JESSICA

JOINT EUROPEAN SUPPORT FOR SUSTAINABLE INVESTMENT IN CITY AREAS

JESSICA INSTRUMENTS FOR ENERGY EFFICIENCY IN LITHUANIA

FINAL REPORT

17 April 2009

This document has been produced with the financial assistance of the European Union. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.

CONTENT

INTRODUCTION

This Report is submitted for the project "JESSICA Evaluation Study for Lithuania – Supplementary Study" (contract No.CC3068/PO30507). It covers four main objectives of the study identified in the Terms of References and presents recommendations for the financing model for renovation of housing for energy efficiency in Lithuania.

Renovation of multi-apartment houses in Lithuania is a big scale project, success of which might be determined by appropriate structure of incentives for homeowners. Three stages of incentives are important.

Firstly, the principle of obligatory accumulation of assets of homeowners should be implemented, which have already been included in provisions of some national legislation in force. This principle corresponds to the best practice of many countries and provides that homeowners accumulate assets for modernisation of multi-apartment houses. State can and must help its citizens to carry out this obligation. Due to this reason, second and third stages of this project are closely related to the accumulation and promotion of the attractiveness of the modernisation of multi-apartment houses.

Second stage of the project is related to the simplification of the whole renovation process and increase in its efficiency. In order to achieve that, draft legislation is being prepared, which would simplify the preparation of investment projects, issuing of building permits and other related processes, would provide an opportunity to exercise public procurement in a centralised manner. One of the elements of this stage is the provision of technical assistance for homeowners to help them with the preparation of investment projects, promoting the process of multi-apartment housing renovation and promoting its advantages in public.

Third stage is also related to actions of increasing attractiveness of the renovation of multi-apartment houses. Financial incentives are an integral part of this stage and are aimed at mobilising assets necessary to implement a project and increase its financial attractiveness for the homeowners. The document presented mainly concerns the latter stage. A financial scheme and financial model for the renovation of multi-apartment houses, which is based on leveraging of public and private assets into a revolving fund and various financial models of incentives, are the topics of this document.

At the end of 2008 the new Government of the Republic of Lithuania attached high importance to JESSICA by including a reference to the initiative in its new programme, linking its potential implementation to modernisation and energy efficiency measures in the housing sector. On 23 January 2009 Prime Minister of the Republic of Lithuania issued the Decree on the Establishment of the Working Group led by the Ministry of Finance for the issues of the financing of housing renovation.[1] On 6 February 2009 Ministry of Economy of the Republic of Lithuania adopted a Recovery Plan for the Economy, which identified renovation of multi-apartment housing through revolving fund as the major focus of the plan.[2] On 18 February 2009 activities of Working Group were extended[3] and the Working Group was obliged to present recommendations for the financing model for renovation of housing for energy efficiency in Lithuania.

[1] Decree on the Establishment of the Working Group No 36 of 23 January 2009
[2] Economy Promotion Plan of the Republic of Lithuania
http://www.ukmin.lt/lt/strategija/planas/Ekonomikos_skatinimo_planas_v34.doc
[3] Decree on Replacement of the Decree on the "Establishment of the Working Group No 36 of 23 January 2009" No 67 of 18 February 2009

On 15 April 2009 the Government of the Republic of Lithuania approved the conclusions and proposals[4] concerning the financing model for the modernisation of multi-apartment houses provided by the Lithuanian Ministry of Finance, which had been revised taking into account comments made by the Government of the Republic of Lithuania on 8 April 2008. The decree of the Lithuanian Ministry of Finance outlined proposals concerning the selection of the optimal financing model; institutions that could be assigned responsible for the implementation of the proposed financing model, their weaknesses and strengths; action plan of the implementation and advantages of the selection of the EIB as a holding fund.

The Consultant closely cooperated with the Working Group in order to place JESSICA in the new model of financing of housing renovation in Lithuania. Structure of this Report reflects the mandate and needs of the Working Group.

[4] Ministry of Finance of the Republic of Lithuania. Conclusions and Recommendations No (24.1-03)-6K-0903939 of 14 April 2009

1. SCHEME FOR THE FINANCING OF HOUSING RENOVATION INVESTMENT PROJECTS USING JESSICA INSTRUMENT

1.1. JESSICA Initiative and Financial Engineering Instruments

The financing scheme for housing renovation using the JESSICA instrument[5] is based on the employment of financial engineering instruments to accumulate financial assets in the revolving JESSICA fund. The revolving JESSICA fund in this case is a specific pool of assets designated for the financing of the renovation and modernisation of multi-apartment houses.

Financial engineering is aimed at increasing the efficiency of using the Structural Funds for project financing in order to leverage additional public and private recourses and provide a possibility for the multiple use of the funds. Requirements for the use of financial engineering instruments are provided in Regulation (EC) No 1083/2006[6] and Regulation (EC) No 1828/2006[7]. These Regulations provide that financial engineering instruments can be set up via holding funds, urban development funds of other financial instruments as independent legal entities governed by the agreements between co-financing partners or shareholders or as a separate block of finance within financial institutions.[8] The description of the organisational models possible for implementation of financial engineering measures, including the advantages and shortcomings of each organisational option is provided in the Annex 1 of this Document. In order to keep the Report concise, further insights are focused, in particular, on the suggested model of *separate block of finances,* which we identified as the most appropriate in a given situation.

Provisions of Commission Regulation (EC) No 1828/2006 regarding the establishment of financial engineering instruments within the financial institutions in the form of *block of finances* empowers a Member State to create a separate pool of assets within the operating financial institutions, e.g. commercial banks, without establishing a separate legal entity and use it for the funding of JESSICA eligible investment projects.

Block of finance organizational option is suggested for the main reasons, as indicated below:

1. The possibility of quick implementation of the model: considering the current economic and financial situation where demand for financing of multi-apartment housing renovation projects, time factor is crucial.
2. The possibility to empower disbursement of financial assets to financial institutions (commercial banks) which possess required experience and capacities to manage financial assets and investment risks.
3. The possibility of participation of financial institutions in the implementation of the model in the mode of co-financing the investment projects.

The JESSICA initiative, arranged as *block of finance* option, contains substantial principles as described below. The Commission Regulation (EC) No 1828/2006 provides, that where the

[5] JESSICA (*Joint European Support for Sustainable Investment in City Areas*) instrument is the Initiative of European Commission and European Investment Bank purposed to promote investments into sustainable urban development projects.
[6] Council Regulation (EC) No 10083/2006 of 11 July 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 (OJ 2006 L 210, p. 25)
[7] Commission Regulation (EC) No 1828/2006 of 8 December 2006 setting out rules for the implementation of 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 of Regulation (EC) No 1080/2006 of the European Parliament and of the Council on the European Regional Development Fund.
[8] Paragraph 3 of Article 43, Council Regulation (EC) No 1828/2006

financial engineering instruments are established within the financial institutions, it shall be subject to a specific implementation rules stipulating that separate accounts are kept to distinguish the new resources invested in the financial engineering instrument, including those contributed by the operational programme from those initially available in the institution. The above provisions may be read as granting an option to finance eligible investment projects by channelling financial support from operational programmes to purpose-specific fund, which would probably be a special account (or several accounts) in which the assets of structural funding (support) would be held. In Consultant's view, the assets designated to the fund can be administrated via a budgetary account of the State, kept in a special account in a financial institution or entrusted for the administration of a holding fund.

Following the *block of finances* institutional arrangement, the Managing Authority is entitled to channel the fund through financial institutions (commercial banks) to support multi-apartment housing renovation projects. It is suggested that a contribution from the operational programme to commercial banks should be made in a form of a loan with a view to the subsequent financing of repayable investments in the housing modernisation investment projects. Commercial banks to participate in the financial model are to be selected via public tender. Subject to this, it should be noted that a loan to commercial banks in this case may be considered "operation" within the meaning of Article 2(3) of the Regulation (EC) No 1083/2006.[9]

