundation EcoFund. This foundation is managed by the Ministry of Finance and provides financial grants for up to 40% of the cost of solar hot-water installations with a surface area of over 50 m². Other programmes supporting refurbishment of housing and energy efficiency improvements are based on (soft) loans or a combination of loans and grants. For example the Thermo-renovation Fund, set up by the Bank of National Economy (BGK), provides 25% of the cost of renovation (www.bgk.pl).

2.2.1.5 Italy

In contrast to other more rent-prone populations, home ownership among Italians is relatively high with only 20% living in rented homes. However, the rise of housing costs over the last decade, combined with the nearly stagnant nature of incomes, has rendered both house rental and purchase less affordable for the growing “grey” segment of the population. These families are too rich to merit State aid, but too poor to independently finance their own quality housing.

Following the lead of several northern European countries, Italian non profits have been trying to address problems faced by this segment of the population in a sustainable manner by pursuing social housing projects. Such projects require investors, such as national banking foundations, willing to accept returns that are subpar by market standards, in addition to local authorities willing to provide land at negligible prices. Furthermore, construction costs must have a strict ceiling and tenants must be able to pay their favourable rent regularly.

More recently, the private social housing sector has been targeting those suffering extremely low incomes. The launch of the government's *Housing Plan in 2009* was a fundamental step in establishing minimum levels of living conditions throughout Italy, and not only identifying the individuals concerned and useful financial tools, but fostering the development of PPPs instrumental to the Plan's success. The Housing Plan involves the State participating in a real estate fund acting at national level and investing in local funds (the National Fund). However, as a result of both legal requirements regarding equity and the limited availability of State funding, said State participation represented a mere 7.3% portion of the overall equity of the National Fund.

Operational Programme

The majority of regions in Italy have, through ERDF-funded projects, dedicated significant resources to promoting the use of renewable energy sources for energy consumption, while also improving energy efficiency nation-wide. Out of 21 regions in Italy, 19 pay special attention to energy efficiency and renewable energy: only the autonomous provinces of Trento and Bolzan fail to do so, instead prioritising the employment objective.

In December 2007, the EC approved a multi-regional "Energy Efficiency and Renewable Energy" OP for the period 2007-2013. The project fell within the scope of cohesion policy and benefitted from a budget of 1.6 bn EUR. ERDF contribution to the project reached 803 Million Euros, representing roughly 2.8% of the overall funds allocated to Italy in the name of cohesion policy for that period.

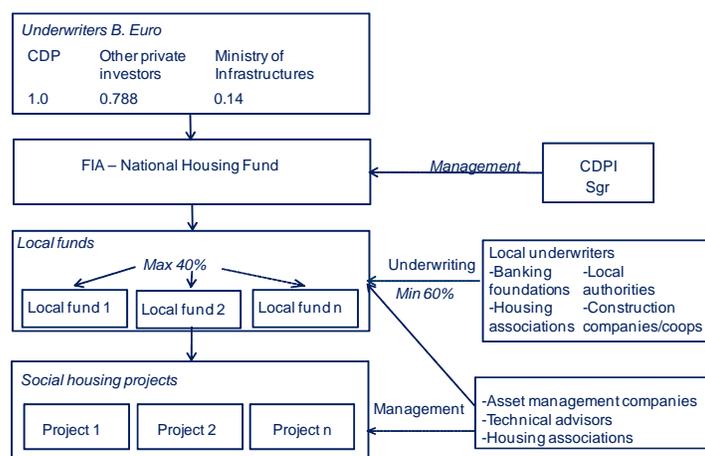
The OP had three pillars:

- Production of energy from renewable energy sources (accounting for 48.5% of total funding)
- Energy efficiency and the optimisation of the energy system (accounting for 47.5% of total funding)
- TA (accounting for the remaining 4% of the programme's funding)

Opportunity for JESSICA

The *FIA* managed by *CDP*²⁹ has been selected as the National Fund in the Integrated Funds' System (SIF). A joint-stock company, CDP is under public control with the Italian government holding 70% and bank foundations holding the remaining 30%.

Figure 3 FIA and the SIF



Source: CDP, 17th April 2012, Brussels

²⁹ <http://www.cdpiisgr.it>

The company is a key player in developing the country's infrastructure and providing support to enterprises. CDP funds businesses either by offering loans or investing directly in the company. From CDP's perspective, providing debt financing ensures a greater chance of repayment with the agreed - upon timeframe, while providing equity financing ensures a vote on major company decisions. CDP is the main shareholder of Italian companies operating both nationally and abroad.

The FIA is currently investing its resources in local initiatives in the form of real estate funds and corporate vehicles. The investors of the fund's total equity of 1.93bn EUR have agreed to subpar target returns of 2-3% over inflation. FIA's investors are CDP, private investors consisting of the main Italian banks, insurance companies and pension funds, and the Ministry of Infrastructure.

Unlike State social housing, this development of private social housing sector is founded on the co-investment of public resources alongside private capital. Locally, the National Fund's investment share cannot exceed 40% by law, ensuring that the remaining 60% be sought in the market. In response to more austere market conditions of late, the maximum participation is under reassessment.

A 220mn EUR target initiative pursued in Crema in Italy by means of public private partnership (PPP) provides a worthwhile case study for analysing the potential for JESSICA's involvement in further funding. The project has four pillars: (1) real estate, (2) public infrastructure, (3) creation of services, and (4) enhanced energy efficiency. Investment thus far has come from the Integrated Funds' System and a local fund participated in by a combination of public and private quota-holders.

The maximum amount eligible for investment for JESSICA in accordance with their conditions could be estimated as reaching roughly 30% of the overall investment. As per said conditions, Urban Development Funds would only be granted for the implementation of certain objectives: the latter three pillars each contain components that would qualify for funding. Alternatively, resources could be used as equity in the local fund involved. However, as this would enable a far wider application of the funds in accordance with the governance of real estate funds in Italy, the destination of the funds would need to be securely managed in order to avoid JESSICA's resources falling outside the initiative's designated scope.

In the near future, *CDP* hopes to extend FIA's investments into Southern Italy. Both Sicily and Sardinia are amongst the most likely target for next investments. The success of the scheme is contingent upon a number of actors agreeing to take the risk of providing either capital or services for subpar returns, subsequently providing less fortunate portions of the population with much less costly, yet sustainable, solutions to their housing problems.

2.2.2 Housing for marginalised communities

Currently most EU-funded projects targeted at Roma involve money from the ESF rather than the ERDF. In May 2010, ERDF rules were changed to permit the use of funds for renovation or replacement of housing for marginalised communities in either urban or rural areas. The regulations explicitly mention Roma, but eligibility is not limited to them. EC guidance states that targets should include the ‘poorest of the poor’ or those otherwise considered most marginalised, and encourages MSs to identify those populations that would qualify (EC 2011b). France, for example, has interpreted the term to include groups such as those in extremely poor housing, homeless people, migrant workers and asylum seekers. This is in accordance with the EU’s Common Basic Principles on Roma Inclusion, which hold that Roma people should be target groups for intervention without excluding others who live under similar socio-economic conditions (Council Conclusions of 8 June 2009).

The EU support to housing expenditure can reach a maximum of 3% of the ERDF allocation for each OP, as long as it does not exceed 2% of the total ERDF allocation (which is about EUR 198.77 billion in the period 2007-2013). The interventions under this provision must follow an integrated approach (according to the Regulation, which includes, in particular, actions in the fields of education, health, social affairs, employment and security, and desegregation measures), and should support desegregation—but unlike other housing interventions in the EU¹², investments in housing for marginalised communities do not have to form part of an integrated plan sustainable for urban development. Given this timing and the long lead times involved for developing projects, no new projects have been initiated under the revised rules in 2010, but there are a few existing projects involving Roma housing that were funded under other priorities before the new regulations came into effect.

EU guidance states that ‘in all cases the housing or buildings that are giving rise to eligible expenditure should be owned by public authorities or non-profit operators or acquired by them for that purpose’ and subsequently retained in such ownership for at least five years (EC 2011c (according to the bibliography)). This requirement may well prove to be problematic in the case of Roma as they have a cultural preference for owner-occupation but often do not have legal title to their homes. Also, municipal authorities in countries with high proportions of Roma inhabitants often purposely exclude them from social housing. Eastern European experts therefore have recommended that interventions related to private housing should be permitted as well, and in particular that Roma households should be helped to acquire legal title to their properties (Somogyi and Teller 2011).

Because this provision is new it is not yet embedded in the national legislation of all European MS. In June 2011, a one-day seminar was held in Brussels on the theme of ‘Social Innovation to Tackle Homelessness: Reinforcing the role of the European SFs’, which was co-organised by the EC, the Committee of the Regions, the European Economic and Social Committee and the European Federation of National Organisations Working with the Homeless (FEANTSA)³⁰. This event gathered key stakeholders, and notably policy-makers responsible for homelessness and MAs of the SFs, to raise awareness on the possibilities that this new European legislation creates. The aim was also to consider how the SFs could enhance social innovation in the area of homelessness in EU MSs. It was clear that as of that meeting, France was the only country to have advanced measures towards the implementation of the directive. In March 2011, the French authorities distributed a circular to the relevant stakeholders and institutions to inform them of the evolving legal context and the new funding opportunities it created.

2.2.2.1 Slovakia

The project on ‘Regeneration of Settlements’ (Table 8) was approved in 2007 and thus does not make use of the 2010 ERDF regulations permitting aid to housing for marginalised groups. The element addressing housing for marginalised groups comes under the ‘regeneration of settlements’ priority of an OP that aims to improve regional infrastructure in three convergence regions. The OP addresses the following: educational infrastructure; social infrastructure; cultural infrastructure; tourism infrastructure; regeneration of settlements; and regional and local roads.

³⁰ <http://ec.europa.eu/social/main.jsp?langId=en&catId=88&eventsId=348&furtherEvents=yes>

Out of EUR 1.45bn for the whole OP, some EUR 478mn (about 33%) was allocated to the ‘regeneration of settlements’ priority. The priority addressed urban issues in 20 areas either experiencing or threatened by physical deterioration and social exclusion by implementing five targeted development strategies, one of which is housing renovation.

In practice the MA encountered difficulties in meeting the requirements from the regulations on funding apartments from the ERDF. A 2010 programme revision therefore proposed supporting housing infrastructure using JESSICA.

2.2.2.2 Czech Republic

The Czech project that involves housing (Table 8) was approved in 2007 and does not make use of the revised ERDF regulations from 2010 permitting aid to housing for marginalised groups. Intervention area 5.2 of the integrated OP, entitled ‘Improving the Environment in Deprived Neighbourhoods’, provided cities with an incentive to address socially excluded Roma areas in their integrated plan for sustainable urban d. Those cities that did so, undertook a series of pilot projects to regenerate buildings in deprived neighbourhoods populated in part by socially excluded Roma households. The renovation work was linked to activities in the area of social inclusion, human resources and employment.

Of the 41 cities which requested financial support under heading 5.2, some 19 included a socially excluded Roma locality. Six cities (Most, Brno, Kladno, Přerov, Ostrava, Orlová) applied for the pilot project.

The Ministry for Regional Development has set up a working group including representatives of various government departments, the Government Council for Roma Minority Affairs and managers from the integrated plans for sustainable urban development for those cities included in the pilot project. The goal is to ensure better coordination, cooperation and sharing of experience between parties interested in Roma issues. The Ministry for Regional Development in September 2010 amended the definition of marginalised communities to include people from socially excluded Roma localities and families who are threatened with having a child taken into care because of lack of adequate housing³¹.

Table 8 Examples of existing ERDF funded projects involving housing for marginalized communities: Slovakia and Czech Republic

Country	Project name	Region/City	ERDF funding	Project period
Slovakia	Regeneration of settlements	Western, central and eastern Slovakia	EUR 478.4mn funded by the ERDF	09/2007 – 2013
Czech Republic	Improving the environment in deprived neighbourhoods	Most, Brno, Kladno, Přerov, Ostrava, Orlová	EUR 1.58mn funded by the ERDF (for entire OP)	12/2007 – 2013

³¹ Report on steps taken by public administration and other bodies to improve the position of the Roma minority in the Czech Republic (September 2010).

2.3 Challenges for the New Programming Period (2014-2020)

In light of the current economic environment, the EC recognised the need for a number of changes to the design and implementation of cohesion policy. Taking inspiration from the *2009 Barca Report*, the Commission presented a new legislative proposal which borrowed many elements from the document with such ambitious recommendations for reform.

*EU Cohesion Policy 2014-2020: legislative proposals*³²

An important element introduced is the *Partnership Contract*, a firm agreement between the Commission and each MS in respect of their national development needs, priorities and targets for the Europe 2020 Strategy. The Partnership Contract will explicitly contain the country's choice of thematic objectives from the 11 aligned with the Europe 2020 strategy, the respective investment priorities, the conditions pre-requisite to funding and targets to be reached by 2020, as well as indicators by which to measure them regularly.

Furthermore, the contract establishes agreed upon performance objectives and the use of funds. Accordingly, *ex-ante conditionalities* for intervention apply: should the MS fails to perform adequately or conform its institutions and policies as necessary, the Commission may suspend or even cancel further transfers of funds. The Commission also has the power to sanction countries by withholding funds in the event of non-compliance with its "*macro-economic conditionalities*. It may request a change in the Contract in order to better reflect the Council's budgetary and macro-economic recommendations for a country. This will help better coordinate cohesion policy with the cycle of European economic policy and protect the effectiveness of the funds from endangerment due to a MS's economic and fiscal situation.

In order to treat regions at a similar stage of economic development uniformly, a *new category of eligible regions* will be created. Improving on the current overly simplified distinction between regions with GDP either above or below 75% of the EU average, the new tripartite classification will distinguish between less developed regions with GDP below 75% of the EU average; transition regions, whose GDP is between 75% and 90% of the EU 27 average; and more developed regions, whose GDP per capital is above 90% of the average. The new second category would cover more than 72 million people in 51 regions, 20 of which are forecasted, as of 2014, to move out of the current convergence objective. The creation of this category acknowledges the fact that while the regions have become more competitive, they still require targeted support to get them through the transition from less developed to more developed regions. Whereas the other ceilings for co-financing rates from the EU will remain unchanged at a maximum of 50% for the most developed regions and 85% for the less developed regions, the rate for the transition region will be 60%³³.

Main elements for affordable housing

Highlight 1: Minimum 20% / 6% for EE/RES

In response to the financial crisis, the 2008 'European economic recovery plan' focused on improving energy efficiency in buildings. On this basis, the EU adopted an amendment to the ERDF regulation in 2009. The change was designed to enable all MSs to dedicate a greater share of their ERDF allocations to the renovation of houses for better energy consumption, particularly so as to support social cohesion. Investments in energy efficiency will further Europe's potential for "sustainable growth" thereby promoting competitiveness and helping low-revenue households.

The 2009 amendment foresees that a maximum of 4% of the total ERDF allocations could be used for "...expenditure on energy efficiency improvements and on the use of renewable energy in existing housing". In the new programming period, 2014-2020, the Commission has proposed that the "more developed" and "transition regions" should dedicate 80% of their resources to three thematic objectives: (1) support to SMEs, (2) research and innovation, and (3) a low-carbon

³² http://ec.europa.eu/regional_policy/what/future/proposals_2014_2020_en.cfm.

³³ CECODHAS Housing Europe – SFs 2014-2020, page 3.

economy. These regions are required to invest at least 20% of their resources in the latter³⁴ (in accordance with a series of ex-ante conditionalities³⁵). In less developed regions there will be a broader range of investment priorities to choose from as development needs in these regions are larger. Nevertheless, these regions will have to allocate at least 50% of ERDF resources to support to SMEs, research and innovation and a low-carbon economy, of which minimum 6% for the latter. The new cohesion policy lends additional weight to local development by, for instance, establishing ‘no ceiling’ on energy refurbishment in housing: MSs are now free to invest up to the full 20% earmarked for the low-carbon economy in EE/RES in housing according to their overall agreement with the Commission on the content of the Partnership Contract and the OPs.

Highlight 2: Alongside ERDF, ESF will participate in financing

In line with EU 2020 strategy the ERDF will contribute to local, regional and national development by co-financing investments in health and social infrastructure, while also supporting the physical and economic regeneration of deprived communities in both rural and urban areas. Along with the 20% of the ESF earmarked for combating social exclusion³⁶, the place-based approach therefore has great potential to advance local communities whilst adhering to overall EU objectives.

The proposal includes an obligation to consult stakeholders at all levels of decision-making: non-governmental actors will be conferred with in order to draw up an optimal Partnership Contract for each country. National/regional agents may have valuable knowledge that could optimise the design of OPs, particularly regarding integrated territorial investment and local development strategies. As such, local authorities would benefit greatly from partnerships with stakeholders in designing the strategy.

Highlight 3: Urban development

At least 5% of the ERDF resources given to each MS are proposed to be earmarked for integrated actions for sustainable urban development³⁷. However the funds may not be under the direct management of cities as for example the city authority may simply be responsible for the selection of projects.

This development at the sub-regional level will need to be carefully assessed by a results-based monitoring and financial reporting.

Highlight 4: Community Led Local Development

Cities are also proposed to pursue innovative approaches and solutions to sustainable urban development. This discretion establishes a greater scope for cooperation between the cities and local affordable housing organisations regarding the design of OPs and subsequent territorial investments at sub-national level.

Financial Instruments

Financial instruments currently represent roughly 5% of total ERDF resources³⁸. For the period 2014-2020, their relative share in EU funds should continue to increase. At EU level, debt and equity platforms will serve as standardised rules for financial instruments using centrally managed EU funds available. At the regional level, the upcoming programming period will bring the strengthening and expansion of financial instruments under shared management with MSs in the context of cohesion policy. Building on the implementation experiences with financial instruments to date, the Commission is proposing to further expand and strengthen their use as a more efficient and sustainable alternative to complement traditional grant-based financing.

MSs and regions will be offered greater flexibility in choosing target sectors and implementation frameworks. The Commission’s proposal will provide a clear set of rules, built on the existing

³⁴ 2011/0275(COD) – Proposal for a Regulation concerning the ERDF and the investment for growth and jobs goal, page 4.

³⁵ Actions pursued under the investment priority “low-carbon society” must be in accordance with: Articles 3 and 11 of Directive 2010/31/EU ; Article 3 of Decision No 406/2009/EU in 2013-2020 ; and Article 14 of Directive 2006/32/EC.

³⁶ CECODHAS Housing Europe – SFs 2014-2020, page 5.

³⁷ 2011/0275(COD) – Proposal for a Regulation concerning the ERDF and the investment for growth and jobs goal, page 4.

³⁸ EC: Financial Instruments in Cohesion policy 2014-2020, page 1.

guidance, capture synergies with other forms of support such as grants, and ensure compatibility with financial instruments at the supranational level. A single set of rules will now govern all five Common Strategic Framework (CSF) Funds, and the instruments' scope will be expanded to all thematic objectives and priorities foreseen by the OPs. The successful design and implementation of the instruments is contingent upon a reliable ex ante assessment that correctly identifies market shortcomings. As such, instruments will be designed in light of the market situation, investment needs, potential private sector interest and any subsequent added value of the instrument involved. The assessment will also aid in the coordination of funding instruments by different actors at different levels, thereby avoiding overlaps and inconsistencies.

Due to the varying operational and administrative environments for financial instruments across MSs and regions, the Commission provides MAs with a number of implementation options from which they may select the most suitable. OP contributions to centrally managed financial instruments will be available only for investments in areas or for purposes within the scope of the contributing OP. For instruments set up at national or regional level, MAs may contribute the programme resources either to already existing or newly created legal entities compliant with requirements, as well as standardised ready-to-use instruments. The implementation of the tasks can be entrusted to the EIB Group, other International Financial Institutions, financial institutions under the control of public authority, or a body government in accordance with EU and national rules.

The proposal establishes more flexible co-financing modalities and additional financial incentives. For contributions to an EU-level centrally managed financial instrument management, a separate priority axis is to be foreseen in the OP. Up to 100% of the paid support may come from CSF funds³⁹. In terms of financial incentives, the EU co-financing share at national or regional level under shared management will be increased by 10% if an entire priority axis is implemented through financial instruments⁴⁰. National public and private co-financing contributions may be directed either towards the financial instrument or the Final Recipient.

The new framework builds on the existing guidelines and defines the appropriate management of supranational contributions to financial instruments. The proposal includes rules regarding the qualification of financial streams at the different levels of financial instruments and corresponding eligibility or legacy requirements. Prior to investment, CSF fund contributions are to be placed in interest-bearing accounts or temporarily invested. Interest or other gains are to be used for the same purpose as the initial contribution. The EU share of gains is to be used for further investment in same, preferential remuneration of investors providing co-investment, or paying management fees.

The availability and reporting of monitoring data on the use of the CSF funds are fundamental in enabling an assessment of the performance of the instruments, and any subsequent adjustments that should be made to increase their effectiveness. As such, MAs should send to the Commission a report on all operations involving financial instruments as part of their annual implementation report.

At the national level, the strengthening of financial instruments will aid MSs in their pursuit of Europe 2020 Strategy objectives. Furthermore, with their wider application and adaptation to specific territorial contexts and recipients, the instruments may significantly improve the availability of finance to a wide range of socio-economic actors at sub-national level.

³⁹ EC: Financial Instruments in Cohesion Policy 2014-2020, page 3.

⁴⁰ Art 110(5) CPR.

3 Highlighting the relevant dimensions to develop conceptual and practical models to embed housing in JESSICA operations

In this section we discuss general principles regarding the financing and governance of housing investment projects. We then present the results of our review of existing practice in housing investment in the areas of energy efficiency and renewable energy in existing housing, and construction or renovation of housing for marginalised communities, which are the only categories eligible for assistance under current ERDF regulation (Article 7). It should be emphasised that most of these projects did not involve the use of JESSICA. Since one of the key requirements of the JESSICA initiative is that the projects funded should be part of an integrated plan for sustainable urban development, we extended our analysis to multi-purpose development projects with a housing element. Finally, we provide an in-depth analysis of four housing investment projects that could have been financed by JESSICA.

3.1 General principles of finance and governance of housing investment

JESSICA instruments will need to be tailored to the ownership structure and financing practices of each country if they are to support additional housing and mixed use investment. If JESSICA is to make a serious contribution to housing conditions in MSs, the cost of borrowing through the initiative will have to be competitive compared to the cost of borrowing on the market. One should also note that JESSICA type instruments are only allowed in case of a market failure. In some countries social housing providers are seasoned market participants and their cost of borrowing is already very low.