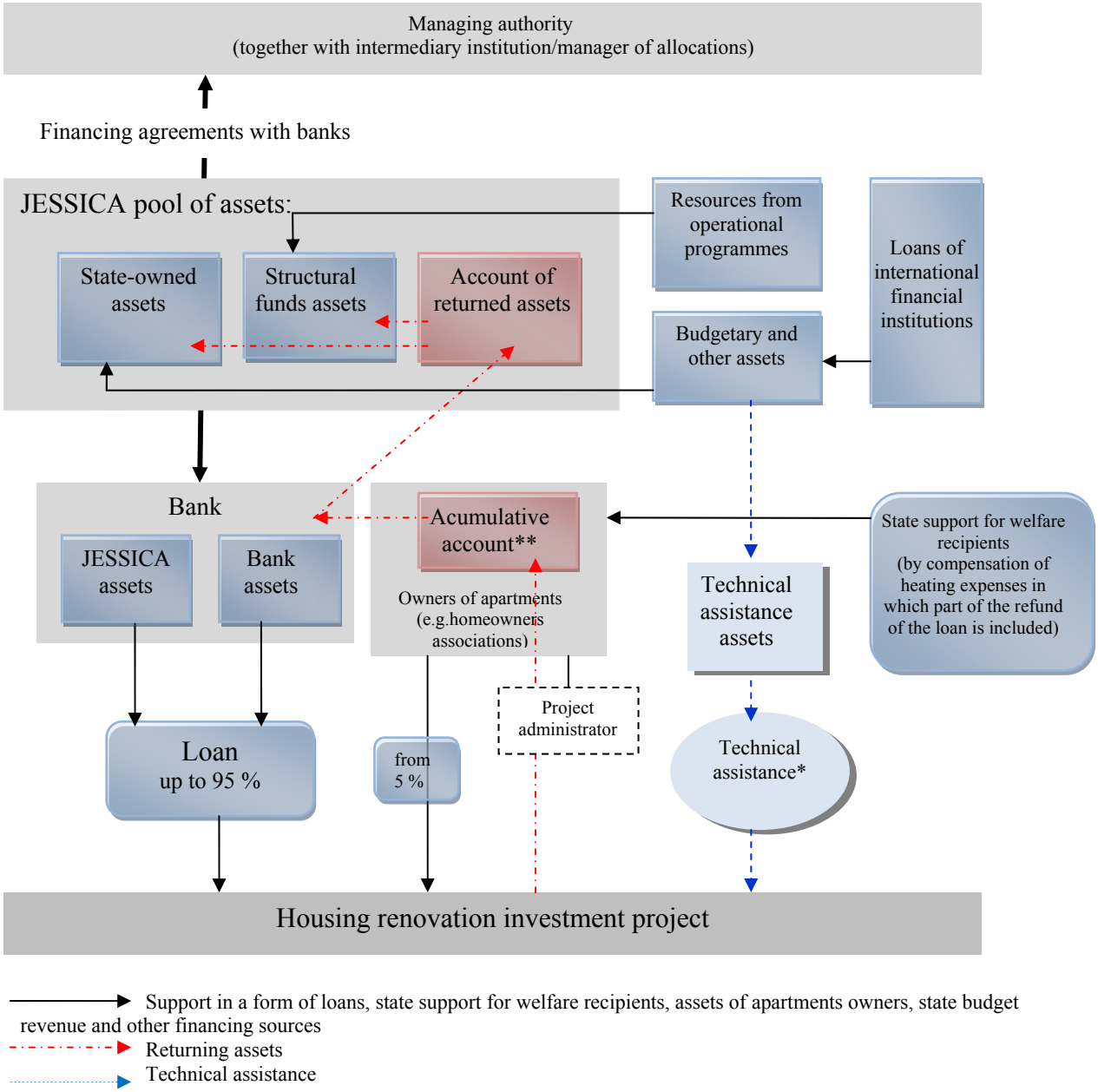
Housing sector is one of the eligible beneficiary sectors under JESSICA measures. For the present moment, the allocation of assets for the housing sector expenditure cannot exceed either 3 per cent of the ERDF allocation to the operational programmes or 2 per cent of the total ERDF allocations.[10]

[9] Commission services replies to the questions submitted by the JESSICA expert working group of Member states, see Question No 2.

[10] European Commission proposed an amendment to Regulation (EC) No 1080/2006 of the European Parliament and of the Council on the European Regional Development Fund of 5 July 2006, which prescribes that "In each Member State, 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".

1.2. Proposed Scheme for Financing of Housing Renovation

Along the previous description, the preliminary scheme of the financing model for housing renovation can be pictured, as illustrated below[11]:



**Technical assistance – 1) assistance in organising the preparation of investment projects (preparation of standard project documentation, projects for modernisation of blocks; 2) assistance in preparing project documentation; 3) organisation of public procurement. Attractiveness of the financing model by non-financial measures can be substantially increased by providing technical assistance, however, in order to achieve that present legal regulation has to be improved.*

***Obligation for homeowners to accumulate assets in an accumulative account is related to the refund of loan for the renovation of house: obligatory amount to be accumulated should be provided in legal acts and renovation loan refunds should be deducted from the obligatory amount to be accumulated by the inhabitant.*

[11] The scheme is an elaborated version of the scheme, provided in the Annex 1, describing Option 2 "Establishment of a financing model using "block of finances " institutional approach "

A brief description of the roles and responsibilities of the participants involved in the scheme:

Managing authority. The national institution responsible for the implementation of financial engineering measures is the Ministry of Finance. According to the Government Resolution on Allocation of Functions and Responsibilities of Authorities for the Implementation of the Lithuanian Strategy for the Use of EU Structural Assistance Strategy for 2007-2013 and Operational Programmes[12], the Ministry of Finance carries out the functions of the structural funds managing, coordinating, certifying and paying authority. The Article 44 of the Regulation 1828/2006 stipulates that where the structural funds finance financial engineering instruments organised through holding funds, the Member State or the managing authority shall conclude a funding agreement with the holding fund, setting out funding arrangements and objectives. Therefore, the decision on the need of a holding fund should be taken by the Ministry of Finance, as set forth in the Government Resolution No 1139. The main responsibilities of the managing authority are as follows (1) to channel financial assets from operational programmes to housing renovation purpose-specific fund (2) to organise a public tender and select commercial banks to participate in the scheme and to enter into respective financing agreements (3) to assign the specific institution for providing the technical assistance for the final beneficiaries (4) to ensure supervision and control of the scheme and the funds recycled through it.

*Financial intermediaries (commercial banks).*Since the main activity in providing support to the final beneficiaries in the proposed model is lending, such activity should be carried out by the entities with the status of financial institution (commercial banks) and which fulfils the requirements of a financial institutions set in the legal acts. The Commission had explained that Article 43 of the Regulation (EC). 1828/2006, which provides that "financial engineering instruments [..] shall be set up as independent legal entities governed by the agreements of the co-financing partners or shareholders or as a separate block of finance within financial institutions", means that a separate *block of finance* within a financial institution such as bank can be a financial engineering instrument. The main responsibilities of the commercial banks in the proposed organisational scheme are as follows (1) to manage the financial assets and to lend it to the final beneficiaries (homeowners) (2) to co-finance them together with banks' assets to the amount envisaged in the financing agreement (3) to ensure the return of lent assets to the JESSICA fund.

Beneficiaries. The beneficiaries in the proposed scheme are the associations of homeowners of a multi-apartment house, homeowners acting under the partnership agreement, and in particular, one or few homeowners, under the authorisation of other homeowners, and the administrator of parts of the building in common use, under a special authorisation of the homeowners as well. The beneficiaries for the purposes of state support are entitled to (1) be organised in one of the required organisational forms (e.g., to establish the association of homeowners of a multi-apartment house) (2) accumulate the assets for the housing renovation i a special accumulative account (3) prepare the housing renovation investment project and submit application for the state support.

Besides, for the reasons of the state aid questions, defined in Section 1.4 of this Report, it is important to note that, according to the explanation of Commission[13], commercial banks shall be considered in the *block of finance* organisational option as the "beneficiaries" in the light of Paragraph 4 of Article 2 of Regulation No 1083/2006.

[12] The Government Resolution No 1139 on Allocation of Functions and Responsibilities of Authorities for the Implementation of the Lithuanian Strategy for the Use of EU Structural Assistance Strategy for 2007-2013 and Operational Programmes of 9 September 2007, Official Gazette No 114-4637 of 8 November 2007

[13] COCOF/07/0018/01

1.3. Action Plan for the Implementation of the Proposed Model

1.3.1. Decision on Allocation of Assets to the JESSICA Programme

A decision on the establishment of a JESSICA fund and allocation of assets to such fund should be taken by the Managing Authority and imposed by a national legal act. The revolving JESSICA fund as indicated in the scheme is a special pool of financial assets aimed to be used for financing the renovation and modernisation investment projects of multi-apartment houses. To Consultant's view, the assets designated to the fund can be administrated via a budgetary account of the state, kept in a special account in a financial institution.

As mentioned, at the first stage of the JESSICA implementation for housing renovation and modernisation investment projects, it is proposed to use a block of finances. At the second stage of the JESSICA implementation a holding fund could be established, if necessary, the functions of which could be performed by the European Investment Bank or a duly selected national financial institution. The main functions of the fund would be to leverage additional assets and provide technical assistance to participants of the financing model.

1.3.2. Funding Sources for JESSICA Fund and Accumulation of Assets for Project Financing

JESSICA is a revolving fund funded by assets channelled from operational programmes and open for budgetary contributions, credits of international financial institutions and other types of assets from the public and private sector. After operational programmes are reviewed and the decision on the allocation of structural support to the JESSICA fund is made, it is proposed to entrust the implementation of the support provision to investment projects to the financial intermediaries indicated in the model, which would undertake the commitment to co-finance the investment project by their own assets. Whereas the proposed model suggests that the main activity of financial intermediaries in providing support to final beneficiaries is lending[14], i.e., financial activity, the entity entrusted to perform such activity should have a status of a financial institution under the requirements established in the Law on Financial Institutions (commercial banks).

1.3.3. Technical assistance

It is necessary to ensure the provision of due technical assistance to stakeholders of the scheme. It should be noted that Article 45 of the Regulation 1083/2006 provides that member states may allocate up to 0,25 percent of their respective annual allocation from ERDF, European Social Fund and Cohesion Fund to finance the preparatory, monitoring, administrative and technical support, evaluation, audit and inspection measures, necessary to implement Regulation 1083/2006.[15] These actions include assistance for project preparation and appraisal, including with the EIB through a grant or other forms of cooperation, as appropriate, as stated therein.[16] Technical assistance may be provided either by holding fund (if the financing scheme includes the HF), or by a special institution, with necessary capacities and expertise, entrusted to provide technical assistance for the project developers on the basis of a separate agreement. The resources allocated for provision of technical assistance shall either be contributed by holding fund (the costs shall be included in the holding fund management fee) or, alternatively, by the State from the budget.

---

[14] Financial instruments that meet JESSICA requirements are loans, guarantees and equity investments.