Widely used instruments to finance housing projects include grants, loans, guarantees and equity. The available products to finance housing and residential real estate development depend both on the nature of the project and on the type of institution providing the funding. In most cases, due to complexity of such projects, a combination of different instruments is required to finance different components of the project:

- *A mixture of grant and debt instruments* is common in financing energy efficiency improvements. A combination of both market-based instruments (loans, guarantees, Energy Performance Contracting schemes etc) for short term measures (such as exchange of heating systems, lighting efficiency or energy management of buildings) and grants for capital intensive long term measures (such as building envelope insulation and replacement of windows) should be supported, possibly aiming at “deep renovation” beyond cost-optimal levels. Any support provided will generally be conditional on an energy audit/energy performance certificate and a verification of achieved results. An investment grade audit⁴¹ is generally required before any investment is made so that the financial and technical viability of the overall investment is assessed. Such a detailed energy audit can be very expensive and most of the time cannot be financed by the project owners alone. Available grants can thus be blended with guarantees and debt instruments in order to achieve financially sustainable housing projects, but could also be modulated with higher grant intensities in cases where improving energy efficiency helps in particular to address energy poverty and supporting complex deep renovations (i.e. combination of grants and loans for systemic rather than partial solutions). The instruments needed will vary from MS to MS, depending on the national or regional circumstances, e.g. ownership structures and social situation, and the design of the schemes will have to be tailor-made on this basis. We have identified several successful blending schemes, although the grant component mostly involved in-kind contributions from the public partner.
- *Guarantees* can prove important in financing housing projects, in order to allow promoters (especially small organisations), such as homeowners’ associations, to obtain loans from

⁴¹ There are two basic types of audits, a walk-through audit and a more detailed investment grade audit. An investment grade audit can be a comprehensive audit that identifies all energy efficiency opportunities in a facility, or more targeted on a specific piece of equipment or process, e.g. lighting, a boiler, a drying process, compressed air system.

financial institutions, such as retail banks. The guarantee implies the commitment of a third party, for instance a public bank, to cover the remaining balance of the loan, including unpaid interest, in the event of default by the borrower.

- *Equity finance* brings in institutional investors (organisations with large sums to invest such as investment companies, mutual funds, brokerages, insurance companies, pension funds, investment banks and endowment funds). These firms are major actors in the commercial property market, but they generally focus on office retail and industrial properties, while the residential sector has traditionally accounted for a low share of their investments. However, in recent years a willingness to invest in less traditional asset classes, such as student or senior accommodation, as well as in secure property-income funds, in particular those that hold long-leased properties, has emerged. A number of issues still exist concerning the potential for equity investment in affordable housing, in particular with respect to the assurance of an adequate rate of return.
- The larger housing organisations for many years raised funds from the well-established corporate *bond market*. The main shortcoming is the high cost of issuing bonds, making them impractical for small transactions. However, lenders and bond-market experts are making progress in cutting costs—for example in the UK, the private placement market allows smaller issues to be placed with individual investors. These are fixed-interest-rate Sterling bonds normally secured on affordable housing assets (e.g. bonds issued by housing associations or by dedicated financial intermediaries).

These financial resources can come from a vast array of sources, ranging from the public sector to private investors and civil society organisations. In this context, PPPs are increasingly used to finance integrated urban development projects across Europe as a way of supplementing grants. PPPs can involve housing associations, building companies and technical organisations as well as public decision makers.

Social housing appears as a particular case among housing development projects, where social landlords are important actors. Over the last twenty years social landlords have increasingly been expected to borrow on the private market, though often with the benefit of government guarantees. They have secure rental income because of income-related support for tenants. The market for large-scale borrowing by social landlords undertaking new or improvement investment has been most developed in the Netherlands and in UK. In both countries risk premia have been reduced to minimal levels and there have been many providers of debt finance.

The ability of social landlords to borrow depends heavily on the certainty of their rental stream and whether they are able to use the value of their housing stock as collateral. In particular, if the owner of a dwelling has no or limited rights to sell the property, and rent levels and/or increases are controlled, then the capital value of the dwelling is constrained to the discounted value of future rents. As the dwelling acts as security for debt finance, any limits on this value will also limit the amount of debt it can secure. This may be further reduced by lenders' assessment of the risk of future rent changes and changes in income support and housing allowances.

In this context it is important to remember that social housing is not just an asset which can be used to support further investment, but is also generally home to relatively deprived households. How this tension is addressed varies greatly between countries. In some, government policy renders it impossible or extremely expensive for social landlords to borrow from the private sector. In others their rental stream is seen as so secure that social housing is regarded as belonging in the same asset class as utilities.

Revenue generation

A core factor in the success of JESSICA operations is the project's ability to generate revenue. Housing investment projects can use proceedings from sale, rents or leases as revenue streams to reimburse their investors. The revenue streams and the repayment terms depend on the objective of the loan. For instance, loans may be used for pre-development costs, site acquisition, construction/rehabilitation financing, and other 'mortgageable' project development costs and may also be used to provide short-term financing repaid from equity.

There are a number of ways to repay housing subsidies and past investment:

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- Over time as rents rise and interest payments fall, the rents on older properties can be used to cross-subsidise new building and regeneration;
 - Existing units can be sold either to tenants or investors (as in Germany) to provide funds to replace the stock;
 - Many providers have large financial reserves built up from subsidies and from rental income. They could use these to provide internal subsidies for new investment.
 - Energy bill reductions resulting from energy efficiency renovation measures can be a source of revenue to pay back some or all of the investment that has been required.

Furthermore, many housing providers can use their assets to back new borrowing. Many European social landlords hold unencumbered capital assets on which no return is required: these can be used as collateral for borrowing for new investment. This approach is common in Western Europe but less so in Eastern Europe, where there was rapid public disinvestment in socially owned property.

In-kind contribution

Often in housing projects, one of the parties involved can provide in-kind contributions. For instance, a certain amount of space, land or existing buildings can be transferred to a trust in exchange for shares of the trust pro-rated to the value of the contribution. Another example is when the governments provide free or cheap land, or give a PPP permission to build on a publicly-owned parcel of land.

3.2 Literature review and the construction of the project database

An extensive literature review was carried out on studies produced by EU-funded research programmes as well as studies commissioned by international organisations, EU institutions and civil society organisations. The literature review resulted in the selection of a sample of 33 projects. These projects were selected to provide a representative sample of housing projects that have been implemented across the EU MSs in recent years. The sample ensures a good geographical coverage (see Figure 4) and encompasses projects financed with and without SF resources.

Figure 4 Geographical coverage of the project database and list of the projects included in the database



Country	City	Projects
Bulgaria	Sofia*	Refurbishment of a multifamily building
	Smyolan	Refurbishment of multifamily buildings
Czech Republic	Brno-Novy Liskovec	Retrofit of a concrete panel social housing building
	Ostrava*	Housing with supporting social programmes
	Dobra Voda	For Better Housing
Denmark	Copenhagen	Regeneration of the Vesterbro neighbourhood
Estonia	Tallinn*	Apartment building at Paldiski Road 171
Finland	Helsinki	Multi-purpose new construction "Eco-Viikki" neighbourhood
France	Saint-Louis et Huningue	Refurbishment of social housing blocks "le Rhône"
	Monsempron-Libos	Refurbishment of 105 social housing Villeneuve-sur-Lot
	Betheny	New construction of the neighbourhood "les Aquerelles"
	Lille	Eco-quartier "L'Union"
Germany	Freiburg	Regeneration of the Vauban district
	Bremen	Refurbishment of 18 social housing units, Steffensweg 97 – 101
	Hanover	Refurbishment of a 4-storey apartment building, Schneiderberg 17
	Leipzig	Regeneration of a degraded neighbourhood

Hungary	Budapest	Refurbishment of a panel block housing condominium, Kada street 116-118
	Miskolc	Frontal reconstruction in Tizeshonvéd 2-22
Latvia	Jelgava	Full renovation of apartment house, Hermana Street 3
	Kuldiga	Retrofit of a 60 apartment building, Mucenieku 30
Lithuania	Vilnius*	Refurbishment of a panel house building, Žirmūnai Street 3
Poland	Warsaw*	Energy-efficiency renovation of a 68-unit apartment building, 115 Czerniakowska Street
	Łódzkie Voivodeship	Weatherization of a multi-apartment building, 8 Bukietowa Street
	Poddębice	Thermo-modernization of buildings
	Wrocław	Refurbishment of apartment houses at 45, 47 Księcia Witolda street
	Warsaw*	Renovation of 4 multi-apartment buildings in Piaseczno
Slovakia	Kosice	Refurbishment of multi-apartment building of 95 units, Letná 29 – 43
Spain	Barcelona	Regeneration of a degraded neighbourhood, La Mina, San Adrià de Besos
UK	Petersfield, Hampshire	Refurbishment of 3 semi-detached houses in Borough Grove
	Petersfield, Hampshire	Refurbishment of 20 REEMA concrete panel homes, Highfield Road
	Kinsley, Hampshire	EE/RES measures to reduce carbon emissions of at least 75%, Woodfields estate
	Buckley, Wales*	Eco-improvements in 82 properties in Powell Road and Becketts Lane
	Manchester*	New East Manchester Strategic Renovation Framework

**JESSICA instruments already implemented*

Having obtained a snapshot of the most common housing project typologies, it was still necessary to identify those projects which could, in principle, be financed through the JESSICA initiative and whose characteristics could be considered as representative of the larger sample. As a result, a subsample of four projects has been identified on the basis of the following criteria:

- Compliance with the existing ERDF regulation concerning the financing of housing projects;
- Compatibility with the requirements of the JESSICA working mechanisms;
- Recognition of the project as an example of best practices at the EU level;
- Data and information availability.

This last point appears to be particularly important, since the financial and governance arrangements of the selected case studies need to be analysed in detail, in order to understand how those projects could have been or could still be financed through JESSICA. In most cases the available information was not sufficiently detailed and precise to provide a clear picture of the financial and governance arrangements. As such, data availability has been a determining factor in the selection of case studies.

Our objective was to classify these projects into broad project typologies, consistent with the categories set up in the Handbook for 'UDF Typologies and governance structure in the context of

JESSICA implementation⁴². We classified all the projects included in our database according to the following characteristics:

- Project characteristics;
- Funding opportunities and Final Recipients;
- Governance structure.

It is important to provide a detailed description of the selected criteria and to demonstrate their relevance in describing potential JESSICA operations.

1) Project characteristics

Different types of housing development projects can be identified, including social housing, residential real estate, projects increasing energy efficiency and the use of renewable energy in housing, refurbishment of existing buildings or new construction and multipurpose developments combining housing, infrastructure and other urban developments.

Under this criterion we included all the variables allowing a precise identification of the project, namely the country in which it was implemented (with the eligible measure used under ERDF funding, if applicable), the type of housing (e.g. refurbishment of existing buildings or new construction, ownership type), and the type of investment (e.g. standard renovations to the building structure, technical installations to the building, energy efficiency improvements, and small-scale renewable energy production, including biomass Combined Heat and Power (CHP), solar Photovoltaic (PV), etc.)

These variables are crucial since the selection of the most appropriate governance structures and financing mechanisms are heavily dependent on project characteristics.

2) Financial products and Final Recipients

The financial setup of the projects is also crucial to their successful implementation. The products available to finance housing improvements and residential real estate development are closely linked to the type of project financed and to the source(s) of funding. Therefore, for each project in the database we investigated the financial mechanisms used.

In particular we collected information about the total project cost, the type of instruments used, namely loans, guarantees or grants and the identity of the lender. Since most cases projects were financed through a mixture of different instruments, we identified the share of the total project cost covered by each instrument. Finally we analysed the conditions imposed for the use of the different instruments, in particular the interest rate and the reimbursement conditions for the loans and the eligibility criteria to access funding.

The revenue stream that will allow the project to be profitable and sustainable and to repay the loans obtained has also been regarded as a crucial feature of these projects, in view of ensuring the revolving character of the operation.

Combining JESSICA with grants

In one of the in-depth analyses we will consider how to combine grants with JESSICA investment in housing projects. Grant money can only be used outside, and in parallel with the JESSICA structure. Various financial resources can be blended to finance components of urban projects that are typically unable to generate enough revenues to be financially self-sustaining.

The COCOF Guidance Note which covers the eligibility of EE/RES interventions for housing (COCOF 08/0034/04) explicitly states that “the possibility of combining grants and repayable

⁴² Kreutz C. and Nadler M. (2010), “JESSICA – UDF Typologies and Governance Structure in the context of JESSICA implementation”, available on the website http://www.eib.org/products/technical_assistance/jessica/studies/index.htm

financing opens up new opportunities to address a wide range of market gaps'. Those projects that most need grants as well as revolving funding would be those:

- for which the *grant* would cover a necessary but non-income-generating component of the project, like TA,
- or where the project requires *subsidy* (e.g. supporting marginalised communities) and would not be viable without grant.

In the next programming period 2014-2020, investments in housing could be co-financed by the ERDF in:

1. Energy efficiency,
2. Social infrastructure⁴³:
 - Investing in social health and social infrastructure which contribute to national, regional and local development, reducing inequalities in terms of health status, and transition from institutional to community-based services;
 - Support for physical and economic regeneration of deprived urban and rural communities,
3. Urban development.

Combining ESF and ERDF will offer great opportunities to address deprivation issues, including lack of employment and skills in a holistic way. If capital investment (from ERDF) was combined with soft investment (from ESF) in skills, issues of deprivation and unemployment could be tackled in a better way than ad-hoc help, which is more likely to achieve better results.

Final Recipient⁴⁴

For each project we collected information about the Final Recipients (project promoters applying for the financial instrument) who bear the repayment obligation. They can range from separate legal entities created for the purpose of the project, to social landlords and housing providers, to homeowners' associations.

3) Governance structures

As a general rule, it is possible to distinguish four different groups involved in the governance structure of housing projects under JESSICA, namely MAs, public and private investors, public and private financial institutions and consultant or experts intervening at different stages of the process.

MAs are responsible for allocating OP funding and may add additional public co-financing, by ensuring that the public funds are sustainably invested in integrated urban development projects taking into account each OP requirements. The MA has the option to decide to implement a HF (e.g. EIB), who could provide not only general TA, but also help to structure, develop, contact and monitor sensible business strategies for potential UDFs.

The *UDFs* can be either independent legal entities or separate block of finance within a financial institution⁴⁵:

⁴³ CECODHAS (December 2011) Policy briefing: Preparing the new SFs period 2014-2020 (pg. 10)

⁴⁴ Guidance Note on FEIs under Article 44 of Council Regulation (EC) No 1083/2006, part 1.2.9: "The term *final recipient* will be employed as referring to enterprises, PPPs, projects and any legal or natural person receiving repayable investments (namely through equity participations, loans, guarantees and other forms of repayable investments implemented through similar transactions, with the exception of grants) from an operation implementing any of the FEIs described in the first paragraph, points (a), (b), and (c) of Article 44 of the General Regulation and in Articles 43 to 46 of the Implementing Regulation. For the avoidance of doubt, the terms "final recipient" or "final recipients" are employed in this study exclusively for a matter of facility and without any other effects, they must not be confused with the terms "beneficiary" or "beneficiaries" as employed by the SF Regulations and as defined in paragraphs 1.2.6 to 1.2.8 of this note.

⁴⁵ The SF Regulations do not specify any particular legal structures to be established for operations implementing FEIs. However, the regulations - more specifically Article 43(2) of the Implementing Regulation - require that FEIs receiving financing from SFs programmes must be set up either as independent legal entities, governed by agreements between the co-financing partners or shareholders, or as a separate block of finance within a financial institution.

-
- *Public investors* (such as local and municipal authorities and regional development agencies) are often co-financers and play a major role in investing in certain areas. In many cases they are the owners of the deprived or abandoned areas to be redeveloped. Therefore, the public investor may include not only investment in capital, but also investment in-kind, such as public brownfield land. In this way they can safeguard their interests and decision making during project development and implementation.
 - *Private investors* also act as co-financers and are often central to project development, especially when the public funding is scarce. However, private investors have lower risk appetite and higher return expectations than public investors. In many instances this issue is tackled by ensuring an asymmetrical distribution of profit and loss, where the first loss is borne by public investors. Since private investors are more concerned with having a high internal rate of return (IRR) of the investment in a shorter term than public investors (which is more focused on the economic rate of return for their citizens), the decision making process is faster. In return, public partners may benefit from private expertise and know-how especially in management and financing.
 - *Financial institutions* have an important role, since they can provide additional debt capital, generally in the form of loans, to cover part of the project costs and contribute to project evaluation, credit analysis and monitoring.

The study analyses governance structures under each project typology and case study, which is presented in the next part taking into account the parties involved (public or private), the financing structure of the JESSICA operation and their legal status.

3.3 Identification of housing project typologies for JESSICA

The database constructed according to the three criteria previously explained allowed us to identify three project types, namely multi-purpose development, energy efficiency and low-carbon refurbishment and housing for marginalised communities. After this analysis, we determined that the first two types of investment offer better opportunities for JESSICA type investments as opposed to housing for marginalised communities.

The rationale behind this assessment is that most EU-funded projects focusing on marginalised communities to date have been targeted at Roma communities. In fact the definition of marginalised communities should, in principle, be more comprehensive i.e. vulnerable populations, who are characterised by low education levels, high levels of unemployment and limited employment opportunities can also be considered as marginalised communities. The analysis of the projects included in our database highlighted that the provision of housing for marginalised communities is generally financed through grants. Such projects have limited or no revenue streams with which to repay loans and to ensure an adequate return on investment (ROI), which is an essential condition for JESSICA.

The provision of housing for marginalised communities is an issue which needs to be addressed further; we will deal with it in more in-depth in one of the in-depth analysis in part 4. Nonetheless, these types of projects do not appear to be a viable investment opportunity for JESSICA for the time being.

The remainder of this study focuses on two project types:

- (1) Multi-purpose development;*
- (2) Energy efficiency and low-carbon refurbishment.*

These appear to offer some interesting opportunities for embedding housing in JESSICA operations and will therefore be analysed in more detail in the following section.

After setting out a general description of each of the eligible types of housing project, we discuss four case studies of specific projects from our database which could, in principle, have been financed through the JESSICA initiative. All of the chosen projects meet the following criteria:

- They comply with existing ERDF regulations concerning the financing of housing projects;
- They are compatible with the requirements of the JESSICA working mechanisms;
- They are recognised as examples of best practice at the EU level;
- There is enough publicly available information about them.

3.3.1 Project Type 1: Multi-purpose development

Project characteristics and eligible expenditure

The EU urban policy supports integrated area-based regeneration initiatives combining economic, social, cultural and environmental aspects managed through partnerships with strong civic involvement. The aim is the revitalisation of derelict or abandoned urban areas, together with improvements in social inclusion, development of human resources and employment-generation initiatives (such as creation of new employment opportunities, the fight against criminality and the economic development of the area). According to ERDF regulation, the goal of such investment must be to increase social cohesion, and national authorities must define the eligible categories of housing.

This project category covers multi-purpose developments including the refurbishment of existing buildings, the re-development of urban brownfield sites for different uses or the development of new areas outside the city centre. Their main objectives are to provide sustainable environments where work and housing can operate in synergy. Energy efficiency, including in housing, is an important component– but not the primary goal of these developments.

Many of the case studies covered all aspects of urban regeneration including refurbishment of existing buildings, demolition and reconstruction of unsafe buildings and new construction. The neighbourhoods concerned are generally characterised by mixed tenure, including owner-occupied and private rented homes and social housing. The social housing units are generally owned by municipal authorities or non-profit housing organisations.

Financial mechanisms, Final Recipients and governance structure

Because of their complexity, their far-reaching objectives and their long implementation periods, these projects often require a plethora of funding sources and instruments. As a general rule, new and large-scale rehabilitation construction involves PPPs encompassing public institutions, local authorities and private investors, but the ownership of the housing is usually funded separately by the housing development.

The projects are often originated by local authorities who, in line with their policy goals, open a call for proposals to select the most suitable development project for a pre-identified area. The selected promoter(s) will then invest part of their own resources and will receive funding from the local authorities as well as from many other actors, notably central government. In most cases the promoters also seek loans from public and commercial banks.

The revenue stream - allowing the recovery of the costs and a reasonable profit margin for promoters - comes from the sale/rent of the land, housing, offices, industrial and commercial units.

The national government generally provides grant funding and may also use part of its ERDF resources to support these types of projects. Public banks, national environmental protection agencies and public sector companies, such as utility companies, may also provide financing to projects pursuing sustainable development and other government objectives. These resources are often used to prepare technical and financial feasibility studies.

Conceptual model for multi-purpose development

Multi-purpose development projects are mostly focused on the regeneration of abandoned or deprived urban areas. They are generally characterised by the adoption of an integrated and strategic approach aiming at revamping economic activities and improving living conditions in the area.

According to our analysis of existing examples of this project category, the actors involved generally include both public and private investors. The investors can be financial institutions, banks, national housing funds or national housing associations, national grant programmes for specific themes (e.g. education, energy efficiency, promotion of the use of renewable energy sources, innovative construction techniques, etc.) and agencies of the national government.

Usually a separate legal entity, whose capital encompasses the contributions of public and private investors, is established. Public investors can provide equity or in-kind contributions (e.g. land, buildings and infrastructure). The legal entity usually has a very strictly delimited geographical scope, since its activities tend to be focused on one neighbourhood, city or region.

The revenues from the sale or the rental of the re-developed assets repay the initial investment. The ROI allows the recycling of capital assets to finance other projects.

The most evident advantage of this model lies in the fact that the public investors are generally ready to take a higher risk while having lower financial return expectations than private investors. The presence of public investors provides an incentive to the private sector to participate, since the latter needs to invest less equity capital of its own and thus takes lower risk. This investment model has, therefore, a high leverage effect. The benefits of this investment model go beyond its financial rate of return; it can contribute to a vast array of objectives ranging from economic development to employment creation and the improvement of living conditions through the construction or refurbishment of housing blocks.

Figure 5 Conceptual model for operations in multi-purpose development

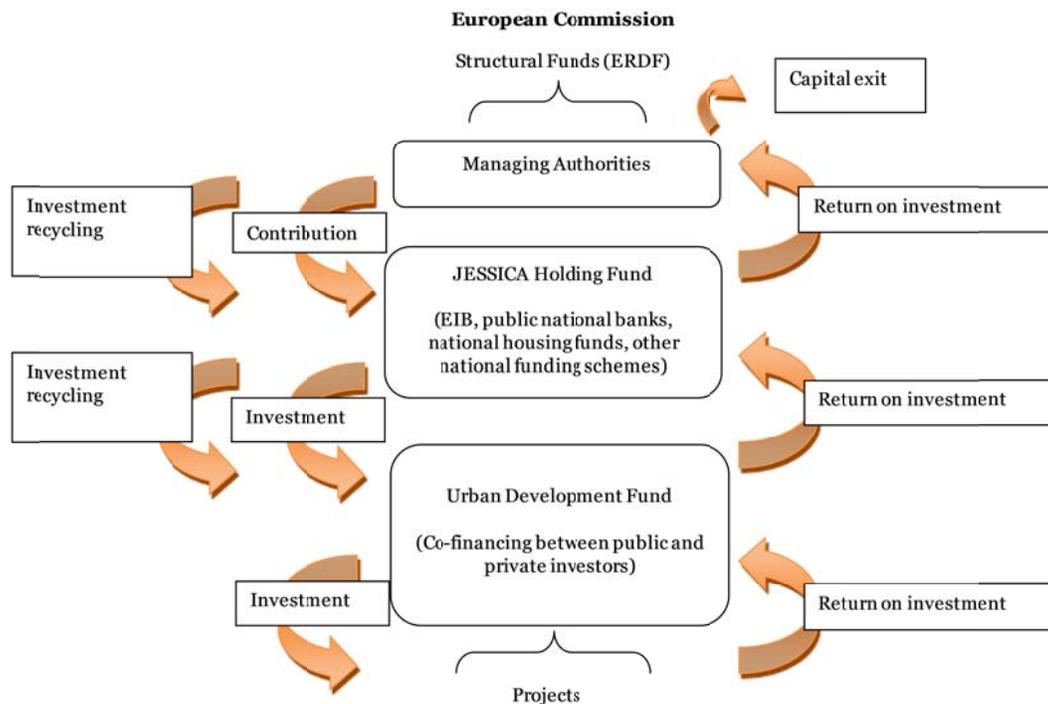


Figure 5 shows the conceptual model for multi-purpose development. This model provides an important area of potential for embedding housing in JESSICA operations, since housing represents an essential component of most multi-purpose development projects. In addition, there appears to be considerable appetite for these types of projects across EU MSs. The JESSICA initiative has been designed to leverage, in addition to EU SFs, other resources for PPPs and for urban renewal and development projects in general, so it can have an important role to play.

We based our model on the JESSICA four level structures:

JESSICA could fit into this conceptual model of ‘multi-purpose development’ projects. The MAs implementing JESSICA could contribute resources from the relevant OP, while other investors (public or private) could contribute additional loan or equity capital, as appropriate. The OP contributions could be used to finance loans, guarantees or equity through the UDF to the urban projects. Multi-purpose development projects will also, where possible, obtain co-financing from commercial banks or other private sector players. These actors could participate both at the UDF and at the project level:

- At the UDF level, their role can be that of UDF managers or co-investors, jointly with public entities
- At the urban project level, commercial banks and private sector developers can act as investors and project promoters.

The roles of the main actors as drafted in the regulation are as follows (see HF Handbook⁴⁶ for more on this):

Managing Authority: in accordance with Article 60 Regulation (EC) No. 1083/2006, this can be a national, regional or local public authority or a public or private body designated by the MS to manage the OP.

Holding Fund: in accordance with Article 44 Regulation (EC) No. 1083/2006, MAs have the option⁴⁷ of organising FEIs through the intermediary of a HF. “In case the MS or the MA decides to implement the operation through a HF, they may also decide to implement it through the award of a contract directly to the EIB. Article 44 second paragraph of the General Regulation lays down three possible forms for their implementation:

- through the award of a public contract in accordance with applicable public procurement law,
- through the award of a grant, defined for this purpose as a direct financial contribution by way of donation to a financial institution without a call for proposals, if this is in accordance with national law compatible with the Treaty, or
- through the award of a contract directly to the EIB or the EIF.

Urban Development Fund: according to the investment strategy of JESSICA operations, the UDF can operate as joint stock company, limited liability company, investment fund or separate block of finance within a financial institution, or may take another organisational form which requires special legal regulations/status. Various organisations and institutions can be considered as UDF candidates, in particular:

- National/regional and international banks;
- Existing commercial investment funds / fund managers;
- Public agencies or other public institutions; and/or
- Real estate developers.

Specific requirements may be set for each of the participants in the governance structures - for instance; they may need to have experience in managing development funds, experience in co-operation with local public authorities, experience in financing projects in specific sectors, readiness to leverage ERDF allocation with additional funds, capacity to operate in the region etc.

Urban Projects: investors contribute to financing specific projects. It is carried out by the Final Recipients and supported by UDFs.

Several examples of multi-purpose development projects can be found in different MSs. Below we discuss two case studies, from the UK and France, of projects which were partly financed by ERDF. We describe how each project was implemented and how similar projects could be adapted to make them suitable for financing by JESSICA.

Even though France has not implemented JESSICA type operations yet, we considered that the French project represented European best practice, and could be implemented elsewhere within the MS where JESSICA operations already exist. Most projects of this type are financed through a mix of grants, generally for TA and/or feasibility studies, equity, in-kind contributions and loans from commercial banks.

⁴⁶ http://www.eib.org/attachments/documents/jessica_holding_fund_handbook_en.pdf

⁴⁷ Regulation (EC) No 1083/2006 of 11 July 2006 provides for the option of using a HF and states in Article 44: ‘When such operations (UDFs) are organised through HFs ...’ which makes it clear that the HF is optional. Moreover, COCOF Note 08/0002/03 dated 22/12/2008 confirms that HFs are optional in the implementation of JESSICA and that MAs themselves are allowed to directly finance UDFs.

3.3.1.1 Case Study 1: Strategic Regeneration Framework for East Manchester (UK)

Project characteristics and eligible expenditure

East Manchester grew in the nineteenth and early twentieth century and emerged as an industrial area where most of the city's traditional manufacturing industries were located. This area also provided housing for the large workforces employed by these industries. In the second half of the twentieth century, East Manchester's economic base was severely affected by successive economic recessions and eroded by the strong competition produced by the progressive globalisation of markets. Between 1951 and 2001 the area's population fell dramatically from 164,000 to 62,000, leaving East Manchester with a significant amount of brownfield land and vacant buildings, along with a low value, low demand housing market and a poor physical environment.

The local authority has set out its main strategic objectives for the revitalisation of East Manchester in three programme areas: the economy and employment, people and communities, and neighbourhoods and places.

Its main objectives include:

- Promoting employment and creating working communities;
- Improving the transport network;
- Tackling crime and anti-social behaviour;
- Promoting educational achievement;
- Establishing family-oriented neighbourhoods;
- Reviving commercial areas;
- Greening East Manchester.

Restructuring the housing market is one of the main issues in the East Manchester redevelopment. The main goals are the promotion of a mixture of residential, commercial and other development in the neighbourhoods, the promotion of access to ownership and the provision of decent homes through the refurbishment of the existing social housing stock.

The main achievements of the programme between 2000 and 2010 include:

- Construction of 197,000 m² of new commercial floor space;
- Recruitment and training of more than 1,000 East Manchester residents through partnership programmes with local employers including Tesco, Asda and Matalan;
- Construction of early 5,000 new homes and refurbishment of 6,700 properties;
- Creation of family neighbourhoods, including three new shopping centres, two new health centres and seven new children's centres. Ten parks have been improved and 12 community gardens created;
- Population increase by over 4,000 since 2001;
- Secondary school attendance is at its highest level in 10 years;
- Construction of three high schools.

Financial products, Final Recipients and governance structure

This project is one of several revitalisation programmes for Manchester and is managed by New East Manchester Ltd. (NEM), established as an Urban Regeneration Company (URC)⁴⁸ in 1999 as a partnership between Manchester City Council, the Homes and Communities Agency (the national

⁴⁸ Urban Regeneration Companies (URCs) unite public and private sector partners to deliver sustainable regeneration and stimulate investment in towns and cities. They are independent companies established by the relevant local authority and Regional Development Agency. The principal aim is to engage the private sector in a sustainable regeneration strategy, working within the context of a wider masterplan which takes full account of the problems and opportunities for the whole area. There are currently four operating URCs in England, where New East Manchester is one of them.
<http://www.homesandcommunities.co.uk/ourwork/urban-regeneration-companies>

social-housing funding agency), the North West Development Agency and the communities of East Manchester. NEM's activities are funded primarily through grants from the three partners and their associated expenditure covers their operational activities.

Total investment is estimated at GBP 3,965 mn in the Regeneration Framework over the full duration of the programme (2000 – 2018), out of which approximately 70% will come from the private sector and 30% from public budgets, including EU ERDF resources. The three partners constituting the NEM contribute to the project with grants. Northwest Development Agency (NWDA)'s grants come partly from its ERDF allocation and partly from its own resources.

Table 9 NEM Regeneration Framework Investment by Development Partners Total Programme – All Years ('000 GBP)

Development Partners	Economy & Employment	Neighbourhoods & Places	People & Communities	Total
NWDA	147,400	8,237	4,000	159,637
EU: ERDF	48,193	5,515	6,628	60,336
EP (HCA)	57,755	38,686	100	96,541
Manchester City Council	30,934	18,413	2,940	52,287
LTP		18,284		18,284
Other (capital receipt)		34,466		34,466
Transport for Greater Manchester		200,393		200,393
HMR Fund		116,760		116,760
HCorp (HCA)		50,268		50,268
RSLs		24,808		24,808
Neighbourhood Renewal Fund (NRF), Working Neighbourhoods Fund (WNF)			6,699	6,699
EIC (facilities management and building services company)	10,252		2,600	2,600
English Cities Fund				10,252
Further Education Funding Council			4,200	4,200
SureStart			6,320	6,320
New Deal for Communities/ Single Regeneration Budget	8,000	46,526	23,143	77,669
Health			15,000	15,000
Education Action Zone			8,487	8,487
DFES/Building Schools for the Future programme			66,966	66,966
PFI Support/credits		103,386	6,543	109,929
Lottery: Sport England	95,500		700	96,200
Heritage	13,055			13,055
Private Sector	1,250,622	1,426,089	57,308	2,734,019
Total	1,661,711	2,091,831	211,634	3,965,176

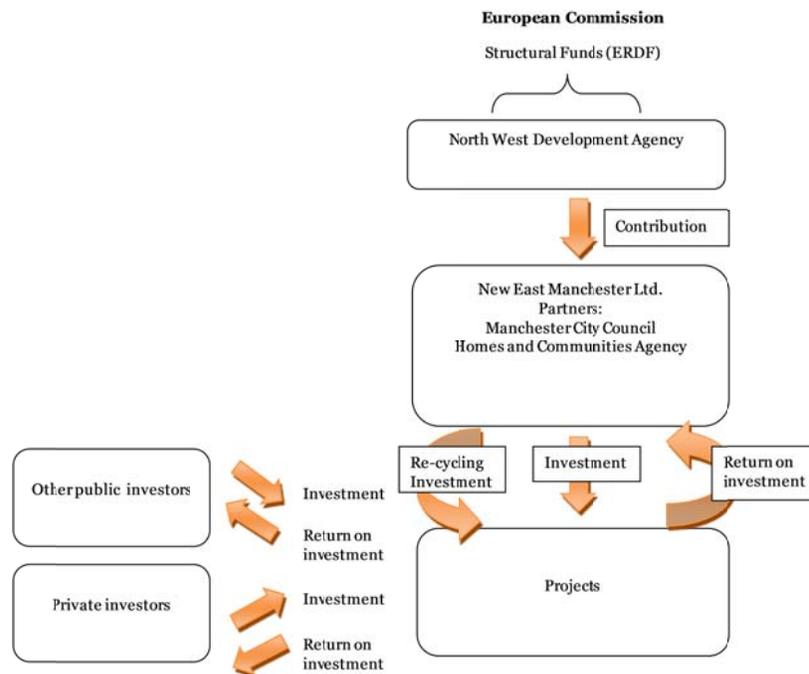
Source: NEM Implementation Plan 2009 - 2010.

As regards ERDF resources, the priorities foreseen by the North West OP are:

-
- *Stimulating Enterprise and Supporting Growth in Target Sectors and Markets* (EUR 205mn from the ERDF), providing business support and financial instruments which help improve the competitiveness of regional businesses, especially in high value target sectors. It also supports work with the region's businesses in all sectors to improve resource efficiency and reduce their carbon footprint;
 - *Exploiting Innovation and Knowledge* (EUR 205mn from the ERDF), aiming at making full use of the region's knowledge base in Higher Education Institutes, research institutes and private sector firms;
 - *Creating the Conditions for Sustainable Growth* (EUR 157mn from ERDF), financing infrastructure in the region to support the development of successful economies;
 - *Growing and Accessing Employment* (EUR 159mn from ERDF), tackling economic exclusion and creating employment especially in disadvantaged areas.

The NEM programme fits the priorities of the North West OP and has made use of ERDF resources to support strategic initiatives at Sport-city and at Central Park. ERDF resources have not been allocated to housing developments so far. The housing programme has been financed mostly by the Home and Communities Agency, which has taken on management responsibility for strategic investment programmes formerly within the control of English Partnerships and housing programmes formerly within the control of the Housing Corporation or the Department for Communities and Local Government.

Figure 6 Financial mechanism and governance structure for the East Manchester Strategic Regeneration Framework



The key elements of the housing programme include:

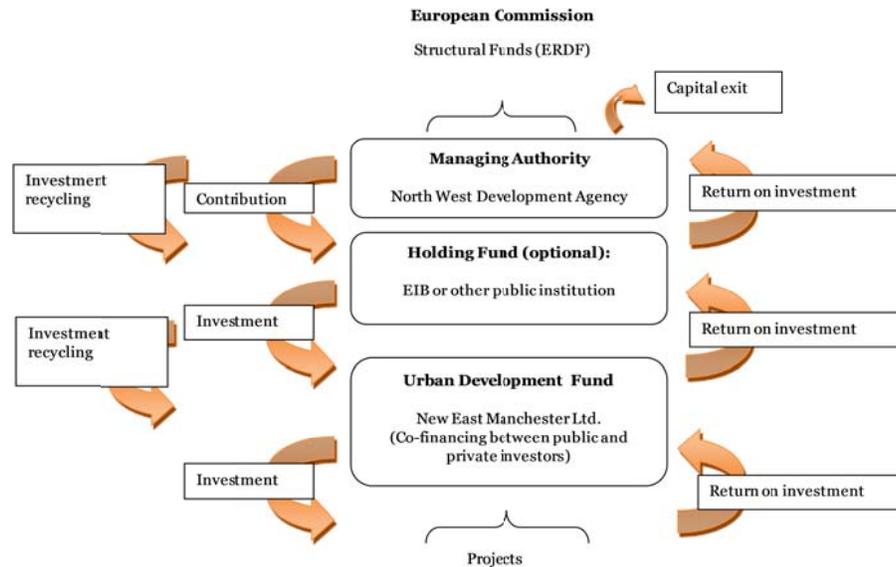
- *HMR programme* with an investment of GBP 24.972mn in 2009/10, carried out major operation at Toxteth Street, Eccleshall Street, and Walsden Street together with various improvements to other neighbourhoods. The HMR programme's outturn exceeded the financial plan (GBP 23.8mn), due to the acceleration of the acquisition and demolition programme at Toxteth Street. The programme was closed in the 2010/11 fiscal year and discussions are ongoing to establish a potential successor programme;
- *West Gorton investment programme* to deliver the revised master plan and 171 local authority new build homes, starting in 2010/11;
- *Kick start funding* to aid stalled development schemes in the area.

The company's activities are those of a supervisory, co-ordinating and facilitating body and are carried out in accordance with the guidance issued to Urban Regeneration Companies (URCs) by the Homes and Communities Agency. NEM's remit is to bring together public agencies, other bodies, and the private sector to deliver the investment necessary to regenerate part of the city – delivering a long-term strategic vision for physical, economic, environmental and social change.

Applying the conceptual model to East Manchester

To demonstrate how JESSICA might have been used in East Manchester, we applied the conceptual model for a multi-purpose development operation. It should be made clear that JESSICA was not in fact used in this project. The Northwest Urban Investment Fund has been established in 2009 by the NWDA in partnership with the EIB who has been appointed as HF Manager. The GBP100m fund includes GBP50mn from the ERDF and the equivalent match of GBP50mn from the NWDA. In September 2011, a consortium led by Igloo Regeneration with the full support of the Liverpool City Region Local Authorities has been selected as preferred bidder to establish an UDF for the Merseyside region. The fund is initially allocated GBP30mn to invest.

Figure 7 Applying the conceptual model for the East Manchester case



Managing Authority: in this case it would be the North West Development Agency.

Holding Fund: in the case of Manchester a HF has been established in 2009.

Urban Development Fund: if this project were to employ the JESSICA mechanism, the most suitable option for the UDF would be the NEM's URC, with its private and public partners. This would be compatible with the company's current role which involves matching public and private funds to finance the individual projects.

Urban Projects: Under the New East Manchester Strategic Regeneration Framework,⁴⁹ private investors contribute to financing specific projects. For example, RSLs contribute to financing social housing developments through a partnership created under the Private Finance Initiative (PFI) between a private construction company, a not-for-profit 'housing management company' and a building society or bank. The partnership takes responsibility for managing social housing estates, collecting rent, arranging repairs and finding new tenants.

This arrangement presents several advantages:

- The *construction company* does major improvement work, renovating existing homes, building new homes to rent and buy and re-designing the area, which may mean the demolition of some houses;
- The *financial institution* (bank) or building society brings borrowing power, new skills and financial expertise; and
- The *housing management organisation* brings experience in successfully running estates and improving quality of life.

Since the project belongs to an integrated plan for sustainable urban development, is eligible for ERDF financing and targets an abandoned urban area implementation within the JESSICA framework is feasible. In addition, since 2009 JESSICA is active in the region through the Northwest England HF.

⁴⁹ This Regeneration Framework followed extensive consultation with local residents and stakeholders and provides a strategic platform from which to regenerate East Manchester. An annual Implementation plan outlines the detail of programmes, their targets and progress to date.
http://www.manchester.gov.uk/egov_downloads/6_New_East_manchester_Implementation_Plan.pdf.

3.3.1.2 Case study 2: Eco-quartier 'l'Union' in Lille (France)

Project characteristics and eligible expenditure

The "L'Union" eco-district is one of the main examples of urban renewal projects in France. The site covers 80 hectares of urban industrial brownfield to be redeveloped. The project was launched in 2007 and construction work started in 2009. The neighbourhood has a rich industrial history; however, due to the crisis in the textile industry in the 1970s, economic activity of the area started to decline and the site was progressively abandoned. In the 1990s the municipality decided to promote a redevelopment of the area and in 1998 the outline of the project was defined.

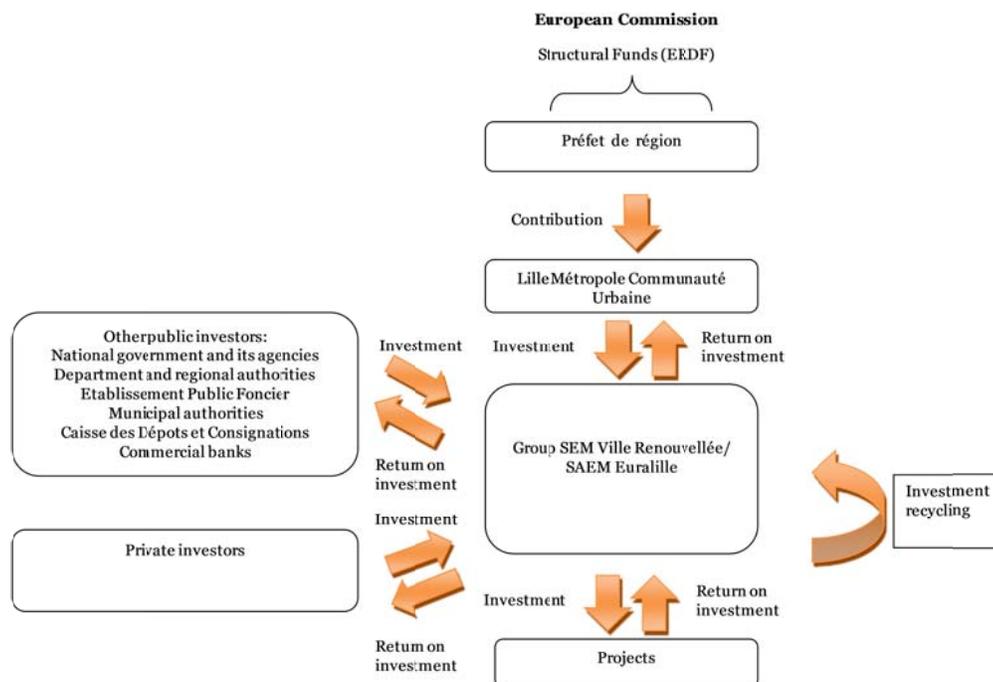
This project represents an integral part of the process of economic revamping and revitalisation of the city of Lille. The area's two main industries are culture/media and innovative textiles production. The provision of housing is a major objective of this project, which foresees the construction of 1400 new dwellings. These include individual houses as well as multi-apartment blocks and are expected to be partly sold to private owners and partly rented. Social housing represents 30% of the projected new housing.

The site is divided into 11 sectors where multiple uses and functions co-exist. As it is a brownfield site, the existing buildings needed to be demolished and rebuilt. Several feasibility studies have been carried out to determine which buildings could be maintained and renovated, on the basis of their cultural and architectural value, as well as of their reconversion potential. The project includes more than 15 hectares of green areas and parks spread across the different sectors of the neighbourhood.

Financial products, Final Recipients and governance structure

From 1998 onwards, the municipality and the metropolitan area of Lille progressively sold the 80 hectares of the project site and the existing assets to the 'Établissement Public Foncier' (EPF) Nord-Pas de Calais. EPFs are public agencies whose duties and structures are governed by national law. The Nord-Pas de Calais EPF operates in the region to support local communities and recycle derelict spaces. It purchases, redevelops and manages properties, and finally sells them to the community. The EPF contributed directly to the project costs, using its own resources to cover 40% to 80% of the cost of demolition.

Figure 8 Financial mechanism and governance structure for the *éco-quartier 'L'Union'*, Lille



In 2007 the EPF sold the land to the ‘*Société d’Economie Mixte (SEM) Ville Renouvelée*’, a public-private organisation specializing in land management. The SEM is constituted as a “*Société Anonyme*”, with a statute and a minimum of 7 shareholders, out of which at least one local community. The local community should provide between 50% and 80% of the capital, either as equity or in-kind. The SEM Ville Renouvelée acted as project developer and owner. The sale price was EUR 100/m² for commercial land and EUR 125 /m² for land for housing.

Partners in the SEM Ville Renouvelée are:

- Local and municipal authorities (64%),
- Chamber of Commerce of Lille (11%),
- Caisse de Dépôts et Consignations (13%),
- Caisse d’Épargne de Flandre (3%),
- Dexia (3%), and
- other private investors (6%).