[15] Art 45 of the Regulation 1083/2006: *"At the initiative of and/or on behalf of the Commission, subject to a ceiling of 0,25 % of their respective annual allocation, the Funds [i.e., ERDF, European Social Fund and Cohesion Fund] may finance the preparatory, monitoring, administrative and technical support, evaluation, audit and inspection measures necessary for implementing this Regulation"*.

[16] Art 45 (1)(a) of the Regulation 1083/2006.

It could also be noted that it is likely that the Housing and Urban Development Agency (the "HUDA") has definitive capacities to provide technical assistance as it is entitled by the law to carry out similar functions in the current housing renovation and modernisation financing model in Lithuania. The HUDA through its 15 regional offices, is responsible for smooth and efficient implementation of the Programme for Modernisation of Multi-Apartment Buildings in Lithuania, creating and developing and efficient housing management and maintenance system and promoting the refurbishment of buildings and implementations of efficient energy saving measures, by providing advice on technical, legal, financial, organisational and other issues to the participants of the said programme.

1.3.4. The Tender for the Selection of Financial Intermediaries

The Managing Authority acting pursuant to provisions of Regulation (EC) No 1083/2006 and Regulation No (EC) 1828/2006 shall prepare terms of reference and announce a tender to submit proposals for the selection of managers of financial engineering instruments (commercial banks).

Whereas financial intermediaries to be selected by the Managing Authority (or another institution authorised by the Managing Authority to administrate budgetary allocations) are obliged not only to make specific-purpose investments using fund assets transferred to them to manage an adequate remuneration, but also to directly contribute to the co-financing of such projects, i.e. to act as a financial partner with respect to a project, it is assumed that in such case a participation of financial intermediaries would not be subject to the regulation of national rules for public procurement[17]. In order to guarantee the selection of financial intermediaries to be conducted in transparent, non-discriminatory, equal manner and the compliance with the provisions of the rules of state aid, financial intermediaries should be selected by public tender.

It is recommended to select financial intermediaries for the implementation of the financing scheme of renovation projects of multi-apartment houses according to the following criteria:[18]

- conformity with the requirements provided in the national Law on Financial Institutions and Law on Banks;
- planned conditions for the provision of JESSICA loans:
  a) interest rate (interest margin);
  b) amount of administration and other bank fees.
- amount of own-assets (level of the participation in the funding of investment project) and their use together with a JESSICA loan for the investment project of a commercial bank;
- amount of funds, which the bank undertakes to on-lend during the prescribed term;
- experience in investing, investment-aimed policy, ability to manage investment risk.

Together with a proposal, a commercial bank should present an investment strategy complying with the provisions of Paragraph 2 of Article 43 of Commission Regulation (EC) No 1828/2006 laying down the information on the financial product offered by a bank as well as forecasts of investments and calculation of refunded assets.

[17]According to the provisions of Law on Public Procurement of the Republic of Lithuania, a concept "public procurement" is applied to define procedures, the aim of which is to conclude public works or services purchase agreement, only. Paragraph 28 of Article 2 of the Law on Public Procurement describes the public purchase of services as public purchase, the subject of which is services listed in Annex 2.

[18]The criteria provided here are aimed at providing an indicative but not exhaustive list and, therefore, should be elaborated on by the Managing Authority or another authorised state authority.

1.3.5. Conclusion of Financing Agreements with Selected Commercial Banks

A funding agreement shall be concluded with the selected financial intermediaries, on the basis of which JESSICA fund assets are contributed to the banks, and term to provide loans for multi-apartment housing renovation investment projects under the provisions of financing agreement is prescribed[19]. A purpose-specific contribution received by a bank can be used for the financing of multi-apartment housing renovation investment projects only.

A financing agreement concluded with commercial banks, *inter alia,* should provide:

1. Detailed conditions and procedure for providing purpose-specific loans for multi-apartment housing renovation investment projects.
2. Maximum interest rate (interest margin) applied by a bank to a loan for final beneficiaries and its calculation formula.
3. Criteria for the appraisal of projects for the eligibility for funding.
4. Undertaking of a bank to on-lend a particular amount of funds within a term prescribed in the agreement under conditions and procedure provided in the agreement.
5. Restraint for a bank to use the JESSICA fund assets for other investments than multi-apartment housing renovation and modernisation investment.
6. Monitoring procedure of investment projects and undertaking to provide reports on the financing status of investment projects under the terms prescribed.
7. Undertaking to administer JESSICA fund assets separately from other assets initially available in the bank[20].
8. Until the moment assets are on-lent for multi-apartment housing renovation investment projects, banks should undertake to pay interests for the assets provided to it in amount prescribed in the agreement and which correspond the market conditions.
9. Under expiration of a term prescribed in a financing agreement of a loan provided to the banks, the financial intermediary shall undertake to return all assets to an account indicated by the Managing Authority.
10. Amount of remuneration for managing expenses, its calculation and payment procedure should be indicated in the financing agreement. Amount of managing fee can be a fixed sum or variable dependant on the results of the activity of the intermediary.

It is recommended to discuss issues of the allocation of investment risks in the agreement, the liability of parties to the agreement as well as to elaborate on undertakings of a bank with regard to conditions of the financing of investment projects of final beneficiaries. An option for the Managing Authority to terminate the financing agreement with a commercial bank in case the latter fails to comply with the procedure and conditions of financing the investment projects prescribed in the agreement should be provided in the agreement as well. In such a case, a purpose-specific contribution shall be returned to the account indicated by the Managing Authority before the commencement of the term.

1.3.6. Transfer of Assets to Commercial Banks

The transfer of assets to financial intermediaries (by providing a purpose-specific loan) shall be exercised under the provisions of the EU regulations and national legal acts regulating allocations of structural support under a financing agreement[21].

---

[19] Criteria for funding agreement are provided in Paragraph 5 Article 43 of Commission Regulation No 1828/2006

[20] Article 43 of Council Regulation (EC) No 1828/2006

[21] Alternative option to transferring the assets to banks directly is to refund a part of loans provided by banks using their own assets under the submission of request and documents supporting the request for refund (expenses incurred etc.).

An alternative option to be taken into consideration is the employment of banks for the administration of funds under the conditions prescribed in the agreement for the remuneration (administration fee). In such a case bank would play the role of a financial intermediary only, facilitating the transfer of funds to final beneficiaries rather than being considered as a beneficiary itself. To Consultant's view, in this case the Managing Authority (or its authorised institution) would remain *de facto* manager of the assets and no "operation" defined in the Article 44 of Regulation No1083/2006 is performed.

The Commission has expressed its view that Paragraph 3 of Article 43 of Regulation (EC) No 1828/2006, which lays down that financial engineering instruments, including holding funds, can be set up as separate block of finances within financial institutions, should be interpreted in such a manner that separate block of finances in a financial institution, e.g. a bank, can be a financial engineering instrument itself.[22] Commercial banks in the proposed financing scheme for the renovation of multi-apartment houses perform a role of the manager of the financial engineering instrument. The Commission has also explained that a contribution of the operational programme to a financial engineering instrument in a form of a loan, with a view to the subsequent financing of repayable investments, may be considered as an "operation" within the meaning of Article 44 and Paragraph 3 of Article 3 of Regulation (EC) No 1083/2006 and Articles 43-46 of Regulation (EC) No 1828/2006, is respected. [23] This provision also means that, according to the regulation provided in Article 78 of Regulation (EC) No 1083/2006, the expenditure paid in establishing or contributing to the financial engineering instruments (i.e., the loan provided to the financial intermediary) is eligible to include into a statement of expenditure[24].

Again, it should be noted that financial intermediaries implementing the functions of manager of the financial engineering instruments are considered to be beneficiaries within the meaning of Paragraph 4 of Article 2 of Regulation No 1083/2006. Therefore, when providing a purpose-specific loan to a commercial bank from the Structural Funds or state budget assets, provisions of state aid rules should be considered and respected.

1.3.7. Priority Investment Projects, Appraisal and Funding of Them and Target Beneficiaries

Commercial banks selected by the Managing Authority shall be responsible for the appraisal of multi-apartment houses renovation investment projects and provision of preferential loans under the procedure and criteria provided in the financing agreement[25]. Financing shall be available by providing loans from JESSICA assets to housing renovation investment project managers (beneficiaries). A list of applicants eligible to apply for support for housing investments has to be provided in national legal acts.

Final beneficiaries of the benefit created by the financial engineering instruments are homeowners of multi-apartment houses organised in one of the forms provided in national legislation, meaning homeowners, who establish the association of homeowners of a multi-apartment house as well as homeowners acting under the partnership agreement. The administrator of parts of the building in common use is also considered to be a beneficiary under Article 4.84 of Civil Code of the Republic of Lithuania. The administrator, if authorised by owners, can act as a project manager (in such case, homeowners are considered to be final beneficiaries as they authorise a project administrator to

---

The main implication for choosing this form of financing financial intermediaries over the form of direct financing is a different moment eligible for the statement of expenditure, as stipulated in the Article 78 of Regulation (EC) No 1083/2006

[22] Commission services reply to the questions submitted by the JESSICA working group of Member States

[23] COCOF Note 1 on financial engineering 2007/0018, 1a

[24] Paragraph 1 of Article 78 of Council Regulation (EC) No 1083/2006

[25] Criteria shall be based on the following elements: 1) the forecasted energy efficiency effect; 2) type of a house; 3) investment project is an integral part of a complex renovation project (block renovation).

manage the project implementation) or the administrator (generally, an administrating company is appointed by the municipality) can be a beneficiary itself. In the latter case, the amendments to the legal acts regulating the activity and functions of the administrator of parts of the building in common use shall be necessary to ensure that the interests of homeowners are respected. It is important to note that beneficiaries shall need to contribute a specific amount of their own assets (e.g., 5 per cent of the investment project value) as a pre-payment, whereas the rest of the project would be funded by a loan from JESSICA fund assets and a commercial bank loan (part of the interests of a JESSICA loan would be compensated for final beneficiaries as state aid).