Table 10 Provisional budget of the operation established in 2007

Origin of funding	Amount (EUR)
Sale of land and real estate assets	55,435,502
Contribution from Lille Métropole Communauté Urbaine	107,554,911
Contribution from the municipalities of Roubaix, Tourcoing and Wattlelos	10,538,994

Source: *Direction Générale de l’Aménagement, du Logement et de la Nature, 2011*

The national funding streams are generally combined with EU funding, mostly through the ERDF. The EU financial resources have been used for various purposes, in particular for soil remediation, refurbishment of existing industrial buildings and the construction of the ‘*Centre Européen des Textiles Innovants*’ (CETI). A publication by the *Centre Ressource du Développement Durable (CERDD)* and the Lille Metropolitan area, provides a detailed analysis of the co-financing possibilities for an éco-quartier using ERDF funds.⁵⁰ Three of the priority axes of the 2007-2013 OP for the Nord-Pas de Calais region could cover the kind of development envisaged for the éco-quartier (Table 11 summarizes the possible uses of ERDF funds). Eco-quartier projects could also qualify for funding under various national or local schemes, including national, regional and municipal grant funding schemes for projects aiming at limiting urban sprawl, enhancing the environmental quality of urban areas by ensuring social mix and social inclusion. The different development phases of an ‘éco-quartier’ project can be summarized as follows:

- Technical and feasibility studies
- Implementation and construction works
- Animation of the life of the éco-quartier

SEM Ville Renouvelée, the project developer, received financial contributions from the metropolitan and municipal authorities. In addition it is using its own funds for the project. The cash-flow of the project will be based on the sale/rent of housing units to owners and social housing providers, as well as revenue from the various economic activities. The projected income was composed of proceeds from the sale of land and real estate assets (31%), contributions from the metropolitan authorities (61%) and contributions from the municipalities involved (6%). The Caisse des Dépôts et Consignations and the National Environmental and Energy Agency provided grants for feasibility and engineering studies, including energy efficiency and sustainable mobility studies as well as complementary market studies. Projects follow HQE standard for buildings.⁵¹ Since HQE’s standards are expensive, social housing providers qualify for additional grant to cover part of the extra costs of obtaining the HQE certification.

⁵⁰ CERDD and Aire Métropolitaine de Lille (2009), *Ingénierie financière des projets d’éco-quartier – Synthèse des échanges de l’atelier technique de l’aire métropolitaine de Lille*, Collection « Urbanisme et modes de vie durables »

⁵¹ HQE is a standard for green building in France, based on the principles of sustainable development and specifying criteria to manage the impacts on the outdoor environment as well as to create a pleasant indoor environment.

Table 11 ERDF Co-financing possibilities for “éco-quartier” projects in France

Operational Programme 2007-2013 Priority Axes	Description	Amount	Beneficiary	Measures financed
<p>Axis 2 ‘Environment, sustainable practices and risk prevention’ (Regional call for projects ‘Bâtiments et quartiers’)</p>	<p>Co-financing studies and implementation of measures aiming at preserving biodiversity and water resources, fighting climate change and managing environmental risks</p>	<p>Up to 70% of the cost of energy engineering studies and measures with a maximum amount of EUR 100k or EUR 200k for engineering studies, depending on the size of the project Up to 30% of the cost of investments aimed at achieving environmental objectives</p>	<p>Project developer (Public or private)</p>	<p>Technical studies:</p> <ul style="list-style-type: none"> • Environmental studies • Assistance to the project developer for producing guidance documents for the eco-quartier • Development of a monitoring and evaluation system • Carbon footprint • Complementary studies • Soil pollution studies only for industrial brownfield <p>Implementation:</p> <ul style="list-style-type: none"> • Sustainable refurbishment of existing buildings • Sustainable construction of new buildings • Creation of public spaces, such as public lighting, etc. • Public spaces and facilities (e.g. schools, sport facilities, green areas, etc.) • Installation of heat distribution networks • Installation of local renewable energy production units • Public and alternative transport facilities (e.g. bicycle lanes, park and ride lots, etc.) • Green infrastructure development (e.g. ecological corridors) <p>Animation of the ‘eco-quartier’:</p> <ul style="list-style-type: none"> • Investment for information provision and knowledge sharing for local actors and residents

Operational Programme 2007-2013 Priority Axes	Description	Amount	Beneficiary	Measures financed
Axis 4 Priority 5 'Volet territorial' <ul style="list-style-type: none"> • Social cohesion • Regional excellence 	Contributions for studies and investments in brownfield redevelopment, in integrated development projects, in accessibility and transport studies and for the strengthening of local commercial handicraft activities	40%-60% of eligible expenditures	Project developer (Public)	Technical studies: <ul style="list-style-type: none"> • Definition of a general urban planning framework for the integrated development project • Definition of a monitoring and evaluation system • Complementary risk assessment studies • Soil pollution studies • Studies for the setting up of the equipment in order to achieve environmental objectives • Studies for infrastructure and networks (i.e. health distribution networks, potential for renewable energy production, sustainable transport and mobility, collective management of natural infrastructures) Implementation: <ul style="list-style-type: none"> • Assistance to project developer during project implementation • Creation of public spaces, such as public lighting, etc. • Public spaces and facilities (e.g. schools, sport facilities, green areas, etc.) • Heritage conservation Animation of the 'eco-quartier': <ul style="list-style-type: none"> • Assistance from an urban planning consultant
Axis 3 'Accessibility'	Studies and investments in municipal and inter-municipal transport connections as well as telecommunication and internet network development	Maximum 75% of the costs of the studies	Project developer (Public or private, if the investment is related to economic activities taking place in the neighbourhood)	Technical studies: <ul style="list-style-type: none"> • Studies of transport networks Implementation: <ul style="list-style-type: none"> • Development of transport and mobility infrastructure

Applying the conceptual model to éco-quartier 'L'Union' Lille

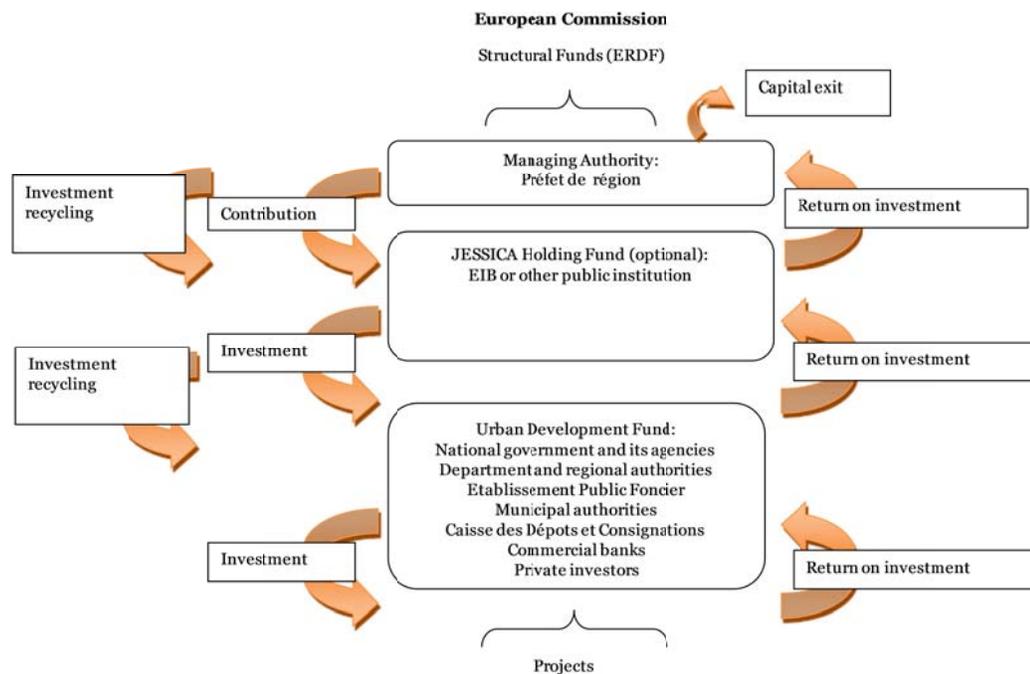
To demonstrate how JESSICA might have been used in Lille, we applied the conceptual model for a multi-purpose development operation. It should be made clear that JESSICA mechanism was not used in Lille.

Managing Authority: ERDF funds are allocated by the French Ministry of Home Affairs and the regional prefecture (*Préfet de Région*).

Holding Fund: As already explained, MAs have the option of organising FEIs through the intermediary of a HF which can be managed by EIB or any other public financial institution, or procured to a private institution.

Urban Development Fund: The function of matching public and private funding sources is covered by the SEM Ville Renouvelée, which appears to be the most suitable entity to cover the role of UDF.

Figure 9 Applying the conceptual model to the case of éco-quartier 'L'Union' in Lille



Implementing this type of model in the framework of JESSICA would be feasible since the project is in an integrated plan for sustainable urban development, is eligible for ERDF financing and targets an abandoned urban area. However, since JESSICA is not yet active in France the full mechanism would need to be put in place. A detailed analysis of the options to implement JESSICA financial instruments in the Nord Pas de Calais Region was made through a JESSICA Evaluation Study.⁵² This study analyses the project of “L’Union”, together with other potential “ecoquartier” projects in the region, and it recognises the relevance of this type of project for JESSICA.

⁵² http://www.eib.org/attachments/documents/etude_jessica_npdc_rapport_final_pwc_fr.pdf

3.3.2 Project Type 2: Energy efficiency and low-carbon refurbishment

Project characteristics and eligible expenditure

This project type mainly involves the refurbishment of panel houses and multi-apartment blocks. Many examples of this type of project can be found in Eastern European countries, for instance Czech Republic, Hungary, Slovakia, Poland, Estonia, Lithuania and Latvia, but also in Western Europe, for example in France, Germany and in the UK.

The most common interventions performed on existing buildings include:

- Insulation of end walls, façades, attics, basement plinths and roofs;
- Change of windows;
- Rebuilding heating systems;
- Installation of thermo-regulating elements;
- Installation of heating proportionality spreaders;
- Staircase re-modelling;
- Glazing of balconies;
- Weatherization of buildings.

The main objectives pursued by these projects are the achievement of energy efficiency improvements and the fight against energy poverty, in both Eastern and Western European countries.

In Eastern Europe these projects mainly target privately owned housing. In these countries most of the housing stock was privatized at the end of the communist era. The formerly public housing blocks are now privately owned and owner-occupied, and are generally administered through joint management arrangements including all the owners of individual dwellings. In some cases owners/management organisations appoint private sector companies as building managers.

By contrast, in France, Germany and the UK, low-carbon renovations including small scale generation are widely implemented in buildings owned and managed by social landlords, who rent them to low-income tenants. In Germany civil society organisations (NGOs) often act as building owners.

This project type involves the renovation of housing units, from detached or semi-detached houses to multi-apartment blocks, in order to achieve greater energy efficiency. The projects may also involve a complete upgrade internally and externally, including new kitchens and bathrooms, re-wiring, re-plastering and re-roofing. In most cases, packages for renewable energy generation, especially solar PV panels, are installed. Some projects of this type aim at obtaining an environmental performance certification (e.g. HQE in France, BREEAM in the UK and DGNB in Germany) for the renovated building to demonstrate that it achieves specific targets of energy efficiency improvements and a 70% - 80% reduction in carbon emissions.

Financial mechanisms, direct beneficiaries and governance structure

Funding for energy efficiency renovations usually comes from state subsidies or commercial banks, and the management organisations of the buildings or estates where projects occur also often use their own resources to finance renovations. MSs or European financial institutions (such as the EIB) distribute subsidised loans with below-market rates and favourable conditions (in particular long repayment periods of 15 to 20 years) through commercial banks.

In Poland, the Thermal Modernisation Fund subsidizes up to 25% of loans for these projects. In Latvia, the German Ministry of Environment provides a grant covering part of the cost of renovations of multi-apartment blocks.

In the UK, housing associations use their own resources to finance part of the refurbishment investments. They can count on a constant cash flow from rents – although these are not related to the additional investment. Since the costs of refurbishment are substantial and since low-carbon refurbishment is consistent with the national objectives of carbon emission reductions, housing associations are also eligible for grants from national government.

In France, regional and local authorities are increasingly developing partnerships with other public sector agencies, such as Electricité de France (EdF) and Agence de l'Environnement et de la Maitrise de l'Energie. For instance in Alsace, the regional authorities, the Haut-Rhin Department and EdF have launched a partnership to finance low-energy renovations of existing social housing buildings. Social landlords can apply for funding for housing refurbishment projects aiming at reducing carbon emissions and at increasing energy efficiency.

Eligible costs include:

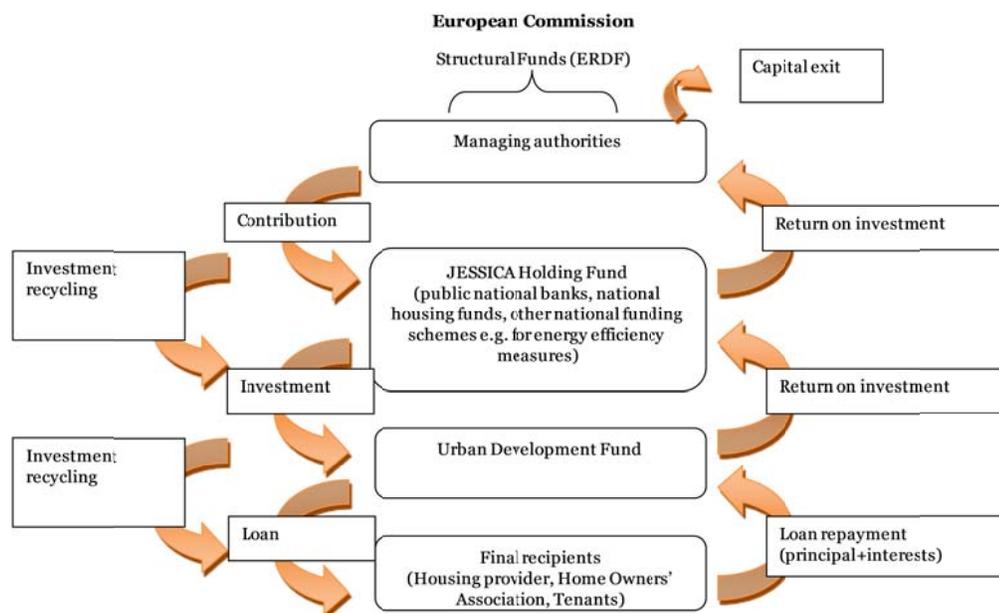
- Changing of the heating system;
- Installing building insulation;
- Double glazing of windows; and
- Installation of a natural ventilation system.

Conceptual model for energy efficiency and low-carbon renovation projects

This investment model focuses on the refurbishment of existing properties with the aim of improving energy efficiency, tackling energy poverty and reducing carbon emissions. We have examined energy efficiency and low-carbon refurbishment projects in various MSs. EE/RES investments in existing properties are eligible for ERDF funds, as are projects to renovate common parts in existing multi-family housing including:

- refurbishment of the following main structural parts of the building: roof, façade, windows and doors on the façade, staircase, inside and outside corridors, entrances and their exteriors, elevator;
- technical installations of the building; and
- energyefficiency improvements.

Figure 10 Conceptual model for projects in energy efficiency and low-carbon renovation of housing



These projects provide the framework of our conceptual model for this project type:

Table 12 Governance structures of JESSICA initiatives in Estonia and Lithuania

Governance	Estonia JESSICA initiative	Lithuania JESSICA initiative
MA level	<p>JESSICA Investment Committee</p> <ul style="list-style-type: none"> • at national government level, board members are from the Ministries of Economic Affairs and Communications 	<p>JESSICA Investment Committee</p> <ul style="list-style-type: none"> • at national government level, board members are from the Ministries of Finance and Environment <p>HUDA</p> <ul style="list-style-type: none"> • Institution under the remit of the Ministry of Environment • Provides TA for the HF and individual projects
HF level	<p>KredEx⁵³ HF</p> <ul style="list-style-type: none"> • EUR 17 million from ERDF • EUR 29 million from CEB covered by State guarantee • EUR 3 million from Kredex own financing 	<p>JESSICA HF (EIB was appointed as fund manager)</p> <ul style="list-style-type: none"> • EUR 127 million from ERDF • EUR 100 million from the Government
UDF level	<p>UDFs for energy efficiency in housing</p> <ul style="list-style-type: none"> • Swedbank • SEB 	<p>UDFs for energy efficiency in housing</p> <ul style="list-style-type: none"> • Siauliu • Swedbank • SEB
Final Recipient	Apartment associations	Individual homeowners Housing associations

Managing Authorities: EU funds are granted to national and regional MAs. These resources, together with other public funds, comprise the HF. Other public funds typically originate from financial institutions, public banks, and other national funding schemes, such as national housing funds or grant schemes to implement energy efficiency measures or feasibility studies.

Holding Fund: As the two cases above show that the HF can be managed by National Development Bank (namely KredEx) or by the EIB⁵⁴.

Urban Development Fund: The HF invests in UDFs managed by financial institutions, for instance commercial banks. These institutions then provide loans to housing providers such as housing associations in the UK, or homeowners' associations as is often the case in EU12 countries. They will then realise the refurbishment and renovation of the property, rent it to tenants and repay the loan. These private sector entities can combine their own resources with a subsidized loan and/or other grant funding in order to fund renovation works.

Final Recipients: Final Recipients can be housing providers, such as social landlords, or home owners' associations. The revenue stream allowing the repayment of the loan is the rent or sale of refurbished housing. Residents benefit from a 'Pay as you Save' approach, whereby low monthly repayments are less than their overall annual running cost savings post retrofit. This could be paid as a service charge under a

53 KredEx was founded by the Ministry of Economic Affairs and Communications in year 2001 with a purpose to improve the financing possibilities of companies, to enable people to build or renovate a home and develop energy-efficient way of thinking. <http://www.kredex.ee/1534>

54 Note: take into account all possible options provided in Article 44 of Council Regulation (EC) No 1083/2006 for HF

voluntary agreement, an increase in rent, where current rent levels are lower than target rent or as a result of a change in rent legislation or policy.

The Estonian and Lithuanian examples demonstrate the feasibility of using JESSICA for this type of project. It works successfully in these two MSs.

Below we describe in detail two case studies in Estonia and the UK. In the project that is the subject of our case study for Estonia, KredEx provides grant from the EU SF resources and Swedbank, is providing additional loan finance.

The second case study of energy efficiency and low-carbon refurbishment is the renovation of REEMA houses in Petersfield, Hampshire, UK. In this case, EU ERDF resources were used by the Retrofit-South East programme.

3.3.2.1 Case study 3: Multi-apartment building in Tallinn (Estonia)

Project characteristics and eligible expenditure

The BEEN (Baltic Energy Efficiency Network for the building stock) project was established in the framework of the EU programme INTERREG IIIB. The project participants included representatives of the institutions responsible for energy efficient refurbishment in housing in Baltic countries, including Germany, Poland, Estonia, Latvia, Lithuania, Russia and Belarus.

On the Estonian side six partners were involved:

1. The Credit and Export Guarantee Fund - KredEx;
2. Tallinn University of Technology;
3. The Estonian Union of Cooperative Housing Associations;
4. The Association of Estonian Facilities Administrators and Maintenance Officers;
5. The Ministry of Economic Affairs and Communications of the Republic of Estonia; and
6. Tallinn City Government.

In May 2006, KredEx announced a competition called 'Make Your Apartment Building More Energy Efficient' to identify one apartment building in Estonia prepared to carry out complex refurbishment work in order to achieve maximum energy efficiency. The work to the winning apartment building would be supported by a grant of 1 mn kroons (EUR 64,100) from the BEEN project.

The building chosen was a typical flat-roofed five-floor panel building in Tallinn with four stairways and 60 apartments. In 2001, the owners formed a home owners' association to manage the building. The association had already commissioned an expert examination of the roof in 2003, an examination of the building's construction in 2004, and a proposal for adding a 6th floor to the building. Due to the expected costs of the work, the association decided to build the 6th floor and to finance the reconstruction works out of the profit gained from selling the new apartments. In 2005 an energy audit showed that by applying all the recommended measures, it would be possible to save ~50 % of the heat energy used by the apartment building.

The construction work was carefully planned with the help of external experts. It involved:

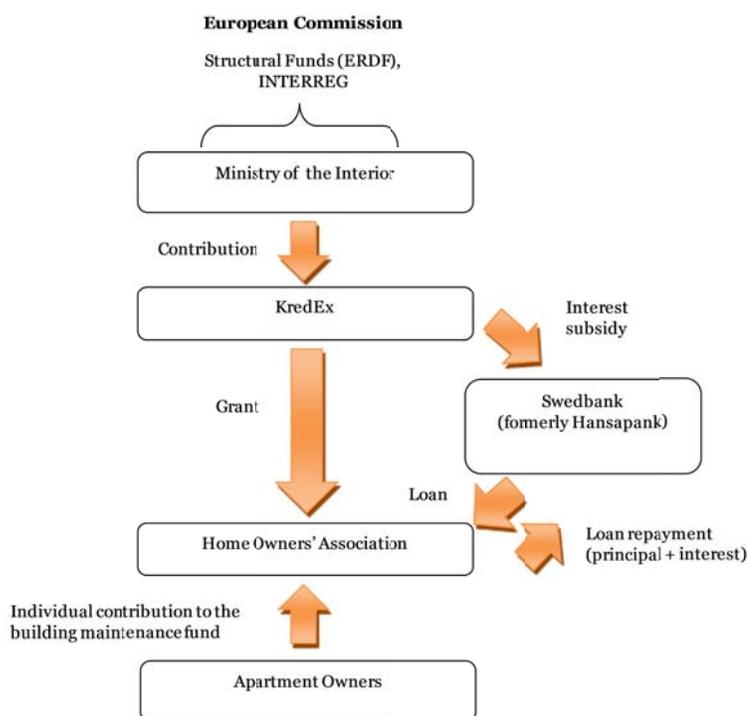
- Renovation of the roof;
- Renovation of the ventilation system;
- Renovation of the heating system;
- Installing insulation;
- Glazing the balconies and loggias with the frameless glass system;
- Replacement of the windows in apartments and stairways;
- Replacement doors to balconies and loggias.

The total cost of the project, including the project manager, planning and construction was 6.3 mn kroons (EUR 403,000), or 2,006 kroons (EUR 128) per m².

Financial products, Final Recipients and governance structure

The partners decided to employ a project manager to supervise and help the association order plans, select builders, sign contracts and inspect the work. Tenders were requested from various construction companies, mainly those recommended by KredEx, the Estonian Union of Cooperative Housing Associations and an Estonian commercial bank.

Figure 11 Financial mechanisms and governance structure of a project for the refurbishment of a multi-apartment block in Tallinn



In 2006 the homeowners' association signed a loan agreement with Hansapank (the former name of Swedbank) for the total amount of 3.2 million kroons (EUR 205,100). The loan period was 15 years, the first five at a fixed interest rate of 6.937% per year. For the remainder of the term the interest rate is EURIBOR + 3% per year. When quotes were received for the construction work it turned out that the association required a further 1 million kroons (EUR 64,100) to finance all the work, so it signed an additional loan agreement with Hansapank for 1 million kroons for 14 years, at a fixed interest rate of 7,536% for the first five years and 5 months EURIBOR + 3% thereafter. The loan was repaid with the payments made to the repair fund. In addition to the loans, the home owners' association received grants from the BEEN projects and the Republic of Estonia.

Table 13 Financing structure of the project

	EEK	EUR	Eligibility
Homeowners' association funds	581,993	37,196	Interventions on common parts only
Loan from Swedbank	4,200,000	268,429	Interventions on common parts only
Grant from the BEEN project	1,017,135	65,007	Interventions on common parts only
Grant from the Republic of Estonia	507,000	32,403	
Total	6,306,128	403,035	

Source: BEEN, 2008.

The contribution from the BEEN project was to be used exclusively for the renovation of common parts, and those individual homeowners who had not yet changed the windows (some of the owners had already done it), had to pay for the replacement of windows. The managing board of the association decided to

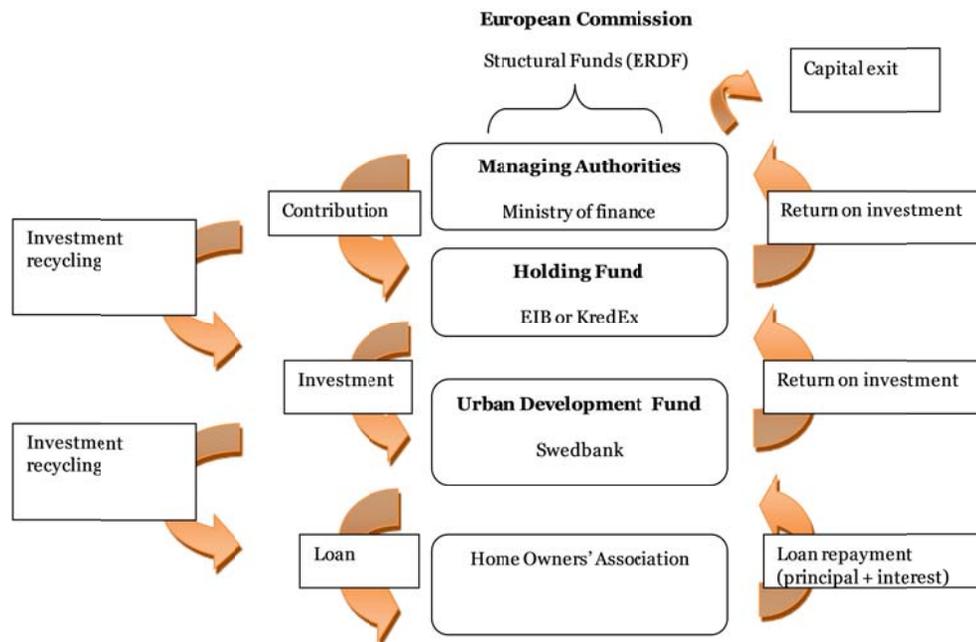
offer 0%, 10-year loans to apartment owners, who would repay them according to a monthly schedule together with all the other housing expenses.

The aim of this best-practice project involving the complex refurbishment of an apartment building was to achieve maximum energy efficiency. The apartment building now has a modern look, is well insulated and has a heating system which allows individual calculation of heating expenses. Residents can expect an estimated energy saving of 40%. In 2005, the managing board of the association raised the standard sums for repairs in the rental accounts from 4.60 kroons to 9.90 kroons per square metre per month in order to repay the bank loan. The lower energy expenditures the homeowners have to bear as a result of the renovation allow them to cover this price difference. This increase even improved payment discipline and regularity as opposed to what could be expected at the beginning of the project.

Applying the conceptual model to Tallinn

This project was financed by the ERDF under its INTERREG III programme. The following figure shows how the Tallinn case study project could have been carried out using JESSICA.

Figure 12 Applying the conceptual model to the Tallinn case



In the BEEN case study:

Managing Authority: the Ministry of Finance is in the MA role.

*Holding Fund*⁵⁵: KredEx is in the HF role.

Urban Development Fund: Swedbank is in the UDF role.

55 Note: take into account all possible options provided in Article 44 of Council Regulation (EC) No 1083/2006 for HF

It is interesting to analyse the financing through the BEEN project and the JESSICA initiative in Estonia, operational since 2009. It should be noted that the current economic and political context, as well as the number of available financial instruments, appear to be substantially different from those existing when this project was initially implemented.

Table 14 Comparison of JESSICA loan versus commercial loan

Refurbishment grant from the BEEN project (2006)	Usual commercial loan	JESSICA loan from KredEx (Start 24.06.2009)
Loan term		
Interest <ul style="list-style-type: none"> - Fixed for 5 years at 6,937% per year - EURIBOR +3% for the next 10 years 	Interest <ul style="list-style-type: none"> - Fixed for 5 years or floating - Interest ~ 7-10% 	Interest <ul style="list-style-type: none"> - Fixed for 10 years - 4.3 – 4.8%
	Contract fee <ul style="list-style-type: none"> - Up to 1% of loan amount 	Contract fee <ul style="list-style-type: none"> - 0.5% - 0.75% from loan amount
Maturity <ul style="list-style-type: none"> - 15 years 	Maturity <ul style="list-style-type: none"> - Average 2008: 11.8 years 	Maturity <ul style="list-style-type: none"> - Up to 20 years

Source: KredEx

Refurbishment grant from the BEEN project (2006)	Refurbishment grant from KredEx (Start 30.09.2010)	JESSICA loan from KredEx (Start 24.06.2009)
Results so far		
Number of apartments <ul style="list-style-type: none"> - 3 applications (1 accepted) - 60 apartments - Approximately 800,000 m² 	Number of apartments (Data as of 20.05.2012) <ul style="list-style-type: none"> - 394 applications for buildings (367 accepted) - Approximately 452,000 m² 	Number of apartments (Data as of 30.04.2012) <ul style="list-style-type: none"> - 427 buildings - 15,748 apartments - Approximately 1,000,000 m²
Budget <ul style="list-style-type: none"> - Total project cost EUR 403,035 - Grant from BEEN project EUR 65,007 - Grant from republic of Estonia EUR 32,403 	Budget <ul style="list-style-type: none"> - 218 applications for EUR 9.7 M - 183 positive decisions for EUR 4.9 M - Average EUR 26,566 per building) 	Budget <ul style="list-style-type: none"> - Total EUR 37.6 M - Average EUR 88,500 per building)
Total budget	EUR 24 M	EUR 49 M

Source: KredEx

The main advantage of the JESSICA loan appears to be the provision of a loan at lower interest rates and for longer periods than those available in the case-study BEEN project (or any commercial loan available at KredEx next to a standard grant). Furthermore, JESSICA initiative has a wider option for selection of works, than a traditional refurbishment grant allows due to the interventions permitted by ERDF compared to INTERREG, such as:

- Thermal insulation of roofs, walls, facades and cellar ceilings,
- New windows,
- New or renovated heating systems,
- New or renovated ventilation systems,
- Installation of renewable energy devices.

3.3.2.2 Case study 4: REEMA concrete houses in Petersfield, Hampshire (UK)

Project characteristics and eligible expenditure

Retrofit South-East is an innovative programme of research, business assistance, awareness raising and knowledge dissemination on different aspects of low-carbon refurbishment.

In 2008, the UK government set a target of reducing carbon emissions by 80% (from the 1990 levels) by 2050 through the Climate Change Act. Over a quarter of the UK's carbon emissions come from energy usage in housing. Thus, the existing housing stock needs to be significantly improved, if the UK wants to meet its targets. The government also drafted a Heat and Energy Saving Strategy, which targets the retrofit of 7 million properties by 2020. RSLs⁵⁶ can play a significant role in helping the government meet its carbon emission reduction targets. There are over 1,800 RSLs in England, currently managing around 1.7 million homes.

The Radian RSL is participating in the Retrofit-South East project in order to develop a model for low-carbon retrofit of social housing in the South-East region in the UK. The project is financed by the South East England Development Agency (SEEDA) and partly funded by ERDF.

The properties, which are owned by Radian, are precast reinforced concrete homes built in the late 1940s to solve the housing shortage at the end of World War II. Known as REEMA homes for the firm that manufactured them, these houses are characterised by hollow precast concrete walls, solid concrete floors and concrete ceilings, with pitched roofs clad in concrete tiles. The project refurbished 20 properties. Having considerably outlasted their projected 30-year useful life, they needed significant investment to bring them nearer to modern standards. However, given their condition no lender would offer a mortgage to finance the refurbishment.

The project involves a complete refurbishment adopting a broad spectrum of energy efficiency and renewable energy measures to bring these properties up to an ultralow carbon standard. The comprehensive package of energy efficiency measures is designed to achieve an estimated 70% reduction in carbon emissions. In addition, renewable solar energy technologies (comprising hot water panels and PVs generating electricity) installed on three of the properties should achieve an estimated 80% reduction in carbon emissions. Due to the cost of the renewable technologies, Radian could not afford to fit these to all properties, so three unoccupied dwellings were chosen in order to minimise disruption to residents.

The refurbishment programme involved a complete upgrade of internal and external finishing, making the homes 'Decent Homes' compliant. The work included:

- Insulation of walls, floors and roofs;
- Replacement of windows and doors;
- Improvements to air tightness and ventilation;
- Installation of solar PVs and solar water heating systems ;
- Replacement of heating control systems;
- Use of efficient light bulbs and smart metering systems;
- Water efficiency measures, including low-flow water taps and rainwater harvesting systems; and
- Site-wide waste management plans.

⁵⁶ RSLs are government-funded not-for-profit organisations, providing affordable housing. They include housing associations, trusts and cooperatives and work with local authorities to provide homes for people meeting the affordable homes criteria. As well as developing land and building homes, RSLs undertake a landlord function by maintaining properties and collecting rent.

Financial mechanisms, beneficiaries and governance structure

The total budget for the refurbishment work was GBP 1.2 mn. The core package of energy-efficiency measures applied to each home cost approximately GBP 24,000. This figure increased to approximately 36,000 GBP for each of the three buildings which benefit from the solar package.

The aim of the South East England Operational Plan was 'to promote economic competitiveness in South East England whilst contributing to reducing the region's ecological footprint'. To achieve this objective the OP set out three themes of activity:

- *Promoting resource efficient business practices*, raising levels of knowledge and innovation across all business sectors in order to support more resource efficient business practices, boosting profitability and long-term competitiveness;
- *Stimulating innovation for a sustainable economy* with job creation in new and emerging ecologically-driven market sectors;
- *Encouraging sustainable consumption practices*, reducing the rate of growth of the region's ecological footprint, whilst stimulating economic growth.

Radian was the first UK housing association to secure ERDF funding for retrofit activities via the SEEDA following the 4% SFs rule change. For the Retrofit South-East Project, Radian received GBP 421,000 under the second round of the ERDF call in 2009 and a further GBP 267,866 in 2010, under the third round of the ERDF call, for the second phase of the project. This phase aims at transforming the social housing retrofit market by developing a sustainable finance mechanism to the point where it would be ready to pilot a programme of 300 retrofits in the South-East region.

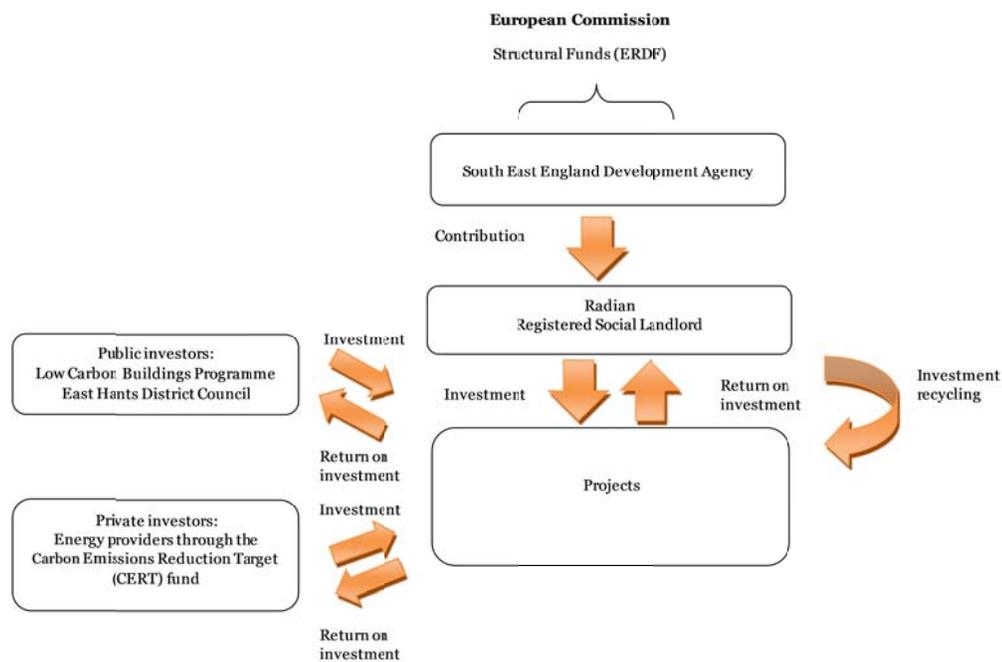
In addition to ERDF funding, Radian secured 50% grant funding towards the cost of the solar energy via the government's 'Low Carbon Buildings Programme'. The Low Carbon Buildings Programme was a major GBP 137mn Government suite of grant programmes that ran from 2006 to 2010, providing funds to householders, schools, charities, businesses, communities and other not-for-profit organisations for the installation of a range of micro-generation technologies.

The criteria and limits to obtain the grants were technology-specific and depended also on the type of organisation involved and on whether the project involved new construction or refurbishment of existing buildings. Beneficiaries were reimbursed within defined time scales, on submission of proof of expenditure.

The technologies supported by the programme were:

- Solar PVs between 0.5kWp and 50kWp;
- Solar thermal up to 300kWth;
- Ground-source heat pumps up to 300kWth;
- Air-source heat pumps up to 300kWth;
- Micro-hydro generators up to 50kWp;
- Micro wind turbines between 0.5 and 50kWp;
- Automated wood pellet-fed heaters or stoves up to 300kWth; and
- Wood-fuelled boiler systems up to 300kWth.

Figure 13 Financial mechanisms and governance structure for the refurbishment of REEMA houses in Petersfield



In addition, around GBP 1,000 per dwelling was to be secured from the energy suppliers’ ‘Carbon Emissions Reduction Target’ (CERT) fund to help to cover the cost of the wall insulation. The CERT is a legal obligation on the six largest UK energy suppliers to achieve reductions in carbon dioxide emissions from domestic buildings in Great Britain. Local authorities and RSLs can take advantage of the CERT obligation to draw funds from energy companies to improve the energy performance of their housing stock. The types of measures likely to be funded by energy suppliers include insulation improvements, micro-generation installations and efficient light bulbs and appliances. Particular attention is devoted to projects focused on reducing energy consumption by low-income households.

Finally, East Hants District Council contributed approximately GBP 15,000 towards the refurbishment project, which made it possible to deliver the three exemplar homes with the advanced package. The residual project cost was financed through Radian’s own resources, which come mainly from the rents received by the tenants (71%), care and support services for people with special needs (15%) and housing sales (8%).

Applying the conceptual model to semi-detached houses in Petersfield

In this case study project EU ERDF resources have been used through the Retrofit-South East programme. The Figure 14 shows how the REEMA project could have been financed through JESSICA.

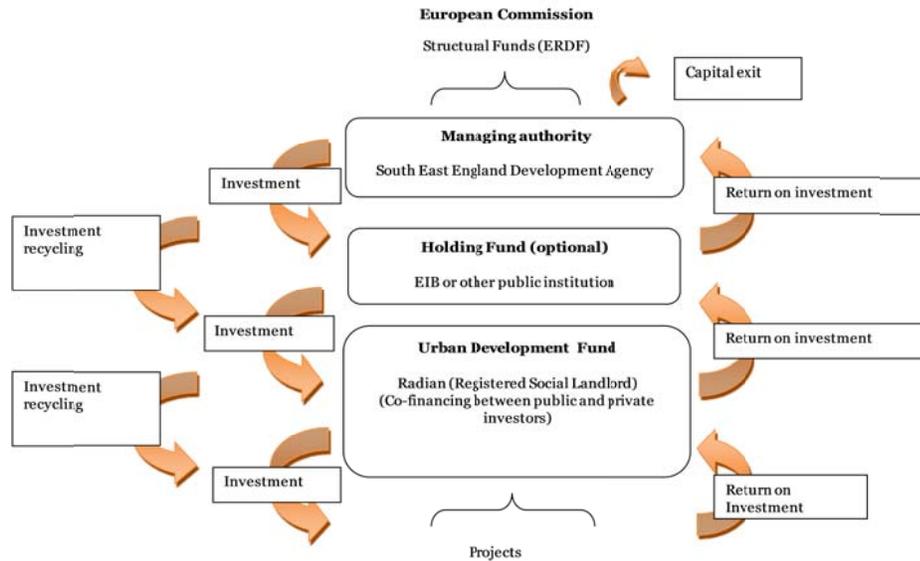
Managing Authority: The SEEDA has the MA role. The project involved other public funding, in particular grants from the national government’s Low Carbon Building Programme and the East Hants District Council.

Holding Fund: In the case study project there is no HF equivalent partly due to the fact that this is a very small-scale project. If the project were to have used JESSICA the MA could have decided to have a HF managed by a national or international financial institution, such as the EIB.

Urban Development Fund: Radian, a social landlord, is responsible for implementing the projects and has obtained, in addition to public funding and to its own resources, other private sector financing, namely contributions from energy providers through the Carbon Emission Reduction Target fund and

loans from commercial banks. In this example, therefore, Radian acted as a fund manager, selecting the projects, ensuring that financing needs were matched with the most appropriate sources and that an acceptable rate of return was achieved. The investments are recouped through the sale or rental of the refurbished properties and this allows the recycling of capital resources. Again however it should be noted that the rents on the refurbished homes are not directly related to the cost of investment.

Figure 14 Applying the conceptual model to Petersfield



This project has been selected because of its focus on both energy efficiency and the reduction of carbon emissions generated by the refurbished properties. The latter aspect appears to be particularly important both in the context of the EU 2020 objectives and in the context of the OPs, most of which emphasise the low carbon economy.

The following table summarizes the main characteristics of the case studies under the two project types:

Table 15 Synoptic overview of the project examples

Multi-purpose development				
	Project characteristics and eligible expenditures	Financial products	Final Recipients	Governance structure
New East Manchester, UK	<ul style="list-style-type: none"> • Construction of new residential spaces; • Construction of new commercial spaces; • Construction of schools; • Extension of the transport network; and • Promotion of employment. 	<ul style="list-style-type: none"> • Grants (ERDF and other public institutions) • Equity from private investors 	NEM	<p>NEM is a separate legal entity formed as a partnership of:</p> <ul style="list-style-type: none"> • Manchester City Council; • North-West Development Agency; and • Home and Communities Agency.
Eco-quartier 'l'Union, France'	<ul style="list-style-type: none"> • Redevelopment of an industrial brownfield; • Revamping of economic activities (textile, media and communication); and • Construction of new housing blocks (30% of which are social housing). 	<ul style="list-style-type: none"> • Grants (ERDF and other public institutions) • Equity from public and private investors • Loans 	SEM Ville Renouvelée SAEM Euralille	<p>SEM Ville Renouvelée and SAEM Euralille are <i>Sociétés d'Economie Mixte</i>, partnerships of :</p> <ul style="list-style-type: none"> • Municipal authorities • Caisse de Dépôts et Consignations • Caisse de Dépôts des Flandres • Dexia Bank • Chamber of commerce of Lille Métropole • Private investors
Energy efficiency and low-carbon refurbishment				
Multi-apartment block in Tallin; Estonia	<ul style="list-style-type: none"> • Renovation of the roof • Renovation of the ventilation system • Renovation of the heating system • Building insulation • Glazing the balconies • Replacement of windows • Replacement of balcony doors. 	<ul style="list-style-type: none"> • Grants (ERDF and other public institutions) • Own resources • Loan 	Homeowners' Association	<ul style="list-style-type: none"> • KredEx, the project manager, • Estonian Union of Cooperative Housing Associations; • Estonian commercial bank (Swedbank); Tallinn University of Technology; • The Association of Estonian Facilities Administrators and Maintenance Officers; • The Ministry of Economic Affairs and Communications of the Republic of Estonia; <p>Tallinn City Government.</p>

Semi-detached houses in Petersfield, UK

- Wall insulation
- Floor insulation
- Roof insulation
- Windows and doors replacement
- Air tightness and ventilation improvements
- Solar PV and solar water heating systems
- Heating control systems replacement
- Efficient light bulbs
- Water efficiency measures,
- Waste management plans

- Grants (ERDF and other national public initiatives)
- Own resources
- Loan

RSL

Owned by Radian (RSL) managing with SEEDA

4 Specific issues for in depth studies

Our participation in the Horizontal Studies Steering Group (HSSG) meetings, conferences and housing working group meetings organised under the JESSICA Networking Platform allowed us to identify topics relevant to the process of embedding housing in JESSICA structures (also in line with the ToR requirement). The final selection of issues was agreed with EIB. Although these issues may not be the main focus of JESSICA operations in housing, they should, nonetheless, be taken into account when designing such operations.

Below we discuss two issues:

- (1) Support for TA, and
- (2) Financing energy efficiency measures to reduce fuel poverty and the opportunity of integrated ESCOs within the JESSICA structure.

4.1 In-depth study 1: Using existing TA tools to facilitate the incorporation of housing into JESSICA operations

Past experience shows that MAs often seek technical support/ TA to help them establish and monitor the activities of UDFs, since in most cases the MAs do not have the required technical capacity and experience. TA is also essential for the UDF manager making the investment, since financial institutions have mostly little in-house technical knowledge, especially about energy-efficiency measures in housing (there are some exceptions between the MSS, especially in the UK and in the Netherlands with highly developed funds, where they have their own specialised expertise). The Final Recipients who are individuals or housing/apartment associations are also unlikely to have designated energy managers, as these are commonly found only in the public sector.