It should also be noted that another potential beneficiary for the loan for housing renovation investments exists, i.e. state, state-owned or private company which can borrow and implement the renovation of multi-apartment houses on its own behalf. The latter can be referred to as the ESCO scheme[26] where ESCO companies borrow assets to acquire equipment or implement energy saving projects for their clients (homeowners). The client of the ESCO pays the ESCO for its regular energy consumption (or major part of such energy consumption), whereas the ESCO pays the energy supplier only a part of this amount. A difference between the amount paid by the client and the amount required to be paid for the energy supplier is used to cover interests of a loan and possibly generate the profit for the ESCO. A homeowner purchases energy from the ESCO during the pre-agreed period of time and pays a pre-agreed price for the energy purchased. Depending on the agreement, the investment would start to bring profit within 5-20 years. A more elaborate analysis of this model under *Chauffage*-type agreements, under which the ESCO borrows from banks for the modernisation of the heating sector, was provided in JESSICA Evaluation Study for Lithuania (January 2009). Currently, if ESCO in residential housing were taken forward, it would likely face the state aid issues. Also low interest from the side of private companies to participate in such projects can be determined by low payback during the first years. Therefore, a more detailed analysis would be needed in order to implement the ESCO financial model.

1.3.8. Repayment of the Assets Invested into the Fund

Refunds of a loan made by beneficiaries shall be accumulated in the account for returned assets, discounted by managing fee applicable for a bank[27] and then returned to the fund and used to finance new multi-apartment houses renovation projects. Source of the assets returned to the fund *de facto* is loan repayments by owners. The obligation of homeowners to accumulate assets in the accumulative account is related to the refund of a loan for housing renovation: a mandatory amount to be accumulated should be established by legislation, whereas loan refunds made should reduce the mandatory amount to be accumulated by the owner. A part of a loan of homeowners, who under the national laws are considered to be state support welfare recipients, should be compensated by the state budget. After the commencement of the term for which assets were contributed to the manager of financial engineering instruments, a commercial bank shall return the assets to the account specified by the Managing Authority.

1.3.9. Possibility to Establish a Holding Fund

According the requirements of Article 44 of the Regulation (EC) No 1083/2006, the JESSICA initiative for housing renovation within existing financial institutions may be implemented using to different options: (1) through the holding fund (2) without the holding fund.[28]

---

[26] ESCO (*Energy Service Company*) is a company providing services for the energy sector.

[27] It should be noted that the maximum amount of the management fee which can be contributed to a manager of financial engineering instruments from operational programmes is set by Paragraph 4 of Article 43 of Regulation (EC) No 1828/2006.

[28] Article 44 of the Regulation 1083/2006, and states that Holding Funds are funds set up to invest in several venture capital funds, guarantee funds, loan funds and urban development funds

The decision of whether to establish a holding fund, should be taken by the Managing Authority. The HF in the block of finance institutional arrangement would be entitled with following responsibilities: (1) announcement of a public tender and selection of financial intermediaries (commercial banks) (2) investing funds in the selected financial engineering managers (commercial banks) through the bilateral agreements (3) supervising and controlling the use of funds and ensuring the recyclability of it. The HF *shall not* provide direct financial investments to the housing renovation investment projects

Considering the crucial need of rapid implementation of the proposed financial model, it is assumed that the implementation of JESSICA initiative for housing renovation and modernisation investment projects by Managing Authority itself is less time –consuming option, therefore this option is analysed in this report. However it is recommended to establish a JESSICA holding fund, possibly at the further stages of the JESSICA implementation, and to entrust the management of the fund to a selected manager of the fund. Following, one or several urban development funds could be established as well, designated for other purposes than housing renovation and modernisation, e.g. for the support of urban infrastructure development or other JESSICA eligible investment projects. It is also possible to start the process of implementation of the HF (preparatory works, negotiations with the possible managers of the HF, etc.) along the actual implementation of the JESSICA initiative for housing renovation institutional scheme.

The Member State or Managing Authority shall establish a holding fund implementing one of the alternatives provided in the Article 44 of the Council Regulation (EC) No 1083/2006, that is, announcing a public tender in compliance with applicable legislative requirements and signing a financing agreement with the successful bidder or providing a subsidy for the European Investment Bank or another financial institution without a public tender. A national financial institution may carry out functions of the holding fund manager only if it has sufficient expertise and experience necessary for a successful performance of the holding fund tasks.[29]

The main advantages of the holding fund in the JESSICA for housing renovation institutional scheme would be the possibility of attracting additional assets to the fund, providing technical assistance to participants of the financing scheme and ensuring the additional level of control and supervision of the managers of financial instruments (commercial banks). Considering that a long-term option to establish one or more urban development funds for other kind of sustainable urban development projects is realistic, having a holding fund to reallocate assets among different urban development funds is a reasonable decision which enables a flexible respond to a changing demand for financial engineering products in the market.

Summary of Action Plan of implementation the JESSICA initiative for housing renovation projects:

1. The decision of the Managing Authority on the allocation of funds to housing renovation fund by virtue of national legal act;
2. Announcement of public tender to select commercial banks to participate in the housing renovation financing scheme and concluding of financing agreements;
3. Selection of institution with necessary capacities and experience to provide technical assistance for beneficiaries for investment projects preparation;
4. Transferring of funds to the commercial banks for the further disbursement of funds, on the conditions set out in the financial agreement;
5. Announcing of invitation for the beneficiaries to apply for the state support;

[29] For more on requirements for a national institution to carry out functions of the holding fund manager see COCOF/07/0018/01-EN point 2a)

If the implementation of the HF shall be arranged within the admissible timeframe, the Managing Authority may transfer the funds to the HF and delegate the functions of announcement of public tender, selection the institutions to participate in the institutional arrangement, transferring the funds to the commercial banks (i.e., steps 2, 3, and 4 of the Action plan) to the manager of the Holding fund. After launching of the proposed housing renovation financing scheme, possibilities in relation of establishing other financial engineering instruments (UDF's for other types of sustainable urban development projects) should be further examined.

1.4. Issues Related to the State Aid

Recital 26 of Regulation No 1828/2006 states that contributions to financial engineering instruments from the operational programme or other public sources as well as the investments made by financial engineering instruments into individual projects are subject to the state aid rules. The said provisions are also applicable to EU structural support to housing renovation and energy efficiency projects.

The grounds of the EU state aid policy is laid down in Paragraph 1 of Article 87 of the Treaty establishing the European Community (hereinafter – "the Treaty") which states that any aid granted by a Member State or through state resources in a form which distorts or threatens to distort competition by favouring certain undertakings is incompatible with the common market. The aid does not necessarily need to be granted by the State itself, it may also be granted by a private or public intermediate body appointed by the State or using the state funds. The support for housing renovation investment projects from the JESSICA fund falls under the regulation of Article 87 of the Treaty as well.

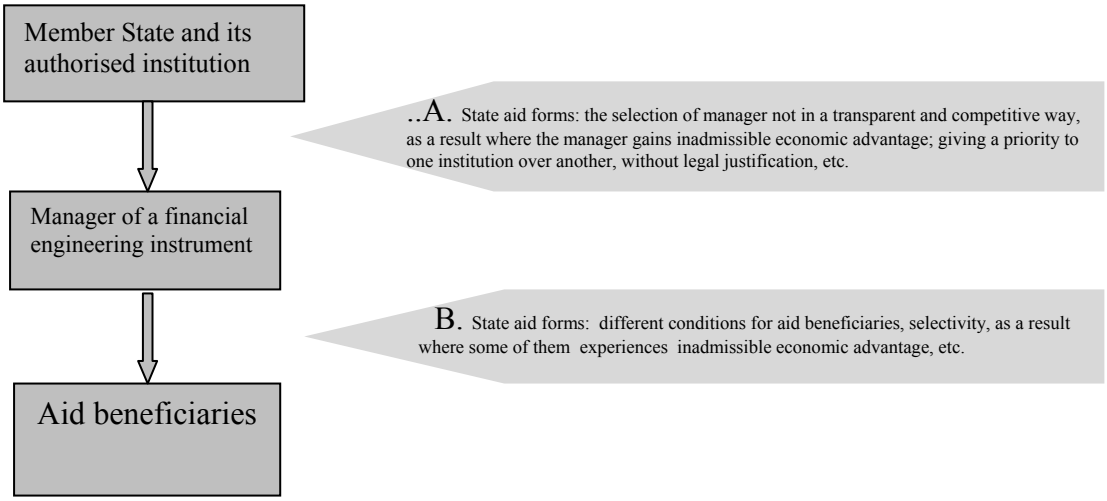
The state aid must be selective and, thus, affect the balance between certain entities and their competitors. The aid should also constitute an economic advantage that the undertaking would not have received in the normal course of business. In line with the case law of the European Courts[30], the concept of economic advantage under the state aid rules includes *any advantage* "*which the recipient undertaking would not have received under normal market conditions*". Finally, the aid must have a potential effect on the competition and trade between Member States.

The suggested financing model includes risks of state aid at two different levels:

1. In providing support to financial intermediaries (commercial banks);
2. In providing support to target beneficiaries.

[30] For instance, see the judgement of the Court of 23 April 1991 in case C-41/90, Klaus Höfner and Fritz Elser vs. Macrotron GmbH.

This is presented in the following scheme:



The support for financial intermediaries (commercial banks). The fact that the support is provided by the State or derives from public funds does not automatically mean that it constitutes unlawful state aid. The state aid will be considered present, if the financial intermediaries shall participate in the scheme on conditions more favourable than market conditions.

First of all, the selection of financial intermediaries could potentially involve state aid if the selection is carried out with omission of the public tendering procedures. This could involve risk that the participation of other bodies potentially would be limited and a preference to a specific body could have had impact on competition. State aid requirements will be met, if commercial banks participating in the financing scheme are selected by open and transparent tendering procedures in the light of objective criteria for determining the requirements for the appropriate remuneration for the services of commercial banks compliant with market conditions. Pursuant to Article 43(4) of the Commission Regulation No. 1828/2006, the management costs may not exceed, a specified percent threshold, unless a higher percentage proves necessary after a competitive tender. Assuming that the thresholds set out in the Regulation No. 1828/2006 reflect market value, the payment of remuneration in such amount should eliminate state aid to the commercial banks.

It is important to note, that applying a public tendering procedure to select commercial banks shall not automatically mean that no state aid is present. Special attention should be paid to clauses of the financing agreement concluded with the selected banks, in particular with regard to sharing of investment risk between the State and commercial banks. If, on the basis of the agreement, the State undertakes all or most of the investment risk, this will provide economic advantage to the commercial bank which it would not have received under normal market conditions and will constitute inadmissible state aid, and, as a rule, should be a subject to notification.

It is also possible to avoid state aid by choosing a slightly different role of commercial banks in the proposed financial model. If the commercial banks selected act only as financial intermediaries to disburse funds to final aid beneficiaries for the appropriate remuneration, which is in compliance with the market terms, this may be a way to avoid inadmissible state aid at the level of financial intermediaries as well. In this case a bank is an intermediary vehicle for the transfer of aid to final beneficiaries, rather than being a beneficiary of aid itself.

Support to target beneficiaries. Since the support will be provided from public funding sources (JESSICA funds), support to final support beneficiaries must be assessed in the light of state aid

requirements as well. The beneficiaries in the scheme for the state are the association of homeowners of a multi-apartment house, homeowners acting under the partnership agreement, and in particular, one or few homeowners, under the authorisation of other homeowners, and the administrator of parts of the building in common use, under a special authorisation of the homeowners as well. The compensation of interest for beneficiaries may constitute the state aid unless it is cleared with the European Commission through notification procedure or justified on the basis of exceptions allowed by the EU law.

The Commission Regulation (EC) No 1998/2006 of 15 December 2006 on the application of Articles 87 and 88 of the Treaty to *de minimis* aid provides that the support up to EUR 200.000 (LTL 690.000) to beneficiaries could be provided on the ground of *de minimis* aid. This might be one of the legal grounds to justify the support, if it does not exceed the amount given.

The Article 4 of the Regulation No 800/2008[31] sets out that for the purposes of calculating aid intensity, 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. Therefore, the state aid intensity for the beneficiaries in the case of compensation of interest should be recalculated and, depending on the amount compensated, actually is equivalent to a grant of the aid, varying from 11,9 percent (in case of 2 percent of interest compensation for 15 year credit) of the investment project value to 14,2 percent (in case of 2 percent interest compensation for 20 year credit)[32]. It constitutes approximately LTL 195.000 to LTL 232.000 support in case the heating energy saving package No 5, where the presumed investment project value is LTL 1,6 million[33]. To Consultant's view, this should be considered compliant with the common market conditions under the justification of *de minimis* aid.

It has been already noted that another potential beneficiary for the loan for housing renovation investments is a state, state-owned or private company, which could borrow and implement the renovation of multi-apartment houses on its own behalf (the ESCO model). ESCO companies borrow assets to acquire equipment or implement energy saving projects for its clients (homeowners), however, the ESCO company is considered to be "beneficiary" in the light of Paragraph 4 of Article 2 of Regulation No 1083/2006. ESCO companies, different from other kinds of beneficiaries, shall borrow assets from JESSICA fund for more than one housing investment project at once; therefore financing housing renovation through ESCO companies is at risk of overriding *de minimis* rule. Therefore, in line with state aid rules, the provision of preferential loans to ESCO on conditions more favourable than market conditions may constitute inadmissible state aid, and may require additional justification or, possibly, notification to the Commission.

1.5. Integrated Plan for Sustainable Urban Development for Implementing the JESSICA Financial Instrument

Regulations for the period of 2007-2013 do not include a definition of or specific requirements for "an integrated plan for sustainable urban development". These should be defined by the Member States and Managing Authorities, taking into account Article 8 of Regulation (EC) No 1080/2006 and the specific urban, administrative and legal context of each region.[34]

---

[31] Commission Regulation (EC) No 800/2008 of 6 August 2008 declaring certain categories of aid compatible with the common market in application of Articles 87 and 88 of the Treaty (General block exemption Regulation)

[32] See information, provided in Table 10. *Possible state aid models in implementation of the multi-family housing modernisation, package 5.*

[33] See information provided in Table 3. *Possible housing modernisation measures* and the following description

[34] EC Decision of 6 October 2006 on Community Strategic Guidelines on Cohesion (2006/702/EC), OJ L291 of 21.10.2006.)

[21] Approved on 29/10/2002 by Resolution No IX-1154 of the Seimas of the Republic of Lithuania

Following the "Guidance note for financial engineering" (COCOF 08/0002/02EN), a recommended definition of "integrated urban development plan" should include the following aspects:

- a medium – long-term integrated territorial and strategic plan for sustainable development ;
- ensures the coherence of investments and their environmental quality;
- helps to secure the commitment and participation of the private sector in urban renewal;
- needs a multi-disciplinary or integrated approach for area-based actions;
- encourages citizens participation in the planning and implementation.

Lithuania is in a progress towards reaching such an integrated urban development planning and coordination level. Taking into account the Leipzig Charter on Sustainable European Cities, the ongoing progress in the preparation of the territorial planning documents and setting national urban policy, Lithuanian Strategy for the Use of the EU Structural Assistance and the Operation Programmes, it could be stated, that measures VP3-1.1-VRM-01-R "Regional Economic Growth Centre Development", VP3-1.1-VRM-02-R "Development of Problem Territories", - reflect sustainable urban development approach and could be treated as an integrated plan/programme. Projects identified in the aforementioned complex development investment programmes of 7 regional centres and 14 problem territories reveal a certain potential for the PPP. These measures are medium term and require actions seeking to improve the quality of life (including the environment and housing), promote the development of new activities and job creation in order to secure a long-term future for the areas concerned.

The Programme for the Modernisation of Multi-Apartment Houses is line with a definition of integrated urban development plan. It is a long term programme aimed at the priority tasks such as the renovation/modernisation of cities' inner areas or their parts (neighbourhoods, blocks, separate buildings) and energy saving, development of public infrastructure. The programme is taking into account the long-term strategies and existing territorial planning documents, foreseen the public and private sector partnerships as well as ensure public access to information on programme development and implementation. Programme is approved by the Government of the Republic of Lithuania by the procedure established by the Government of Lithuania. Issuing of permits for the projects foreseen in the Programme for the Modernisation of Multi-Apartment Houses means the *conformity with an existing integrated urban development plan*.

The implementation measures of the Action Programme of the Government of the Republic of Lithuania for the period of 2008-2012 foresee drafting of a law on the amendments to the Laws on Territorial planning and Construction of the Republic of Lithuania and subordinate legislation laying down simplified procedure for the issue of construction permits for the multi-apartment housing blocks, neighbourhoods modernisation. It is likely to ensure successful renovation works at the second state where a complex renovation of blocks or neighbourhoods will be performed.

2. FINANCING MODEL FOR THE RENOVATION OF MULTI-APARTMENT HOUSES

Currently the Programme for the Modernisation of Multi-Apartment Houses[35] (hereinafter – "the Programme") foresees state aid for investment projects, which would amount up to 50 per cent of the investment value depending on the energy saving measures implemented. However, such aid requires a lot of state budget investments, therefore, a lack of them has terminated the programme implementation: even though project administrators submitted applications for the organisation of tenders for construction works at the beginning of 2008, 175 multi-apartment houses are still waiting for permits to organise the said tenders.

To have a more thorough assessment of the utility and effectiveness of the models proposed the analysis below primarily presents the issues of current Programme for the Modernisation of Multi-Apartment Houses, constructs a data dissemination model and then possible financing models for the Programme are discussed. Different state aid options are modelled according to the housing modernisation measures under implementation.

2.1. Issues of the Programme for the Modernisation of Multi-Apartment Houses Implementation

The Programme implementation started in 2005; however, the contribution of state support has been revised three times, methodological requirements for multi-family housing modernisation investment projects and their implementation procedures have been changed a number of times, which has not provide the stability for the Programme implementation process.

The tables below show the progress of the Multi-Apartment Housing Modernisation Programme from the beginning until 13 March 2009 and the statistics of the implementation of the Programme in the period from 2005 till 2009[36].