JESSICA already provides TA at different levels of its project cycle that could be applicable to housing projects, but there would seem to be scope for combining these resources with other TA facilities offered by the Commission, the EIB, the CEB⁵⁷ and KfW in particular for example the European Local Energy Assistance (ELENA) programme. This chapter will present the potential synergies between different TA facilities and address the issue of the extension of their scope to tackle specific issues linked to housing, in particular energy efficiency and greenhouse gas emission reductions.

Although TA facilities are available to all countries in which JESSICA operates, it seems that Eastern European countries have a greater need for such assistance. Below we explore the link between TA and using part of the grant allocation. We also provide examples from existing JESSICA structures in Lithuania, Estonia and Spain how they used TA in their structure.

TA within the JESSICA framework

The Regulatory framework envisages the possibility for the MA to utilise part of the funds allocated in the context of cohesion policy to finance TA. Article 45 of Regulation 1083/2006 states that 'the Funds may finance the preparatory, monitoring, administrative and technical support, evaluation, audit and inspection measures'. These actions are particularly focused on assistance for project preparation and appraisal, through grants or other forms of cooperation, as appropriate, as well as evaluations, expert reports, statistics and studies. Such studies can also address general issues such as the operation of the funds.

The HFs (if present) can provide MAs with the various skills and support needed. However, particular needs may arise from time to time such as specific technical support (e.g. legal advice on specific issues

⁵⁷ For more information on CEB activity, see in the Appendix 1.

relating to the national jurisdiction). In order to develop a credible project pipeline, there may be need for TA. This could be supported by ERDF grant funding to the project owner itself or to the TA body that carries out the project preparation. TA is particularly crucial for the implementation of projects in the housing sector because homeowners and housing associations often have little technical capacity, especially as far as energy management is concerned.

TA at HF level: The Regulation envisages the possibility for MS to use part of the funds allocated in the context of cohesion policy to finance TA through their OPs. Article 46 of Regulation 1083/2006 states that *'the Funds may finance the preparatory, management, monitoring, evaluation, information and control activities of Ops together with activities to reinforce the administrative capacity for implementing the Funds within the limits of 4 % of the total amount allocated under the Convergence and Regional competitiveness and employment objectives'*.

TA at UDF level: UDFs are required to demonstrate the necessary governance, processes, skills, track record and deal sourcing/appraisal capabilities relating to the advisory services, financing, execution, monitoring and audit of the Urban Projects, whilst also knowing the EU rules and procedures. However, TA at the UDF level may be needed to establish a strategy, develop a project pipeline and assess of project selection criteria.

The following part will provide few examples of TA provided with and without the assistance of the EIB for a number of HFs and in a number of ways:

TA in Lithuania – JESSICA combined with external TA

TA can be provided by external experts, since the UDFs are separate blocks of finance within existing financing institutions which may have little in-house technical capacity. An example of where this is done is in Lithuania where a technical agency forms an integral part of the fund management process. The HUDA is a budgetary institution under the remit of the Ministry of Environment that provides TA for the individual projects. Its duties include:

- Undertaking initial consultations with municipalities, apartment associations, and other stakeholders to gain support for JESSICA operations;
- Running and developing public information and marketing campaign for energy-efficiency in multi-family housing;
- Assisting housing associations in the preparation of the investment plan for their buildings including obtaining an investment grade energy audit on the baseline energy consumption and the expected savings (national standards present the details of the calculation process);
- Approving the technical project before the UDF approves loan disbursement;
- Assisting in the administrative process and in the preparation of the documents required by the UDF (retail bank);
- Assisting in the preparation of procurement documents for the technical project;
- Monitoring and managing the construction work and preparing relevant reporting;
- Compensating the housing association for the preparation of the technical project and investment plan (if required energy savings of 20% are met);
- Verifying the energy consumption audit prepared at the end of the project and presenting this to the HF (projects can get a 15% interest subsidy on their initial loan if the project reaches more than 20% energy efficiency levels).

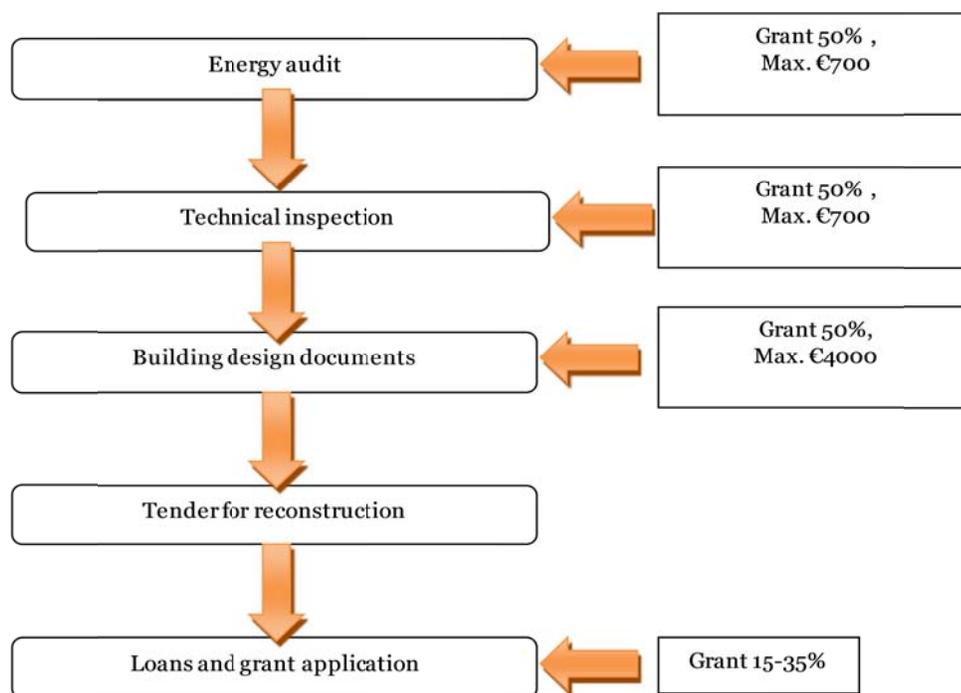
The case of Lithuania, represents a successful integrated technical and financial approach, which provides homeowners with expert technical advice and low interest loans with long payback periods in order to overcome the traditional barriers to investment in energy-efficiency measures, namely:

- Lack of knowledge and information about the costs and benefits of energy conservation measures;
- Lack of access to low-cost finance for projects that often have long payback periods

TA in Estonia – JESSICA combined with grants

In addition to the JESSICA facility there is also further financial support for Final Recipients from state grant sources. For example, before starting renovation works, KredEx recommends that apartment owners order an energy audit in order to have an overview of the energy conditions of the building. The audit includes suggestions for increasing energy efficiency.

Figure 15 State grant for KredEx



As Figure 15 shows, KredEx gives grants for up to 50% of the cost of energy audits. The maximum grant amounts per apartment building per year are EUR 700 for energy audit grants, EUR 700 for building expert evaluations, and EUR 4,000 for building designs.

KredEx also gives additional grants of between 15 and 35% of total project cost, depending on the level of integration in reconstruction of apartment buildings. This grant is meant to supplement KredEx's low-interest building renovation loan in order to decrease the required down payment, but can also be combined the borrower's own resources.

TA in Spain and Italy – JESSICA with establishment of a special technical unit

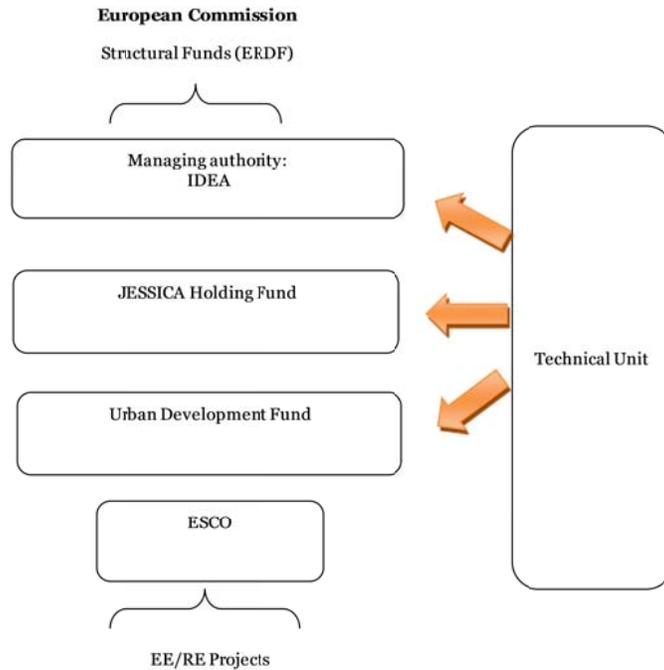
Spain

Another interesting example of the use of TA under the JESSICA framework is the JESSICA HF in Spain, which specifically targets energy efficiency and renewable energy projects. The EE/RES projects will be implemented by private company promoters, including ESCOs. In order to help them to identify potential projects within the range of sectors targeted by the JESSICA HF, TA is provided to help them carry out necessary preparation work.

In the National HF in Spain the SF allocations are managed by IDAE (Instituto para la Diversificación y Ahorro de la Energía) on behalf of the MAs in 10 regions. There was an allocation of an additional EUR 5 mn from the TA OP to establish a technical unit. The technical consultants in this unit can be used in the 10 regions for preparation of projects in energy efficiency and use of renewable energies for UDF financing under the National HF.

Figure 16 shows the structure of a separate ‘Technical Unit’ that has been created in Spain. This aims to help public entities, such as national/regional entities, local authorities and others to develop EE/RES projects. It also aims to simulate the development of ESCOs, and other private providers of energy efficiency and renewable energy services. It supports private and public asset owners to identify the potential project pipeline. These tasks are important to the success of the operations, especially for the public sector, where there is not sufficient incentive for increasing energy efficiency and renewable energy. The Technical Unit plans to liaise with the MA, the JESSICA HF manager and the regional energy agencies.

Figure 16 Structure of JESSICA with Technical Unit in Spain



Italy

In Sicily the technical unit is developed by the Regione Siciliana and is primarily aimed at helping local authorities in the context of the Covenant of Mayors (and the Covenant of the Islands). From the TA the consultants are able to assist in preparing EE/RES projects which will include, but is not limited to, those suitable for UDF investment.

In Sardinia, TA is being initially developed to specifically support a smaller group of municipalities ('Pioneer Communities') in order to develop SEAPs that in turn will potentially include JESSICA-compliant EE/RES Urban Projects that could be financed by UDFs. The Regione Autonoma Sardegna pays for these TA services out of its OP funds.

Combining JESSICA with ELENA TA facility

ELENA provides grants for TA for a wide range of measures including:

- feasibility & market studies;
- structuring of investment programmes;
- business plans;
- energy audits;
- preparation of tendering procedures and contractual arrangements and allocation of investment programme management to newly recruited staff.

As Table 16 shows, the ELENA facility through EIB covers big projects of more than EUR 50 mn, which excluded the majority of local and regional authorities. The EC therefore announced in early 2011 that the ELENA facility would be extended to cover medium-sized energy-related projects (this facility is not provided through EIB, but from the German Development Bank, KfW). In addition, the CEB can provide TA for the development of investment projects targeting social housing.

Table 16 ELENA TA facility

ELENA	Investment project/programme
EIB-ELENA facility (since 2010)	Project Development services for energy efficiency and renewable energy projects in municipalities and regions with EIB <ul style="list-style-type: none">• Leverage – factor of 20 between grant and investment• Investment project/programme minimum 50M€
KfW-ELENA facility (announced by the EC on 18 January 2011)	The KfW-ELENA facility offers a complementary approach in order to mobilize sustainable investments of small and medium sized municipalities and, where appropriate, ESCOs. <ul style="list-style-type: none">• Leverage – factor of 20 between grant and investment• Investment project/programme up to 50M€
CEB-ELENA facility (launched later in 2011)	CEB-ELENA will provide TA for the development of investment projects targeting social housing.

ELENA covers up to 90% of eligible costs required for technical support related to a clearly identified investment programme. The aim is to bundle dispersed local projects into systemic investments and make them bankable. ELENA supports the implementation of investment programmes and projects such as

retrofitting of public and private buildings, sustainable construction, energy-efficient district heating and cooling networks, and environmentally-friendly transport.

Eligible projects include:

- Refurbishment of public and private buildings, including social housing and street and traffic lighting, to support increased energy efficiency – e.g., refurbishment of buildings aimed at significantly decreasing energy consumption (both heat and electricity), thermal insulation, efficient air conditioning and ventilation or efficient lighting;
- Integration of renewable energy sources into the built environment – e.g. solar PV, solar thermal collectors and biomass;
- Investments into renovating, extending or building new district heating/cooling networks, based on high efficient CHP or renewable energy sources, as well as decentralised CHP systems (at the building or neighbourhood level).

As public resources are generally limited the private sector is frequently involved, for instance through ESCOs. This may lead to complex tendering processes exceeding the capacity of some public promoters. ELENA support covers a share of the cost of technical support necessary to prepare, implement and finance the investment programme, such as feasibility and market studies, structuring of programmes, business plans, energy audits, preparation for tendering procedures - in short, everything necessary to make cities' and regions' sustainable energy projects ready for funding.

There is scope for combining JESSICA with ELENA TA. Grant finance in the form of TA from an ERDF programme or ELENA funding may complement the UDF model⁵⁸ to enable project development processes both within the MA itself and also at the project level for aspects of potential projects that have very low financial returns such as some building refurbishment measures. All of these financial instruments will need to be in compliance with all relevant State aid legislation.

The LEEF provides one example of the use of ELENA in the framework of JESSICA operations section

2.2.1.1 . The EIB-managed ELENA facility is providing TA for project preparation.

Table 17 ELENA TA in the UK for London Green Fund

TA	Eligible costs	Implementation of investment programme	Final project services	Recipients of development
<ul style="list-style-type: none"> • Feasibility and market studies, • structuring of programmes, • business plans, • energy audits, • preparation for tendering procedures 	<ul style="list-style-type: none"> • Additional staff hired for ELENA project by beneficiary • External experts and services 	<ul style="list-style-type: none"> • Local or regional authorities or other public bodies or • Entities like holder or operator of a concession or an ESCO 	<ul style="list-style-type: none"> • Local or regional authority or • Other public body • Groupings of such bodies • Established in IEE participating country 	

It will also be used to establish two project management offices one of which will support the RE:FIT programme⁵⁹ over the next three years. RE:FIT is a London-wide energy efficient retrofit programme that can be used to source projects for UDF financing. This work will involve recruiting building owners into the programme, helping public bodies to identify buildings for retrofit, and selecting ESCO suppliers. Applications for the EIB ELENA are sent into the EIB for processing and approval. Table 17 summarises the sorts of assistance part-funded by ELENA.

⁵⁸ On condition to the specifications of Article 54(5) of the General Regulation.

⁵⁹ <http://www.lda.gov.uk/projects/refit/>.

Conclusion

The aim of the MSs to reduce existing legal and market barriers and encourage investments and/or other activities to increase the energy efficiency of new and existing housing, thus potentially contributing to reducing energy poverty. The chapter shows that there are opportunities offered in parallel with the JESSICA scheme, such as free or subsidised TA, direct subsidies, subsidised loan schemes or low interest loans, grant schemes and loan guarantee schemes. In particular the ELENA programme could work well with JESSICA.

Different TA programmes within and outside JESSICA can generate synergies in the provision of TA for housing developments. The HF has the main role, if the MA decides to establish one to delegate some of the tasks required in implementing JESSICA.

4.2 In-depth study 2: Financing energy efficiency measures to reduce fuel poverty, the opportunities to further integrate ESCO model

The concept of fuel poverty was developed in Britain in the late 1970s to describe a situation where a *household is unable to maintain its dwelling at an adequate level of warmth at a reasonable cost*. This concept is different from the notion of energy poverty, which indicates a situation where the energy distribution network is insufficient to guarantee an acceptable level of service.

At the EU level, however, there is no common definition of fuel poverty, as a definition of proper heating standards is largely dependent on the country's climatic conditions. In addition, EU MSs would need to address the issue of defining 'vulnerability' and precisely identifying 'vulnerable customers'. Between 50 million and 125 million people in Europe are estimated to be fuel-poor. This number will inevitably increase in the future since:

- nearly 1 in 7 households in Europe are at risk of poverty,
- from 2005 to 2007 the price of domestic gas increased on average by 18%,
- from 2005 to 2007 the price of domestic electricity increased on average by 14%,
- more than 60% of the dwellings in the five countries studied were built before any thermal insulation regulations were applicable.

This section of the report analyses the incidence of fuel poverty in EU MSs, the role of energy efficiency measures in alleviating fuel poverty and the regulatory and financial mechanisms necessary to implement them. Fuel poverty has a supra-national reach and needs to be tackled both at the EU and at the national level. The EU and its MSs have already set up a plethora of instruments to address the issue and its consequences. Energy efficiency improvements to the housing stock appear to be a cost-effective solution since they directly impact households' energy bills. Despite the fact that existing technical means would allow achieving these benefits, significant investments need to be made to achieve these benefits and this cost is a major obstacle to the large-scale deployment of energy-efficiency measures.

Many MSs could not afford to make such investments, without EU co-financing, so the SFs play a particularly important role in this respect since energy efficiency improvements are one of their key priority areas.

On the other hand, without the involvement of the private sector no long-term change in energy efficiency and consumption behaviour can be achieved. At present, the incentives for private sector companies to invest in energy-efficiency improvements in residential buildings appear to be largely insufficient to foster private sector involvement. A promising solution comes from ESCOs which can guarantee energy savings and/or the provision of the same level of energy service at a lower cost by implementing an energy efficiency project.

ESCOs can finance energy efficiency measures with their own resources but, since the upfront investment tends to be significant, they benefit from obtaining third-party financing. This is where the financial institutions, such as the EIB, can play a pivotal role in providing loans based on performance guarantees and expected end-user payments. An example of how the JESSICA initiative can intervene in this market is provided by the Spanish HF specialised in financing energy efficiency projects, whose Final Recipients are ESCOs and other private sector companies.

Fuel poverty in EU15

The UK has the greatest experience and understanding of fuel poverty issues. The adoption of an objective measure of fuel poverty enables the problem to be accurately quantified. The UK government considers any household spending more than 10% of its annual income on energy to be fuel poor (EPEE Project, 2009). There are currently some 5.1 million fuel-poor households in the UK – almost 20% of all households.

In France there exists a coherent infrastructure to tackle different manifestations of fuel poverty but there seems to be a lack of coordination at the national policy level. The incidence of fuel poverty in France is variously estimated at between 2 million and 5 million households. Fuel poverty has been treated as an aspect of the overall poverty problem, therefore a range of infrastructure and welfare measures have been developed to help fuel-poor households, but their impacts on the underlying causes of fuel poverty are limited.

In Italy, a social tariff has been established for vulnerable electricity consumers, estimated at 5 million households, and the energy regulator is working on a similar mechanism for the gas market.

Fuel poverty in EU12

Eastern European countries constitute a peculiar case, as they must deal with the legacies of the Communist era. The socialist model considered fuel sources to be inexhaustible and high levels of fuel and power consumption as signs of modernization. Governments regulated every aspect of fuel and energy consumption and treated a number of essential goods and services, such as housing, heating and health, as basic needs. In order to satisfy those needs they maintained low energy prices in absolute terms and, in particular, low prices for households. As a result the price structure for essential goods was completely independent from the production costs of those goods.

One of the reasons why the issue of fuel poverty seems to be a 'hidden problem' for Eastern European countries is that the tariffs have not yet been completely adjusted to the market level. Electricity costs tend to be higher than heating and water bills since power prices tend to be much closer to cost recovery levels than water and, to a lesser extent, district heating tariffs. Electricity expenditures tend to be higher in those countries where tariff reform has advanced most.

In Czech Republic, for instance, the implementation of energy reforms has resulted in the formal breaking up of the electricity monopoly. In the housing sector, the state has attempted to use rent control as a social protection mechanism, which has resulted in below-market rent levels and distorted tenant-landlord relations, entailing negative effects on the maintenance of the housing stock, including energy efficiency measures. In Czech Republic fuel poverty affects about 10% of the population. It is interesting to notice that this phenomenon mostly affects single parents, households with several children and pensioners (Buzar, 2006).

The underlying causes of fuel poverty

In European urban areas 27% of total final energy consumption is used by the residential sector. Buildings, and particularly homes, have the highest potential to generate energy savings in comparison with other energy users. In addition, 80% to 90% of total energy consumption over the life cycle of a building occurs during its operation phase and the largest share of the consumption in a residential building is represented by space and water heating (Cities Action for Sustainable Housing, 2010)⁶⁰.

Previous studies have identified three main factors contributing to fuel poverty: *income*, *energy prices* and *housing quality*. A combination of low income, high energy prices and poor housing quality can force households to choose between purchasing adequate energy services (heat and light) and purchasing other essential goods. In addition, lower income households tend to live in older buildings with poor heating and insulation standards, another vulnerability factor determining fuel poverty. Fuel-poor households cannot adequately heat and ventilate living spaces and have difficulty paying energy bills. A study carried out by the IEA links this inadequate thermal comfort to increasing morbidity and mortality as well as poor educational outcomes further worsening the living conditions of the most vulnerable social groups.

Energy efficiency measures in the different MSs

National governments, both within and outside the EU, are already using a range of policies to tackle the issue of fuel poverty. These measures include providing income supplements to cover fuel payments for

⁶⁰ Cities Action for Sustainable Housing (2010), Energy efficiency for social housing – Baseline study.

qualifying households, social tariffs to reduce effective energy prices and investments in improved quality of housing or more efficient appliances.

Income supplements and social tariffs contribute to tackling fuel poverty but they represent a cost to the state as well as to the energy provider. For instance, in 2010 the United Kingdom provided the equivalent of EUR 4.2bn in winter fuel and cold weather payments. On the other hand, energy efficiency measures constitute a cost-effective way of addressing the problem of fuel poverty, while producing additional benefits, both in terms of health and quality of life and in the framework of the global fight against climate change.

Barriers to the deployment of energy efficiency measures

The landlord/tenant dilemma

Improving the energy efficiency of buildings is a shared interest which raises living standards, increases the value of a building and reduces management costs. However, implementing energy efficiency measures generally requires substantial investments. The landlord wants to protect the value of his property but may be reluctant to incur short-term costs, particularly when the main benefits will be perceived by the tenant. The tenant may also be reluctant to incur short-term costs but will benefit directly from renovation and lower energy bills. Such a situation, known as the landlord/tenant dilemma, arises from split incentives. The potential solutions are largely dependent on the national legal systems of different countries.