Table 1. *Progress of the Multi-Apartment Housing Modernisation Programme*

Total amount of state support since the beginning of the Programme (LTL)			65,519,112
For low income families (people residing alone)	*1,233,224*	For investment projects	64,285,888
Investment projects implemented			
- number of projects			307
- investment amount			146,939,230
Partly implemented projects			
- number of projects			83
- investment amount			35,492,022
Investment projects that are currently implemented under agreement for construction work signed			
- number of projects			16
- agreements for construction work amount			57,050,516
- foreseen state support			45,143,988
Investment projects approved by the agency and currently prepared for implementation			

[35] Resolution of the Government of Lithuania No 1213 of 23 September 2004 On the Programme for the Modernisation of Multi-Apartment Houses and State Aid Provision for the Modernisation of Multi-Apartment Houses and Approval of Rules for the Establishment of Energy Efficiency of Investment Projects (Official Gazette No 143-5232 of 2004).
[36] Housing and Urban Development Agency information

- number of projects	313
- foreseen investment amount	558,624,608
- foreseen state support	244.263.609

Table 2. *Statistics of the implementation of the Multi-Apartment Housing Modernisation Programme*

	Period				
	2005	2006	2007	2008	2009*
Investment projects implemented					
Number of projects	1	75	152	79	-
Value in LTL	26,717	13,939,452	57,526,043	75,447,018	-
Investment projects supported					
Support amount in LTL	5,735	2,878,370	19,626,537	41,775,246	-
Support provided for low income families (people residing alone)					
Amount of support in LTL	0	85,030	202,215	945,979	-
Number of families supported by the state					
Number of families	65	3,690	8,096	4,093	-
Partly implemented projects					
Number of projects	-	-	-	1	82
Value in LTL	-	-	-	237,146	32,254,876
Agreement for construction works signed					
Number of projects	2	130	136	41	98
Value in LTL	290,995	28,299,124	91,275,603	40,390,419	79,462,774
Investment projects approved					
Number of projects	54	177	346	143	-
Value in LTL	17,490,992	67,435,711	445,261,644	268,155,176	-
**Investment projects under implementation to be supported by the state from assignations of 2009*					

The increase of the state support for investment projects up to 50 per cent of the investment project value determined a bigger number of persons willing to implement investment projects. Nevertheless, the state budget did not foresee sufficient funds, therefore, there was no possibility to implement all investment projects approved by the HUDA. On the other hand, this increase in the state aid also effected a rapid growth in prices of construction works – in 2008 the average value of implemented investment projects amounted to LTL 955,025, meanwhile now it is LTL 2,803,215. Another reason for a rise in prices is a fact that tenders for construction works are not open and a limited number of contracting organisations is invited to submit a proposal.

For the implementation of the current Programme a tender was organised and 7 banks selected. However, only 6 banks have offered loans for the implementation of investment projects. Būsto Paskolų Draudimas UAB (Home Loans Insurance Company) has been selected as the insurance company for such loans. The mission of Būsto Paskolų Draudimas UAB is to help the Lithuanian people getting financing to buy the residential property or modernise it by insuring their credit.[37] The Company pays a lot of attention to the evaluation, development and risk management of its

[37] The purpose of a loan must be funding of the modernisation of a multi-apartment house according to an investment project. A loan cannot exceed 95 per cent of the investment amount and can be granted in Litas or Euros.

performance, also improves conditions for insurance of credits for the modernisation of multi-apartments houses. Moreover, the Company trains bank employees and raises public awareness on the available services.

What regards the insurance of credits for the modernisation of multi-apartment houses, an insurer can be:

- a homeowners association which joins owners of apartments and other premises;
- owners of apartments and other premises in a multi-apartment building, who concluded a contract on joint activities.

All banks selected have signed agreements with the BUPA undertaking to grant loans for the modernisation of multi-apartment houses with bank margin up to 2.9 per cent (base interest rate – 6 or 12 months EUR LIBOR or VILIBOR). The average loan for the implementation of investment project amounts to EUR 136,300.

Contracts on the participation in the Programme were signed with banks participating in the Programme; however, the contracts limit only the margin of loans provided for the implementation of investment projects. They did not foresee liability of banks, if bank did not provide credits, even though the investment project and multi-apartment house met all the requirements set. It provided banks with conditions to increase the administration fee without any limitations, introduce new financial obligations for the houses funded, e.g. to have the amount equal to at least 3 monthly payments and annual insurance contribution in a deposit account. In the face of a current economic situation bank provide almost no credits for the implementation of investment projects.

Banks have a possibility to choose one of two insurance models: 1) insurance of all loan portfolio of the bank; or 2) insurance of the loan by a multi-apartment house which is going to implement the investment project. According to the analysis of such loans, the sector is not risky. There has never been any claim to pay insurance benefit yet.

In order to provide additional support for investment projects in Vilnius, Vilnius City Municipality has signed with 3 banks the agreement for issuing subordinated loans. According to the agreement, Vilnius City Municipality shall payback to the bank 50 per cent of loans granted for the implementation of investment projects.

Recently there have been a lot of conflicts between contracting organisations and multi-apartment houses implementing investment projects concerning the quality of construction works and payment for works accomplished. Accounts of the association of homeowners of multi-apartment houses implementing the investment projects are being arrested leading to a malfunction of the return of credits with interest, as a result of which banks are initiating the termination of credit agreements.

There are a lot of problems and ambiguities related to the credit administration inside the multi-apartment house, i.e. when distributing the due amounts by apartments and other premises, since the administrator of the investment project does not have sufficient capacities to prepare all documents needed for crediting and administrate the credit return.

In order to implement an investment project foreseeing thermo-insulation of the roof and walls, it is necessary to get a building permit which takes up to 6 months. Given it, the procedure for the issue of building permits for houses to be modernised should be simplified.

Sometimes procedures of the implementation of the investment project are violated – terms of notification on the meeting of homeowners are not met, persons without any authorisation vote when adopting a decision on the implementation of the investment project, etc.

All the aforementioned facts show that project administrators lack knowledge and skills to manage the project preparation and implementation. Based on out best knowledge, in Lithuania there is only one private company capable of proposing the project management services from the idea of the project to the final credit return as well as having software necessary for the credit administration.

In 2008 some amendments to the Programme were adopted enabling multi-apartment houses administrated by building administration companies to participate in the Programme. However, it is still difficult to get credits for the investment project implementation – banks assess financial indicators and current liabilities of the administrating company, but do not look at the administrating company as the project administrator. If a bank granted a credit to the administrating company for the investment project implementation, another problem would be faced, i.e. credit insurance. Pursuant to the effective rules, the administrating company willing to insure its credit at Būsto paskolų draudimas UAB would have to have consents of all homeowners to take a credit and implement the investment project.

2.2. Data Dissemination Model

The main input data of the model are based on five packages of heating energy saving measures (see Table 3).

Table 3. *Possible housing modernisation measures*

Heating energy saving measures	Packages of heating energy saving measures				
	1	2	3	4	5
Roof thermo-insulation					
Wall thermo-insulation				Only back-end walls are thermo-insulated	
Window sealing					
Window renovation					
Window replacement					
Cellar floor thermo-insulation					
Replacement of stairwell doors					
Installation of individual heating energy accounting systems in apartments*					
Renovation of heating energy station* [a]					
Installation of balance valves* [a]					
Isolation of heating system pipes					
Renovation of hot water system*					
Average investments, LTL/m²	**58**	**129**	**180**	**301**	**495**
Energy savings, %	**22**	**23**	**35**	**38**	**45**

* These measures are an integral part of the housing modernisation package, however, it has a final indirect impact on energy saving.
[a] These works have been completed in some cities (Vilnius), therefore, the amount of investments required may be reduced.

As packages 1 and 2 are not sufficiently effective in terms of energy saving, i.e. they do not foresee thermo-insulation of walls and roofs, window replacement, they are not discussed in the calculations below.

A further analysis assesses a possibility to implement modernisation measures of packages 3, 4 and 5 without increasing residents' expenditure, i.e. it assesses whether possible savings of heating

expenses would cover modernisation costs per year. The calculations are based on the following data:

- average multi-apartment house – 55 apartments;
- heating area – 3300 m²
- average apartment – 60 m²
- average energy consumption for heating – 150 kWh/m²/year.

Taking into consideration rates of large-block construction works, it is presumed that the value of investment projects would be as follows:

- in case of heating energy saving package 3 – LTL 594,000;
- in case of heating energy saving package 4 – LTL 993,300;
- in case of heating energy saving package 5 – LTL 1,633,500.

Table 4 presents the repayment of investments into 1 m² of the useful area during a heating season[38] subject to the measure packages implemented and credit period. The repayment calculations have been made for multi-apartment houses, where 25 kWh/m² of energy is used for heating (heating energy price – 0.25 LTL/kWh). According to the data of the Lithuanian District Heating Association, a share of such houses in Lithuania is the biggest – 55.7 per cent. The calculations presume that the investment project is implemented when homeowners cover 5 per cent of the investment project value by their own funds, whereas the remaining 95 per cent is covered by a loan of commercial banks with the annual interest rate of 6 per cent. A presumption is made that the heating price will not change in the programming period, i.e. it will remain 0.25 LTL/kWh. Further (Table 4) three options are presented with the credit period of 10, 15 and 20 years.

[38] According to the Law on Heating Sector No IX-1565 of 12 January 2009 "*heating season* shall mean time period the beginning and end whereof shall be established by municipal resolutions taking into account the outdoor temperature defined by construction technical regulations prescribing the time when it is obligatory to start and when it is permitted to terminate heating of certain municipal buildings". Currently the heating season in Lithuania starts around 15 October and ends around 15 April (average duration – 6 months). During the heating seasons the average outdoor temperature is approximately 0^0C.