In France for example, the Boutin law (23 November 2009) allows the redistribution of costs and benefits of energy efficiency measures between the landlord and the tenant. When energy-saving renovations are undertaken by a landlord within the private and/or common parts of a dwelling, the landlord can ask for a contribution from the tenant provided that the latter directly benefits from the renovations and that these benefits have clearly presented. This contribution is separate from the rent paid by the tenant (CEPI and UIPI, 2010). Nonetheless, this contribution is only be required when substantial work has been done or when the dwelling reaches a minimum energy performance threshold. This participation cannot exceed 50% of the energy saving made.

In November 2010, the UK's Department of Energy and Climate Change announced a new energy efficiency proposal known as the 'Green Deal'. This initiative foresees that the government provides the up-front finance for energy efficiency improvements such as insulation for lofts, cavity walls, solid walls and floors as well as water pipe lagging, thus eliminating the initial costs for landlords or owner-occupiers. Once the improvements are installed, the cost of the measures (the 'Green Deal Loan') is paid back by whoever pays the utility bills.

Lack of incentives for energy producers and building companies

Currently the market for energy efficiency investments is weak and perceived as too risky. New instruments such as standards, labels and PPPs can play an important role in increasing the trust in this market. Energy producers are interested in increasing their production at low cost and their natural ambitions usually run counter to energy conservation. Therefore incentives are needed in order to align utilities' and consumers' interests.

Several EU MSs have put in place energy efficiency obligations for energy companies. As a result, energy suppliers, retailers or distributors have a legal obligation to promote energy efficiency investments generating savings in customers' premises or households. This obligation can be met by buying or selling the energy saving credits, the so-called White Certificates.

When a White Certificate scheme is established, individual energy-saving targets are imposed to each obliged party as a proportion of their share of the household energy retail market. Obligated parties have flexibility as far as the means to fulfil their obligations. They can either generate the savings themselves or have an agreement with a third party, such as equipment manufacturers, retailers and ESCOs (Giraudet and Finon, 2011).

The UK, Italy, France, Denmark and the Flemish region of Belgium have introduced these obligations. Other European countries, such as the Netherlands and most recently Poland, Bulgaria and Romania, have expressed interest in introducing White Certificates schemes (Rezessy and Bertoldi, 2010).

The provision of technology and services for improved energy efficiency depends on front runners in the construction sector, which is traditionally one of most conservative industries. Investments in energy efficiency are often hindered by the initial cost barrier and the difficulties in raising capital, combined with relatively long payback periods. Even when they have good access to capital, businesses may still be unwilling to accept such long payback periods, given the uncertainty about future energy prices and actual energy cost savings.

Energy efficiency and fuel poverty as EU priority objectives

The promotion of energy efficiency measures, as well as the fight against fuel poverty, are among the EU long-term policy objectives and form an integral part of several EU regulatory instruments. *The Europe 2020 Strategy (EU2020)*, launched in early March 2010, outlines a 10-year strategy for smart, sustainable and inclusive growth in the EU. The five targets for the EU in 2020 are:

- A 20% reduction in greenhouse gas emissions with respect to 1990 levels, with 20% of energy produced from renewable energy sources and a 20% increase in energy efficiency
- Employment of 75% of the 20-64 year-old population
- Investment of 3% of the EU's GDP in R&D and innovation
- Reduction of school drop-out rates below 10% and at least 40% of 30-34 year-old population completing third level education
- A reduction of people in, or at risk of, poverty and social exclusion by at least 20 million.

Resource Efficient Europe is a flagship initiative of the EU2020 strategy setting the focus for future investment, demand management and energy efficiency policy across the EU. It encompasses a number of specific plans related to individual policy areas such as:

- The Low-Carbon Economy Roadmap 2050, a strategy to meet the long-term target of reducing domestic emissions by 80 to 95 per cent across EU MSs
- The Energy Efficiency Plan 2011, proposing measures aimed at closing the gap towards reaching the EU's 20 per cent energy efficiency target
- The proposal for a new Directive of the European Parliament and of the Council on energy efficiency⁶¹ which will transform parts of the Energy Efficiency Plan 2011 into binding measures and focuses on going beyond the 20% target to enable the EU to plan for further energy efficiency measures post 2020.

As a reaction to the current economic crisis, the European Economic Recovery Plan published in 2009, elaborates a coordinated strategy to save jobs and the competitiveness of EU MSs' economies. The objective of the plan is twofold: on the one hand it aims at cushioning the blow of recession in the short-term, while on the other hand it promotes the structural reforms needed to help the EU emerge stronger from the crisis, without undermining longer term fiscal sustainability. In this context, the Plan puts particular emphasis on innovation and greening of EU investment. Specific reference is made to measures enhancing energy efficiency of buildings, lighting, cooling and heating systems, and of other technologies like vehicles and machinery since, major positive effects for households and businesses can be harvested in the short-term.

In addition to the general policy level, a number of recent directives address issues related to fuel poverty. *Directive 2009/72/EC* of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC requires MS to

⁶¹ Proposal for a Directive on energy efficiency and repealing Directives 2004/8/EC and 2006/32/EC [COM(2011)370, 22/06/2011] available on the website: http://ec.europa.eu/energy/efficiency/eed/eed_en.htm.

take appropriate measures to protect final customers and, in particular, to ensure that there are adequate safeguards to protect vulnerable customers and to help improve energy efficiency of housing.

Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC, contains the same requirements as the directive on the internal electricity market.

Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings, repeals Directive 2002/91/EC, requires MS to adopt, either at national or regional level, a methodology for calculating the energy performance of buildings.

The overall EU policy objectives and regulatory framework clearly state the importance of promoting energy efficiency and establish a link between energy efficiency measures and the issue of fuel poverty. Yet such objectives need to be translated into concrete actions and the EU needs to support MSs in the implementation of the required investments in order to improve the energy performance of their housing stock. As a consequence, energy efficiency is one of the priority areas eligible for SF co-financing.

Financing energy efficiency through SFs

Regional competitiveness and employment are among the main objectives of the SFs for the current programming period. Under this priority axis SFs resources can be used to anticipate economic and social change, promote innovation, entrepreneurship, environmental protection and the development of labour markets. Measures under this objective can receive co-financing of up to 50% of public expenditure.

The total allocated budget for the structural and cohesion funds amounts to EUR 347bn for the 2007-2013 programming period and EUR 177bn are allocated to the EU12.

EU12

The beginning of the implementation of the 2007-2013 programming period the EU funds coincided with the economic crisis presenting an opportunity for investment in long-term development and redirection of part of the EU funds into sustainable energy investments. As a result, some EU12 MSs reacted to the economic crisis by redefining their funding priorities and reorganising the OPs in favour of sustainable energy investments.

For instance, Latvia tripled the share of EU funding dedicated to improvements in heat insulation in multi-apartment residential buildings. The government has also increased support for the development of cogeneration power plants utilising renewable energy sources by EUR 10mn. In Lithuania the government has placed energy savings at the core of its economic stimulation plan, and is trying to increase the absorption of the EU funds.

Bulgaria gave energy efficiency and renewable energy higher priority following the gas crisis in January 2009. In addition, EUR 91mn from the OP Regional Development were reallocated to energy efficiency and renewable energy project in public schools, universities and social institutions owned by municipalities in urban areas.

Finally, the Estonian government commissioned a study to identify potential changes in its OPs. The proposed measures target, in particular, energy efficiency. The interest in energy efficiency and renewable energy projects like 'smart green' anti-crisis measures is accompanied by a growing interest among possible private or public beneficiaries of EU funds.

EU15

SFs for energy efficiency and renewable energy measures are successfully used in France, United Kingdom, Belgium (Flanders) and Greece. In France 68% of the available amount, corresponding to EUR 207mn, has been allocated between June 2009 and September 2010. The main objectives of the supported actions included targeting the most energy consuming social housing units, being exemplary and trigger a multiplier effect and affecting a large number of dwellings (CECODHAS, 2010b). In the UK, 72.7% of the available amount has been committed between 2009 and 2010. Examples are the London Green Fund and the Retrofit South-East project. The former is a GBP 100 million fund that will

invest in climate change projects across Greater London such as waste, energy efficiency and decentralised energy. The fund is part of the JESSICA initiative and has the broad remit of providing debt, equity and guarantee investment to support climate change infrastructure projects through UDFs. The second is focused on the exemplar retrofit to a community of 14 homes to best practice, namely high energy efficiency standards (75-82% carbon reduction), high water use standards (80-130 litres/person/day max target) and site construction waste management and recycling.

In Greece, a national refurbishment programme co-financed by ERDF has been set up to finance energy efficiency interventions in private household buildings, with a view to regional and social cohesion aim promoted by SFs. The project's Budget amounts to EUR 396mn, financed by ROPs and OPs 'Competitiveness and Entrepreneurship' and 'Environment and Sustainable Development', with regional distribution according to the number of old buildings and households.

In the Flemish region, a call for project has been closed in September 2010. It allowed social housing organisations to submit renovation projects where single glazing will be replaced or heating systems will be renewed. A fixed compensation of EUR 100/m² for the windows and EUR 500 per apartment or EUR 800 per family home to renovate the central heating will be provided. ERDF resources are thus used to extend the reach of Flemish subsidies for energy efficiency operations.

While interest and demand in EU funding for energy efficiency and renewable energy investment is rising, allocated resources are being spent very slowly⁶².

The private sector perspective and the role of ESCOs

The changes in the ERDF regulation indicate an acknowledgement of the need to further facilitate the access to EU co-financing for energy efficiency projects. However, despite these changes, the market for energy efficiency investments is still limited and perceived as too risky by the private sector. To stimulate the growth of this market new and innovative financial arrangements are needed. The so-called ESCO model seems to provide an interesting opportunity that needs to be analysed in more detail.

ESCOs develop, install, and provide financing for comprehensive performance-based projects. They guarantee energy savings and/or the provision of the same level of energy service at a lower cost by implementing an energy efficiency project. A performance guarantee can be focused on the actual flow of energy savings, which can stipulate that energy savings will be sufficient to repay a loan for an efficiency project or that the same amount of energy will be provided at a lower cost.

The remuneration of ESCOs is directly linked to the achieved savings, which in turn depend significantly on the energy market prices. ESCOs typically finance the installation of an energy saving project. Subsequently they implement the project by providing a savings guarantee. ESCOs are involved in measuring and verifying the savings over the financing term, thus assuming part of the risk of implementing energy efficiency measures in a customer's facility and link their payment for the services delivered based on the achievement of the savings.

There are 2 main contract typologies ESCOs can be involved in, namely ECS and Energy Performance Contracting.

Energy Service Contracting (ESC)

ESC focuses on the efficient supply of energy. The ESCO provides heating, cooling or electricity. The subject of the contract is not the amount of energy provided but the utility value expressed in monetary terms. The service package often includes financing, engineering design, planning, constructing, operation and maintenance of energy production plants as well as energy distribution management. ESC is mostly used in the commercial and industrial sectors, even though residential dwellings may be included, for instance within a district heating scheme. The ESC model encompasses the entire process from the purchasing of fuel to the delivery and invoicing of energy. CHP plants and renewable energy solutions are also frequently covered by energy supply contracts.

⁶² http://www.inforse.dk/europe/EU_SF_RE_07_13.htm.

With an ESC the customer benefits from an increased security of supply and price stability while, at the same time, achieving an improved environmental performance.

Energy Performance Certification (EPC)

EPC goes beyond ECS, since it is focused on energy savings. The EPC model encompasses the financing, planning, implementation, and supervision of energy saving measures and can be applied to all energy uses such as lighting, heating or cooling of buildings, street lighting, and other areas such as industrial applications.

The ESCO implements energy saving or energy efficiency improvement measures, connected to a savings guarantee specifically addressed in the EPC contract. The ESCO's investments are remunerated through a share of the realised energy costs savings for a fixed amount of time specified in the contract. EPC contracts are mostly used for investments in the building equipment but not yet common for energy investments on the building envelope, since they are often considerable and require longer amortisation rates.

One of the main triggering factors for the setting up of EPC in European countries is the lack of investment capital for energy efficiency upgrades in the building stock and the need to develop alternative financing options. The involvement of ESCOs opens up three new financing options.

Firstly, ESCOs can use their own resources to carry out the investments. This funding can be complemented through other debt or lease instruments.

Secondly, final energy users, for instance homeowners and tenants, can finance the realisation of the necessary measures under the contractual savings guarantee provided by the ESCO.

Finally, energy efficiency investments can be financed by a third party mostly through debt instruments, such as a loan obtained from a financial institution. The latter may either acquire the rights to the achieved energy savings or may take a security interest in the project equipment.

Third party financing can imply that the ESCO borrows the necessary financial resources or that the energy-user/customer takes a loan from a financial institution, backed by an energy savings guarantee agreement signed with the ESCO. The purpose of the savings guarantee is to demonstrate to the bank that the project for which the customer borrows will generate a positive cash flow and that, as a result, the savings achieved will ensure the repayment of the loan. The energy savings guarantee reduces the risk perception of the bank thus reducing the loan interest rate (Lamers, Kuhn, and Krechting, 2008).

The EPC model appears to be suitable mechanism allowing implementing energy efficiency measures in residential buildings and, therefore, tackling the issue of fuel poverty in an efficient and cost-effective way. Third-party financing provides an interesting opportunity to increase the share of ERDF resources invested in energy efficiency measures, in line with the EU policy objectives and regulatory framework. The next paragraph provides an example of how such a solution could be realised in practice, through the JESSICA initiative.

Financing energy efficiency investment: the case of the JESSICA HF in Spain

On 1st July 2011, the EIB and the Spanish Energy Saving and Diversification Institute (IDAE) concluded a funding agreement to launch a JESSICA HF designed to finance energy efficiency and renewable energy projects in an innovative use of EU SFs where ESCOs and other private-sector companies are the main Final Recipients. The HF has a total budget of EUR 126.7mn, split between EUR 87.8mn from the Spanish ERDF allocation and EUR 39.7mn as national match funding.

The objective of the JESSICA HF is to manage the financial resources from ten ROPs, in particular for Andalucía, Extremadura, Galicia, Castilla-La Mancha, Murcia, Ceuta, Melilla, Castilla y Leon, Comunidad Valenciana and Canary Islands.

The objectives the HF will pursue include:

- Supporting the Spanish energy and environmental goals;

- Taking advantage of the revolving nature of the JESSICA FEIs to ‘recycle’ financial resources allocated to urban projects;
- Leveraging private funding;
- Promoting the long-term implementation of energy efficiency and renewable energy projects and achieve socio-environmental gains along with economic and financial returns;
- Creating jobs through the implementation of urban development projects.

Through IDAE Spanish OPs, Spain aims to carry out actions to improve energy efficiency and to develop renewable energy sources. These actions fall within the following priority areas defined in the EU SFs regulations, namely solar energy, biomass, energy efficiency, cogeneration and energy management and support to clean urban transport.

The financial architecture involves the IDAE as the MA channelling ERDF resources to the JESSICA HF, managed by the EIB, and, from there, to the UDF and finally invested into specific projects. The selected UDFs will be identified through a public procurement process by the JESSICA HF on the basis of the UDF Business Plan submitted in accordance with the SFs regulation.

The beneficiaries of the UDF loans can be ESCOs, other private bodies and PPPs. In order to promote the development of ESCOs as well as of the other private providers of energy efficiency and renewable energy services, the financial architecture encompasses a so called ‘TA unit’ (already introduced in the in-depth case study above). The main activities of this unit will be the provision of support to potential beneficiaries of UDF loans in the preparation of the tender documents for the projects. This aims at ensuring the development of a large pipeline of projects in the abovementioned priority areas.

Eligible projects typologies are:

- Solar thermal and solar PV for energy production;
- Biomass energy production projects, including the use of biomass in CHP plants and second and third generation bio fuels;
- Energy savings and energy efficiency in buildings, including the renovation of existing buildings to replace inefficient heating/cooling systems and installing more efficient lighting systems as well as the construction of new buildings rated in class A or B of energy efficiency standards;
- Renovation or extension of existing district heating or cooling networks for which the base load is covered by high efficiency co-generation;
- High efficiency CHP;
- Clean transport projects.

For all projects classified as energy efficiency projects the investments to generate energy savings must account for at least 50% of the total project cost in net present value terms using a 5% discount rate.

Since the Spanish legislation has not yet transposed the recent developments of EU regulatory framework, eligible projects which could be financed by the UDFs are limited to public buildings and thus do not include housing. Nonetheless, the model put in place with the JESSICA HF can easily be applied to other countries where housing can be financed through ERDF resources.

Conclusions

For the first time ESCOs are clearly designated as the preferential Final Recipient of the loans provided by the UDFs. In this way ESCOs do not act as investors but they are in charge of implementing the projects. As discussed in the previous paragraph, ESCOs could play an important role in fostering energy efficiency improvements in residential buildings; this seems therefore an interesting option for expanding JESSICA operations in housing.

In the context of JESSICA operations, the UDF could either provide a loan to the homeowners or a mixture of debt and equity financing directly to the ESCO. The ESCO would then be responsible for debt repayment and they would also be bearing the performance risk. The customers will pay a slightly higher price for their energy provision to the ESCO, in order to compensate it for the performance risk. The ESCO can then secure a loan from the UDF on the basis of the expected customer payments. This amount is computed as a share of the energy cost savings achieved as a result of the project.

This model appears particularly appropriate in developing markets since it can be used where the project owners have limited access to finance, for instance housing projects. It can also promote those projects with shorter payback periods, and therefore lower levels of risk, since the performance and financing risk are taken on by the ESCOs.

For this model to work under JESSICA, private bodies such as ESCOs would need to be explicitly mentioned as potential Final Recipients in the OP, as it is the case in Spain, and the loan would need to be made at the country-specific reference rate to avoid State aid implications.

The case of the Spanish HF is still very recent and the results of the application of the ESCO Model will need to be assessed further down the line. In addition, it does not apply to housing projects but, as noted above, this is simply due to the delay in the transposition of the recent development in EU regulation into the Spanish national legislation. However, on the basis of the evidence presented in this study as well as on the results of the study 'Energy-focused UDFs carried out by ARUP in the framework of the JESSICA framework contract, a broader application of the ESCO model as a way of intervention for JESSICA could be envisaged.

5 Conclusion and recommended action plan

Conclusion

This study focuses in particular on the identification of the potential opportunities to embed housing within JESSICA operations. Although housing and real estate developments play an important role in urban development strategies, the residential component has not been addressed in most JESSICA operations so far. Housing policy is part of ERDF priorities in many countries as it impacts other relevant issues like the fight against poverty and social exclusion, the enhancement of local employment, and the promotion of EE/RES⁶³.

Mixed-use and mixed-tenure urban development projects which include housing but also commercial uses may allow JESSICA to support housing indirectly. In this context, targeting Urban Development Funds at the non-housing elements of developments would nevertheless indirectly facilitate investment in housing.

The areas where JESSICA can be implemented most easily are those where there is a clearly defined revenue stream directly related to the investment and where there is the capacity to replicate relatively small scale projects – as in energy efficiency in the EU¹². Equally JESSICA should have a role in large-scale urban redevelopment projects with mixed use and mixed income developments.

This study aims to clarify how housing operations can best be implemented under the JESSICA initiative, building on existing approaches and identifying specific financial instruments compatible with the JESSICA framework.

The results of the analysis carried out allow us to present a set of recommendations on the best way to adapt JESSICA operating mechanisms in the existing UDF structures to include housing development projects, as well as on the proposal and scope of the new housing development fund.

Action Plan

The proposed action plan presents an indicative timetable of the measures which could be implemented in the:

- (1) **Short-term action plan** (current programming period), and
- (2) **Long-term action plan** (post 2013).

The proposed measures are differentiated according to the complexity of the changes they imply for the existing JESSICA operating mechanisms.

Figure 17 shows the seven steps of the action plan which we propose should be adopted in the short-term to embed support for housing in JESSICA operations in the existing administrative procedures and regulations.

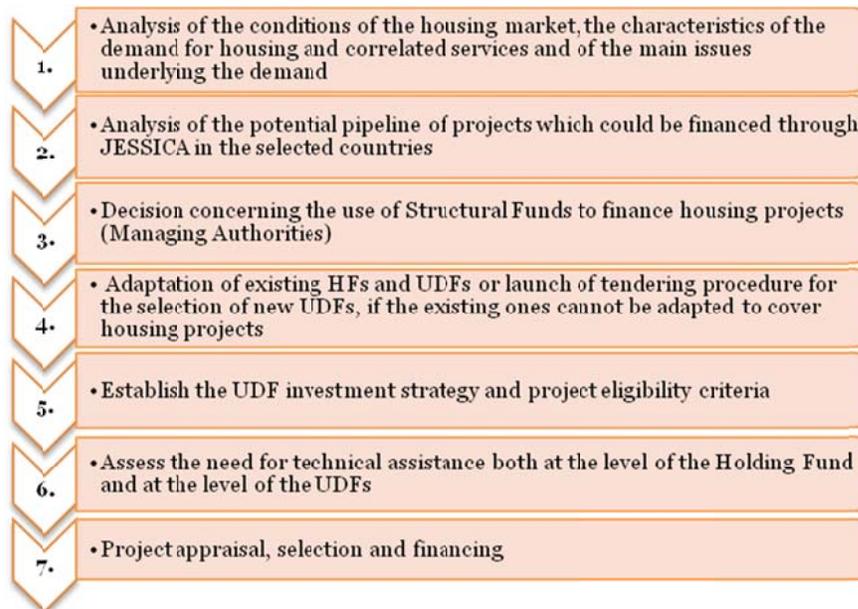
Short-term Action Plan (until 2015)

In the short term, the starting point should be to attempt to include housing projects in existing JESSICA operations. When the mechanisms are already in place, the HF already established and the financial intermediaries already identified, by putting in place appropriate arrangements, housing projects could be brought within the scope of these structures.

⁶³ See more in detailed the eligibility criterias as explained in part 2.1 under the regulatory framework.

This study shows that housing could be financed as one component of multi-purpose development projects. Mixed-use and mixed-tenure urban development projects which include housing but also commercial uses may allow JESSICA to support housing indirectly. The overall financial viability of projects would be secured by the revenue streams from the various project components. In this context, targeting Urban Development Funds at the non-housing elements of developments would nevertheless facilitate investment in housing.

Figure 17 Necessary actions for the short-term Action Plan



Step 1 Analysis of housing market conditions and the demand for housing related services

The housing market situation in the relevant areas of MSs in which JESSICA already operates needs to be analysed in detail in order to understand the structure of demand and supply in the housing sector as well as their determining factors. Particular attention needs to be devoted to the identification of the main issues to be tackled: e.g. energy efficiency and fuel poverty issues, poor quality of the housing stock, shortage of housing etc. This is necessary background when identifying the potential project pipeline as well as the investment strategy of the UDF and the eligibility criteria in terms of projects and beneficiaries.