Table 4. *Repayment of investments into 1 m² during the heating period, without any interest compensation*

Packages of heating energy saving measures, 60 m², 55 apartments	Investments into 1 m² (LTL)	Credit period (years)	Total investments into 1 m² (together with inertest)	Investments into 1 m² with interest per year (LTL)	Investments in to 1 m² with interest per month	Heating energy consumed before the modernisation (kWh)	Heating energy consumed after the modernisation (kWh)	Paid for heating of 1 m² before the modernisation	Paid for heating of 1 m² after the modernisation	Saved heating expenses after the modernisation (LTL)	Amount payable for heating and credit with interest per month per m² (LTL)	Difference between payments per m² before and after the modernisation
Package 3	180	10	227.81	22.78	1.90	25	16.25	6.25	4.06	2.19	5.96	0.29
		15	259.74	17.32	1.44						5.51	0.74
		20	294.02	14.70	1.23						5.29	0.96
Package 4	301	10	380.96	38.10	3.17	25	15.5	6.25	3.87	2.38	7.05	-1.39
		15	434.34	28.96	2.41						6.29	-0.04
		20	491.67	24.58	2.05						5.92	0.33
Package 5	495	10	626.49	62.65	5.22	25	13.75	6.25	3.44	2.81	8.66	-1.31
		15	714.28	47.62	3.97						7.41	-1.16
		20	808.56	40.43	3.37						6.81	-0.56

According to the calculations, if measures of Package 3 are implemented, monthly heating expenses saved during the heating season will cover expenditure of the payment of a monthly share of the credit with interest for 1 m², where the credit is granted with the annual interest rate of 6 per cent, i.e. the interest compensation is not needed. However, if talking about annual payments of the credit with interest, savings of expenses during the heating season as a result of the reduction in the heating energy consumption do not cover annual payments of the credit with interest.

Given the results, it is recommended to set the following maximum periods for credits with a subordinated share of the state loan:

- for projects of Package 3 – 10 years;
- for projects of Package 3 – 15 years;
- for projects of Package 5 – 20 years.

Possible savings per 60 m² apartment by packages:

Table 5. *Possible savings per 60 m² by packages, credit period and compensated share of the interest rate during the heating season*

Packages of heating energy saving measures, 60 m², 55 apartments	Investments into 1 m² (LTL)	Credit period (years)	Interest compensated (%)	Total investments into 60 m² apartment (together with inertest)	Investments into 60 m² apartment with interest per year (LTL)	Investments into 60 m² apartment with interest per month (LTL)	Heating energy consumed before the modernisation (kWh)	Heating energy consumed after the modernisation (kWh)	Paid for heating before the modernisation (LTL)	Paid for heating after the modernisation (LTL)	Saved heating expenses after the modernisation (LTL)	Amount payable for heating and credit with interest during the heating season (LTL)	Difference between payments per apartment before and after the modernisation (LTL)
Package 3	180	10	1	13,559	1,359.90	113.33	9,000	5,850	2,250	1,462.50	787.50	2,142.48	107.52
Package 4	301	15	2	23,746.49	1,583.10	131.93	9,000	5,580	2,250	1,395	855	2,186.58	63.42
Package 5	495	20	3	39,040.13	1,952.01	162.67	9,000	4,950	2,250	1,237.50	1,012.50	2,213.52	36.48

According to the calculations, if a credit period is chosen and a part of the interest rate is compensated during the heating season, the reduction in heating expenses after the house modernisation will cover costs for credit return with interest.

Table 6 presents calculations of the investment repayment within a calendar year when implementing packages of modernisation measures in a standard apartment of 60 m².

Table 6. *Differences between annual payments before and after the modernisation of a standard apartment of 60 m²*

Packages of heating energy saving measures, 60 m², 55 apartments	Investments into 1 m² (LTL)	Credit period (years)	Interest compensated (%)	Total investments into 60 m² apartment (together with inertest)	Investments into 60 m² apartment with interest per year (LTL)	Investments into 60 m² apartment with interest per month (LTL)	Heating energy consumed before the modernisation (kWh)	Heating energy consumed after the modernisation (kWh)	Paid for heating before the modernisation (LTL)	Paid for heating after the modernisation (LTL)	Saved heating expenses after the modernisation (LTL)	Amount payable for heating and credit with interest during the heating season (LTL)	Difference between payments per apartment before and after the modernisation (LTL)
Package 3	180	10	1	13,559	1,359.90	113.33	9,000	5,850	2,250	1,462.50	787.50	2,822.40	-572.40
Package 4	301	15	2	23,746.49	1,58.10	131.93	9,000	5,580	2,250	1,395	855	2,978.10	-728.10
Package 5	495	20	3	39,040.13	1,952.01	162.67	9,000	4,950	2,250	1,237.50	1,012.50	3.189.51	-939.51

According to the data provided in the table, in case of all packages of modernisation measures, savings of heating expenses after the house modernisation do not cover the credit return with interest per calendar year. It requires not only an interest-free loan but an additional grant as well. As a result, such an objective should not be set. The state could provide financial assistance for inhabitants, who are having their multi-apartment houses renovated, by contributing as much as it is required to ensure the investment payback during the heating season. If the aim is to cover investments into modernisation measures by savings made during the heating season, the credit period should be prolonged and the compensated share of the interest rate increased. Table 7 provides data on a possible credit period and compensated share of the interest rate so that energy savings during the heating season would cover investments into the modernisation. The calculations assume that the credit is provided with the annual interest rate of 6 per cent.

Table 7. *Possible credit period and amount of the compensated interest rate so that energy savings during the heating season would cover investments into the modernisation*

Packages of heating energy saving measures, 60 m², 55 apartments	Investments into 1 m² (LTL)	Credit period (years)	Interest compensated (%)	Total investments into 60 m² apartment (together with inertest)	Investments into 60 m² apartment with interest per year (LTL)	Investments into 60 m² apartment with interest per month (LTL)	Heating energy consumed before the modernisation (kWh)	Heating energy consumed after the modernisation (kWh)	Paid for heating before the modernisation (LTL)	Paid for heating after the modernisation (LTL)	Saved heating expenses after the modernisation (LTL)	Amount payable for heating and credit with interest during the heating season (LTL)	Difference between payments per apartment before and after the modernisation (LTL)
Package 3	180	15	5	11,593.05	772.87	64.40	9,000	5,850	2,250	1,462,50	787.50	2,235.37	14.63
Package 4	301	21	6	17,157.00	817.00	68.08	9,000	5,580	2,250	1,395	855	2,212	38.00
Package5	495	30	6	29,700	990.00	82.50	9,000	4,950	2,250	1,237,50	1,012.50	2,227.50	22.50

2.3. Investment Needs for the Modernisation of Multi-Apartment Houses in order to Increase Energy Efficiency

In order to implement the Programme for the Modernisation of Multi-Apartment Houses it is foreseen by 2020to modernise at least 70 per cent of multi-apartment houses, i.e. 24,000 multi-apartment houses, the permits for which were issued before 1993, with a help of the state aid, contributions of municipalities, EU Structural Funds, residents and other funds. It is planned that heating energy and fuel expenses per unit of the useful area of modernised multi-apartment houses will reduce at least by 30 per cent compared to 2004. The Action Programme of the 15th Government[39] lays down an objective to make the modernisation of multi-apartment houses a mass phenomenon and focus on the renovation of at least 2,000 houses per year.

The Housing and Urban Development Agency has confirmed that in 2008 the value of the project of the modernisation of multi-apartment houses was LTL 1.86 million, meanwhile in 2005 it amounted only to LTL 323,907. Considering a foreseen number of houses to be renovated, investment needs would be LTL 44.7 billion by 2020. Thereby, it is foreseen that investment needs for the renovation of 2,000 houses foreseen would be LTL 3.7 billion. Taking into consideration current expert forecasts on the reduction in construction prices, the renovation project value is likely to be smaller.

Given a big number of houses foreseen to be renovated, it is recommended to focus on a priority group of houses, which would be a starting point of the new housing renovation model. Over 60 per cent of multi-apartment houses in Lithuania were built within the last decades of the previous century, when the construction of large-block multi-apartment houses was prevailing. By the end of 2008 even 44 per cent of wall constructions of multi-apartment houses modernised or undergoing modernisation were large-block[40]. According to the statistical data of the Lithuanian District Heating Association, multi-apartments are divided into four main groups by heating energy consumption (the brackets include a preliminary share of such houses) (see Annex 3):

- Group 1: multi-apartment houses which consume the least heating energy (4.6%);
- Group 2: multi-apartment houses which consume little or average amount of heating energy (17.3%);
- Group 3: multi-apartment houses which consume much of heating energy (55.7%);
- Group 4: multi-apartment houses which consume very much of heating energy (22.4%).

A priority group for the renovation of multi-apartment houses in 2009-2011 may be large-block multi-apartment houses which correspond to a group of houses consuming much and very much of heating energy (Groups 3 and 4, respectively).

2.4. Investment Sources for JESSICA-Type Fund

Given that sufficient resources were not allocated to the thermo-insulation of public and residential buildings, one of the priority state projects foreseen in the Economy Promotion Plan[41] is the increase in energy efficiency in houses. After the implementation of this project the funds are

[39] Resolution of the Government of Lithuania No XI-52 of 9 December 2008 On the Programme of the Government of the Republic of Lithuania

[40] Vilnius Gediminas Technical University. Monitoring of the Programme for the Modernisation of Multi-Apartment Houses, 2008.