Step 2 Analysis of the potential pipeline of projects which could be financed through JESSICA in the selected countries

This report identifies two project types best suited to JESSICA: multi-purpose developments and energy efficiency and low-carbon refurbishment. MSs will need to identify the potential project pipeline of such projects. This will give an indication of the size of the market and opportunities for JESSICA investment, and will also allow forecasting of the expected ROI.

Step 3 Decisions concerning the use of SFs to finance housing projects

The decision to use a share of the national allocation of SFs for housing development projects needs to be taken by the MAs. As previously discussed, the limits imposed by the SFs Regulation allow MSs to use up to 4% of their national ERDF allocation to finance certain type of housing projects. However, MSs should not view the ERDF as the only source of finance for housing projects. These resources should be seen as complementary to national investment programmes that encompass both public and private sector funding.

The EIB and the EC should take into account the limited knowledge of MAs with respect to the possibility to finance housing projects using ERDF. Because the regulation has been amended a number of times (see in Table 3 and 4) to make such expenditures eligible, MSs need time to adapt to these changes. An information campaign on the new opportunities and on the advantages they represent, including a series of workshops and seminars, could therefore be useful.

Step 4 Adaptation of existing HFs and UDFs (or the launch of tendering procedure for the selection of new UDFs, if the existing ones cannot be adapted to cover housing projects)

Generally it should be possible to finance housing projects under the existing JESSICA structures. Nonetheless, the investment strategies of existing UDFs might be too restrictive and focus on different areas of urban regeneration. It may therefore be needed to establish new specific UDFs focusing on investments including housing such as projects presented in case studies above.

Step 5 Establish the UDF investment strategy and project eligibility criteria

The results of this study have highlighted two of the three main types of projects including housing developments that could be financed through JESSICA. The analysis of the potential project pipeline described as the second step of this action plan will identify the main investment opportunities in each country. Particular attention will need to be given to the following aspects:

- Which parts of the projects would be eligible expenditures (e.g. common parts of the building, technical and economic feasibility studies, etc);
- Minimum energy and environmental performance requirements;
- Eligible beneficiaries, focusing in particular on the possible role of ESCOs and other private sector companies in implementing energy efficiency and low-carbon refurbishment projects;
- Expected minimum rate of return for the project;
- Conditions of loans to beneficiaries.

Step 6 Assess the need for TA both at the level of the HF and at the level of the UDFs

As explained in one of the in-depth studies, there is a significant need for TA in project preparation, assessment and evaluation, as well as in the definition of the investment strategy for UDFs. Housing can prove a particularly challenging topic and TA is likely to be needed at all stages of the JESSICA investment cycle. The need for expert support must be assessed and the appropriate facilities need to be established. An evaluation of the most suitable instruments, as described in the in-depth study should be carried out.

Step 7 Project appraisal selection and financing

Once the appropriate mechanisms have been put in place and project eligibility rules and investment strategies for the UDFs have been agreed, projects may be appraised, selected and financed. The selected beneficiaries will obtain a loan (equity or guarantee) from the institution acting as UDF and will repay it according to predetermined conditions.

Long-term Action Plan (post 2013)

For long-term action, there needs to be a bigger commitment from all actors if implementing housing projects are aimed through financial instruments. MAs should identify the potential need in their MSs/regions, and harmonise their OPs to increase the scope for housing development according to the new legislative proposal introduced under part 2.3 for the next programming period and identify further measures which could support the developments in multi-purpose development and energy efficiency and low-carbon refurbishment.

At present, JESSICA mechanism can finance housing projects only in a narrow range of circumstances, even though its main advantage in multi-purpose development projects is to facilitate the task of partnering public with private finance. There should be an increasing emphasis on urban renewal in the form of mixed-tenure and mixed-use urban investment, which could increase the range of projects where

JESSICA type revolving financing could add value. MAs need to understand how to employ a mix of central government grants; private debt and equity as well as JESSICA type funding mechanisms to reach this aim and should also increase TA for these types of integrated projects.

UDF managements have to meet target IRR to ensure the functioning and sustainability of the funds. While the IRR target clearly depends on the costs and governance structure of the UDF, the nature of the real estate or infrastructure assets to be funded also plays a significant role. Energy efficient refurbishment of existing housing should generate regular savings in energy costs from relatively low investments which will help repayment of the investments made.

Particularly the EU12 countries are in need for funding. Since most of the dwellings are owner-occupied, residents themselves bear the cost and obtain the benefits of any improvements. It is therefore crucial that they are eligible for financing from financial instruments. The Estonian example demonstrates that JESSICA can facilitate the renovation of the entire building rather than those parts eligible for ERDF funding. The major issue is whether the cost savings generated by the refurbishment of the existing blocks are sufficient to repay the loans and whether those who obtain the benefits from the renovations are those liable to make the repayments.

As a long term strategy, MAs and other relevant stakeholders need better information about the opportunities and advantages represented by the use of SFs resources through financial instruments for urban development to finance housing projects. Communication and trainings on this should be financed by EU or national grants.

Moreover MAs should be encouraged to include eligibility requirements for housing projects in their OPs concerning next programming period. Eligibility criteria and potential Final Recipients can be defined using experience from countries that have already implemented eligible housing projects in the current programming period.

There is a perceived need to integrate housing projects into operations financed through financial instruments for urban projects. The current policy approach throughout Europe is to consider that neighbourhoods containing a mixture of uses, including housing, commercial, retail and possibly industrial activities, are able to realise their full potential and, at the same time, result in better living conditions for residents. Thus the aim is to find mixed-use and mixed-tenure urban development projects which include housing but also commercial uses, which allow financial instrument to support housing indirectly. In this context, targeting SFs at the non-housing elements of developments could nevertheless indirectly facilitate investment in housing.

From the programming period 2007-2013 there is a good sample of real examples (projects) to investigate which could be used to conduct an ex-post evaluation, to learn from the existing know-how and experience.

6 Glossary

- **EU12: 10** MSs joined after 2004 namely Poland (PL), Czech Republic (CZ), Cyprus (CY), Latvia (LV), Lithuania (LT), Slovenia (SI), Estonia (EE), Slovakia (SK), Hungary (HU), Malta (MT), plus Bulgaria (BG) and Romania (RO) who joined since 2007.
- **EU15:** MSs joined before 2004 enlargement, namely Belgium (BE), Greece (EL), Luxembourg (LU), Denmark (DK), Spain (ES), Netherlands (NL), Germany (DE), France (FR), Portugal (PT), Ireland (IE), Italy (IT), United Kingdom (UK), Austria (AT), Finland (FI), Sweden (SE)
- **ERDF Regulation:** Regulation (EC) No 1080/2006 on the European Regional Development Fund and repealing Regulation (EC) No 1783/1999 and successive amendments
- **Final Recipients (FRs):** The term Final Recipient refers to enterprises, Public Private Partnerships, projects and any legal or natural person receiving Repayable Investments (namely through Equity participations, Loans, Guarantees and other forms of Repayable Investments implemented through similar transactions, with the exception of Grants) from an Financial Engineering Instrument.
- **Financial Engineering Instruments (FEIs):** Financial Engineering Instruments are those set up under Article 44 of Council Regulation (EC) No 1083/2006. As part of an Operational Programme, the Structural Funds may finance of the following: (a) Financial Engineering Instruments for enterprises, primarily small and medium-sized ones, such as Venture Capital funds, Guarantee funds and Loan funds (b) Urban Development Funds, that is, funds investing in Public-Private Partnerships and other projects included in an Integrated Plan for Sustainable Urban Development (c) Funds or other incentive schemes providing Loans, Guarantees for Repayable Investments, or equivalent instruments, for energy efficiency and use of renewable energy in buildings, including in existing housing.
- **Financial Instruments:** Financial Instruments is the term used in preference to Financial Engineering Instrument for the next programming period. Financial Instruments eligibility covers the 11 Thematic Objectives as well as the Common Strategic Framework Funds.
- **General Regulation:** Council Regulation (EC) No 1083/2006 “laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999” and successive amendments.
- **Guidance Notes (COCOF notes):** Documents prepared by the Commission services with the aim of providing explanations and interpretations on EU rules in the area of Cohesion policy in order to facilitate the implementation of OPs and to encourage good practice(s).
- **Holding Fund (HF):** Holding Fund is as described in the EU Regulations and are funds set up to invest in Venture Capital funds, Guarantee funds, Loan funds, Urban Development Funds, funds or other incentive schemes providing Loans, Guarantees for Repayable Investments, or equivalent instruments, for energy efficiency and use of renewable energy in buildings, including in existing housing.
- **Implementing Regulation:** Regulation No 1828/2006 of December 2006, which sets out rules for the implementation of Council Regulation (EC) No 1083/2006 laying down general provisions on the European Regional Development, the European Social Fund and the Cohesion Fund and of Regulation (EC) 1080/2006 of the European Parliament and the Council on the European Regional Development Fund (as amended).
- **Operational Programmes (OPs):** Document approved by the Commission comprising a set of priorities which may be implemented by means of Grants, repayable assistance and financial engineering instruments depending on the design of the Operational Programme.

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- **Repayable investment:** In accordance with the Revised Guidance Note on FEIs under Article 44 of Council Regulation (EC) No 1083/2006 shall mean repayable financial assistance or support wholly or partially financed through SFs' programmes, to address cohesion policy objectives, by way of loans, guarantees or equity.
 - **Managing Authority (MA):** In accordance with Article 60 Regulation (EC) No. 1083/2006, a national, regional or local public authority or a public or private body designated by the MS to manage the OP.
 - **Structural Funds (SFs):** The ERDF and ESF, referred to under Regulations (EC) No. 1083/2006, 1080/2006 and 1081/2006 and successive amendments.
 - **Urban Development Fund (UDF):** A UDF is a fund as defined by Article 44 1st paragraph b) of Regulation (EC) No 1083.2006 and Article 46 of Regulation (EC) No.1828/2006. It invests in PPPs and other projects included in an integrated plan for sustainable urban development.

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8 Appendix 1: EIB and Housing

This appendix gives a brief overview of EIB policy related to urban sector and housing in specific and in addition presents some examples of projects being financed by the EIB.

EIB and the Urban Sector

Promoting integrated urban development, EIB's lending in cities especially focuses on urban renewal and regeneration projects that help shape sustainable communities. By improving areas where the most deprived citizens live and by making better use of scarce land assets in city centres, urban renewal can foster social cohesion. At the same time, urban renewal may reduce the pressure that otherwise encourages occupation of surrounding vacant land (suburbanisation), thereby limiting urban sprawl and contributing to a more balanced settlement structure. EIB therefore supports municipal investment to improve and rehabilitate public infrastructure, buildings and facilities, with special attention being given to the protection of the cultural and historical heritage.

Over the last five years, almost half of the EIB's total financing for the urban sector has gone to projects involving urban development and regeneration. EIB investments in the Urban Sector can be grouped in four main categories:

- Urban Renewal and Regeneration;
- Social and Affordable Housing;
- Public Transport;
- Urban Transport Infrastructure.

EIB policy regarding housing in EU countries

Social/affordable housing policies in many EU countries are facing constraints in terms of increasing demand for social housing, and limited resources, with financial sustainability often only achieved through substantial public funding. Against this backdrop, the "Final Communiqué" issued by the EU Ministers of Housing in Toledo (June 2010) explicitly asks the EIB to promote the renovation, reconstruction, upgrading and energy efficiency of the housing stock in MSs of the EU, and to implement more considered maintenance strategies.

General pre-requisites for any EIB financing for social housing projects are the following:

- A sound and proper regulatory framework for social and affordable housing is in place (e.g. defining income thresholds for applicants/eligible households) appropriately corresponding to serve people not provided with decent housing conditions (e.g. living in overcrowded conditions, sharing sanitary facilities with other units/households; eligible for social benefits and allowances such as unemployment benefits, etc.);
- The housing type/tenure will remain unchanged in the long-term, at least for the duration of the loan operation. In the case of financing right-to-buy or shared ownership, the promoter has to demonstrate the existence of a revolving mechanism ensuring the replacement of the sold assets;
- In the case of new construction of social and affordable housing, the project is part of a specific housing plan or urban renewal plan for the respective area(s);
- Long-term operation and maintenance of the housing stock is ensured;
- Regular comprehensive and effective inspection and control mechanisms are in place.

In the years 2007-2011 the EIB has signed operations worth around EUR 2.500 million (in EU27 and Efta countries) which were specifically earmarked for housing. This accounts for 26% of the lending in the urban infrastructure sector. This amount reflects a minimum on lending to housing projects, as a great share of EIB loans cover a wider context, including housing.

Housing and Climate Change

According to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) the Greenhouse Gas (GHG) emissions of the building sector could be reduced by 29% by 2020 through cost-effective energy-efficiency measures and distributed (renewable) energy generation technologies. Due to strong and diverse barriers in the residential and commercial sector, the application of these measures may not be realised by the market alone; making it necessary for the public sector to put in place policy instruments for GHG abatement.

Since 2009 MS can use ERDF grants for energy efficiency improvements and renewable energy in existing housing up to an amount of 4% of the total ERDF allocation. It is up to each MS to define the type of eligible housing.

The Directive on the energy performance of buildings (Directive 2010/31/EU) introduces new requirements with a large estimated macroeconomic impact: energy savings of 60-80 Mtoe in 2020 (i.e. the total EU energy consumption and CO₂ emissions will be reduced by 5-6% and 5% respectively).

Examples of Housing Projects financed by the EIB

Wallonia with SWL (Walloon Housing Association):

This project consisted of financing the Regional Investment Programme via a public intermediary comprising small and medium scale schemes of retrofitting social housing throughout a region. The beneficiaries were social housing companies in the whole region. In terms of Energy Efficiency there is an innovative approach and therefore TA was foreseen through the ELENA initiative. The total loan of the EIB was EUR 500 million.

Flanders with VMSV (Flemish Social Housing Association):

The EIB has financed a Regional Investment Programme via a public intermediary, comprising small and medium scale schemes of retrofitting social housing. The beneficiaries were social housing companies in the whole region. The project was innovative in terms of Energy Efficiency and the use of renewable energies. As an innovative approach was present regarding energy Efficiency, TA was foreseen through the ELENA initiative. The total loan of the EIB was EUR 600 million.

Wiener Wohnen:

This project the EIB has financed consisted of modernisation of large-scale municipal housing stock and comprised a 10 year retrofitting programme. The housing stock was very diverse, comprising comprehensive upgrading of 220,000 units in total. The total loan was EUR 1 billion.

9 Appendix 2: CEB Activities on Housing

Financing housing and urban renewal projects have been one of the major areas of investment for the CEB since its inception in 1956. Housing sector covers several of CEB's missions. Beyond the obvious objective of improving living conditions for those who are poorly housed; providing shelter for refugees, migrants, victims of natural disasters or other vulnerable populations such as the elderly, ethnic minorities or handicapped persons is also a part of the Bank's mission. In addition to direct investments in housing, CEB also plays a role in urban renewal through the financing of housing-related municipal infrastructure including investments linked to environmental sustainability and energy efficiency.

Up to now CEB dedicated more than EUR 16 billion, i.e. more than half of its total lending, to housing and associated infrastructure projects towards building sustainable communities in urban areas across Europe. Around EUR 10 billion of this amount was earmarked to housing and housing related infrastructure whereas the rest covered cross-sector operations with housing and urban components. The leverage effect of CEB financing is considerable and can be estimated at a factor of 2.5, given that the amounts approved by the CEB represent on average 40 percent of the total volume of the actual investments. Accordingly, it can be assumed that CEB loans of EUR 16 billion have mobilised at least EUR 40 billion of total investments.

These EUR 16 billion loans have been distributed to specific housing and related investments as follows:

- More than EUR 6 billion (39%) is allocated for "housing for low-income persons" being the most important sector CEB funds have been allocated,
- A similar amount has been devoted to financing housing for vulnerable groups of populations including "refugees and displaced persons" (EUR 2 billion / 13%); "ethnic minorities", "migrants" (EUR 1.8 billion / 11%); "victims of natural or ecological disasters" (EUR 2 billion / 14%) and the "elderly and disabled" (EUR 660 million / 4%),
- Another EUR 2.5 billion (16%) has been allocated to projects for the development of "housing related urban infrastructure",
- Finally, about EUR 525 million (3%) is allocated to "green housing" i.e. energy efficiency in housing projects with the objective to improve environmental sustainability.

The geographic focus of loans in favour of housing and related investments reflects the change in priority areas of investment of the CEB. Recently Bank's emphasis has been gradually shifting from its "traditional" areas in Western⁶⁴, Southern⁶⁵ and Northern⁶⁶ Europe to new priority areas in Central⁶⁷ and South Eastern⁶⁸ Europe.

The criteria that the CEB takes into account when financing housing projects include income levels, physical characteristics of the housing and the purchase and/or rent conditions applicable in the country hosting the project, conform legal and regulatory provisions in force. Moreover financing of the CEB is extended in compliance with its environmental management as well as public procurement policies.

CEB aims to develop its activities in housing sector along three main lines: (i) provide decent, affordable and adapted dwellings for those whose needs are not met by the general housing market; (ii) develop cross-sector operations; (iii) promote energy efficient housing and sustainable urban development.

⁶⁴ Belgium, France, Germany, Ireland, the Netherlands.

⁶⁵ Cyprus, Greece, Italy, Malta, Portugal, Spain.

⁶⁶ Nordic and Baltic countries: Denmark, Finland, Norway, Sweden, Estonia, Latvia, Lithuania.

⁶⁷ Czech Republic, Hungary, Poland, Slovak Republic.

⁶⁸ Albania, Bosnia and Herzegovina, Croatia, "the former Yugoslav Republic of Macedonia", Moldova, Montenegro, Romania, Serbia, Turkey.

Examples of CEB housing projects

Housing for low-income persons:

In 2009, CEB got involved in the “Social housing and dwelling units in North Rhine-Westphalia” programme designed by NRW.Bank in Germany to provide decent rental housing for low income persons, persons living in socially and economically disadvantaged urban areas and families in financial distress. CEB’s participation in this project amounts to EUR 110 million (13% of the total cost) and is set to be used for sub-projects targeted to rental housing only. This operation aims to meet the needs for social housing in the North Rhine-Westphalia region which has experienced a degradation of its social and economic situation due to structural changes and the effects of the financial crisis on the automobile sector.

Housing for Ethnic Minorities - Roma:

In 2000, a project worth EUR 3.3 million was approved in favour of the Municipality of Sofia, Bulgaria, with a guarantee from the Bulgarian Government. It was the first pilot project to be part of a municipal scheme to promote the inclusion of the Roma community in the city, in line with the national integration programme. The purpose of the project was to finance the construction of housing and infrastructure for 1 600 Roma living in Slatina, a disadvantaged district of Sofia.

Similarly, CEB participated in the housing provision for Roma in Hungary (EUR 5 million). Implemented within the framework of the “Decade of Roma Inclusion 2005-2015”, the overall objective of this project was to promote the social integration of Roma by addressing the serious housing, education, health and employment problems of the Roma community. Investments were concentrated on the improvement of housing conditions through transfer to new dwellings, rehabilitation of the housing environment and improvements to related social and technical infrastructure, including the improvement of sanitary and environmental conditions. The “housing component” was implemented in a limited number of municipalities suffering the most serious segregated settlement problems.

Housing for refugees and displaced persons:

In Croatia, the Bank supported, in collaboration with local authorities and UNHCR, the return and resettlement of refugees and displaced persons by financing the reconstruction of damaged houses and basic municipal infrastructure (EUR 69 million, 2001-2005). The Bank also helped accelerate the process of repossession of occupied property by the rightful owners and provision of alternative accommodation for eligible temporary users. With this project CEB participated in one of the most important housing programmes ever implemented in the Balkan region.

Housing for victims of natural or ecological disasters:

The CEB participated in the reconstruction of housing in the aftermath of a severe earthquake which occurred in the Marmara region in August 1999 in Turkey. The CEB contributed with almost EUR 370 million to the reconstruction of over 17 000 housing units either destroyed or seriously damaged by the earthquake. The aim of the project was to rebuild dwellings in accordance with anti-seismic standards.

Housing for other vulnerable groups of population:

The Bank approved in June 2009 a “rental housing project” for the most vulnerable in “the former Yugoslav Republic of Macedonia.” The project aims to co-finance with EUR 25.4 million (50% of total project cost) the construction of 37 buildings with 1 708 rental housing units in 19 municipalities throughout the country in favour of vulnerable beneficiaries of different groups: (i) residents of areas affected by natural disasters; (ii) orphans attaining legal age for leaving institutional accommodation; (iii) socially threatened Roma; (iv) dependent or disabled households; (v) permanently unemployed and welfare recipients; and (vi) single parents with young children.

JESSICA related CEB projects

CEB participates in the JESSICA instrument by virtue of a Memorandum of Understanding signed with the EC and the EIB in May 2006. CEB has been contributing one staff member on a full-time basis to the JESSICA Task Force headquartered at the EIB since April 2008. As a fully-fledged member, the CEB organised the JESSICA Steering Committee meeting in Paris in November 2010. It was also involved, in collaboration with the EC and the EIB, in the launch of the JESSICA Networking Platform which is a tool to promote exchange of best practices about the instrument by all stakeholders.

CEB's support to the JESSICA initiative is not limited to organisational aspects only but is also directed to lending operations.

In 2008, CEB's Administrative Council approved a project providing CEB funding to the Credit and Export Guarantee Fund (KredEx) in Estonia. KredEx on-lent EUR 29 million of CEB funds, together with funds coming from the EU SFs, to selected commercial banks in Estonia, namely Swedbank and SEB. These banks act as the UDFs and invest the available funds to part-finance energy efficiency investments in Estonian multi-apartment buildings carried out by housing associations, housing co-operatives or communities of apartment owners.

In September 2011, CEB's Administrative Council approved a loan amounting to EUR 75 million in favour of Bank Ochrony Srodowiska (BOS) which is selected as one of the UDFs in Poland. This loan is aimed at continuing the existing cooperation in the-co-financing of public infrastructure investments in two of CEB's sectors of action, i.e. "improving living conditions in urban and rural areas" and "protection of the environment". In addition, a third of the loan is earmarked for projects for urban revitalization under the JESSICA initiative in Westpomerania region, more specifically for projects outside the Szczecin metropolitan area.

These JESSICA urban projects involve the construction and expansion of tourism infrastructure, including the upgrade and building of cultural establishments. The revitalization projects may also concern utilities networks, social housing, regenerating and protecting historical and cultural monuments, including industrial and post-military facilities and their surroundings. Recently BOS is also selected as UDF in the Silesia and Pomerania regions and consequently part of the above-mentioned CEB loan earmarked for JESSICA projects can also be allocated to eligible urban projects in these two regions.