[41] Economy Promotion Plan of the Republic of Lithuania, 2009.

expected to reach the market as wages and investments of the construction sector, meanwhile Lithuania will become less dependent on the imported energy resources.

After the assessment of a potential contribution of the state budget, EU Structural Funds and commercial banks, the following investment sources for the JESSICA-type fund may be distinguished, which will be used to promote and financially support owners of multi-apartment houses in 2009–2011:

- **LTL 475 million**, i.e. the reallocation of funds of the European Regional Development Fund for the housing renovation (following provisions of the European Economic Recovery Plan[42], the Commission proposed the amendment to the European Parliament and Council Regulation (EC) No 1080/2006 on the European Regional Development Fund laying down that "In each Member State, 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");
- A loan of the European Investment Bank amounting to **LTL 300 million** for the co-financing of the state share in the EU Structural Fund projects;
- **LTL 163 million** for measure VP3-1.1.-VRM-03-R "Renovation of Multi-Apartment Houses Primarily by Increasing their Energy Efficiency" of the action programme financed by the EU Structural Funds;
- **LTL 33 million** foreseen in Article 7 of European Parliament and Council Regulation (EC) No 1080/2006 laying down that Lithuania may additionally allocate 0.28% of all funds allocated by ERDF;
- Investments of commercial banks which could increase up to **LTL 2 billion** depending on the state contribution.[43]

In addition to the EIB loan for EU-funded projects, a potential involvement of other financial institutions such as European Bank for Reconstruction and Development (EBRD), Northern Investment Bank, Council of Europe Development Bank (CEB) could be considered to be additional investment sources. The EU Structural Funds are also likely to contribute to the housing renovation again in the new financial perspective.

Further calculations allow presuming that up to 2014 assets of the fund will be additionally complemented by **LTL 100 million** from the state budget; moreover, in 2014 additional **LTL 1 billion** will be transferred to the fund (after the commencement of a new financial perspective and programme period of the EU Structural Funds).

2.5. Possible Financing of Investment Projects

Given a demand for as fast as possible modernisation of multi-apartments in order to reduce energy consumption and dependency on fuel suppliers, at least two means of financing are possible: 1) covering a part of the interest rate of credits granted for the implementation of the modernisation project; 2) providing a state grant of the amount set for investment projects under implementation. Persons entitled to the compensation of heating expenses may have their investment share covered by choosing one or several models described in Section 2.7. The calculations assume that the state

[42] Communication from the Commission to the European Council. A European Economic Recovery Plan, Brussels, 26.11.2008 COM(2008) 800 final

[43] Despite the fact that in the face of a financial crisis banks are not inclined to lend (even though it would be only a partial contribution to the project funding), the following sectors may expect more favourable decisions on financing: infrastructural projects, renewable energy and multi-family housing renovation.

contribution to the implementation of this programme will be around LTL 1 billion[44] in 2009-2011. It will also be attempted to raise LTL 2 billion from commercial banks.

2.6. State Support for Investment Projects

Further calculations allow presuming that 5 per cent of funds required for the implementation of investment projects will be funds provided by homeowners of multi-apartment houses and 95 per cent – a loan comprised of funds of 1) a commercial-financial institution; and 2) public subordinated loan.

Considering current financial situation, a size of a public subordinated loan could be differentiated. Table 8 shows a demand for state funds in crediting an investment project, the value of which amounts to LTL 993.300 (in case of Package 4 of energy saving).

Table 8. *Possible models of a share of public subordinated loan*

Model 1:

	Share of a subordinated loan provided by the state		Share of a loan provided by a commercial-financial institution	
	%	LTL	%	LTL
2009	80	754,908	20	188,727
From 2010	20	188,727	80	754,908

Model 2:

	Share of a subordinated loan provided by the state		Share of a loan provided by a commercial-financial institution	
	%	LTL	%	LTL
2009	80	754,908	20	188,727
2010	70	660,545	30	283,090
2011	30	283,090	70	660,545
From 2012	20	188,727	80	754,908

Model 3:

	Share of a subordinated loan provided by the state		Share of a loan provided by a commercial-financial institution	
	%	LTL	%	LTL
2009	80	754,908	20	188,727
2010-2012	30	283,090	70	660,545
From 2013	20	188,727	80	754,908

Table 9 provides a maximum number of modernised multi-apartment houses which could be achieved by 2014. If maintaining the aforementioned proportion of a subordinated loan in respective years, the calculations make a presumption that 1) in 2009 JESSICA-type fund will amount to LTL 1 billion; 2) the fund will be additionally complemented by LTL 100 million by

[44] This sum includes the above stated JESSICA-type fund sources such as ERDF reallocations, current OP measure "Renovation of Multi-Apartment Houses Primarily by Increasing their Energy Efficiency", EIB loan and additional allocation of 0.28% of all funds allocated by ERDF.

2014; 3) additional LTL 1 billion will be transferred to the fund in 2014. Interest rates are compensated in shares provided in Table 5.

Table 9. *Possible number of standard multi-apartment houses modernised by 2014*

	2009	2010	2011	2012	2013	2014	Total No of houses possible to modernise
By maintaining current state aid (up to 50%)	1,224	122	122	122	122	1,224	**2,936**
By providing support to the investment project up to 50% but not more than 200 LTL/m²	1,783	772	772	772	772	1,783	**6,654**
By providing subordinated loans, 10-year period, Package 3, share of the public subordinated loan 80:20, 70:30;30:70 and 20:80	500	1,900	2,000	2,000	2,000	2,000	**10,400**
By providing subordinated loans, 15-year period, Package 4, share of the public subordinated loan 80:20; 30:70 and 20:80	500	1,000	1,000	1,000	1,400	3,000	**7,900**
By providing subordinated loans, 20-year period, Package 5, share of the public subordinated loan 80:20; and 20:80	500	850	900	950	950	2,000	**6,150**

According to the data in Table 9, the optimal option for the state depends on the package of modernisation measures, considered to be priority by the state. If the current aid to the investment project is left (i.e. up to 50 per cent but not more than 200 LTL/m²), a final number of houses could be modernised leaving the fund without any assets. If providing subordinated loans, a possible number of houses to be modernised by measure packages would ensure a possibility to direct annually returning loan assets to the financing of new projects. State assets contributed to the fund by 2014 would enable to modernise 24,000 houses by 2019 (if implementing measures of Package 4) or by 2018 (if implementing measures of Package 3).

2.7. State Support for Modernisation Projects under Implementation

Currently the Programme for the Modernisation of Multi-Apartment Houses foresees a state aid for investment projects of up to 50 per cent of the investment value depending on measures reducing energy consumption. The financing model set is not optimum because it requires a large amount of state financial assets to be contributed each year for the provision of support, therefore it is recommended to switch to other model of state support, i.e. compensating a part of interest paid to commercial banks when implementing projects of multi-family housing modernisation (see Table 10). The above-mentioned model, where a part of interest of preferential loan would be *de facto* compensated to the final beneficiaries, would require less of state budgetary assets, compared to the model operating at the moment, whereas the intensity of financial support, compared to the intensity of present level of financial support, would be greater. As multi-apartment houses have recently implemented housing modernisation measures described in Package 5, Table 10 calculates factual state aid provided at the moment. The proposed interest compensation models calculate it at prices of projects under implementation. Additionally, assets for financial support could be used as assets of subordinate loan for the banks, while returning assets would be used to fund new projects of multi-apartment housing modernisation.

Table 10. *Possible state aid models in implementation of the multi-family housing modernisation, Package 5*

Share of state aid	Factual investments into a multi-apartment house with interest, 20-year credit	Factual investments into a multi-apartment house with interest, 15-year credit	Factual state aid (%), 20-year credit	Factual state aid (%), 15-year credit
Currently existing aid to the project (up to 50%)	1,805,549	1,571,029	13.2	15.74
Compensation of 4% of the interest rate	1,965,777	1,879,178	43.8	32.2
Compensation of 2% of the interest rate	1,422,043	1,256,392	14.21	11.9

Further calculations use a model where a subordinated loan is granted for 15 years with a compensation of 2 per cent of the interest rate. A state share in a subordinated loan would amount to 80 per cent in 2009, 70 per cent in 2010, 30 per cent in 2011 and 20 per cent from 2012 (in case of Package 3) and 80 per cent in 2009, 30 per cent in 2010-2012 and 20 per cent from 2013 (in case of Package 4).

Table 11 presents investments into one apartment and their repayment when the credit is granted with the interest rate of 6 per cent.

Table 11. *Investments into a standard apartment of 60 m² per calendar year by measure packages*

Packages of heating energy saving measures, 60 m², 55 apartments	Investments into 1 m² (LTL)	Credit period (years)	Interest compensated (%)	Total investments into 60 m² apartment (together with inertest)	Investments into 60 m² apartment with interest per year (LTL)	Investments into 60 m² apartment with interest per month (LTL)	Heating energy consumed before the modernisation (kWh)	Heating energy consumed after the modernisation (kWh)	Paid for heating before the modernisation (LTL)	Paid for heating after the modernisation (LTL)	Saved heating expenses after the modernisation (LTL)	Amount payable for heating and credit with interest during the heating season (LTL)	Difference between payments per apartment before and after the modernisation (LTL)
Package 3	180	15	2	14,200.50	946.70	78.90	9,000	5,850	2,250	1,462.50	787.50	2,409.20	-159.20
Package 4	301	15	2	23,746.50	1,583.10	131.93	9,000	5,580	2,250	1,395	855	2,978.10	-728.10
Package 5	495	15	2	39,051.53	2,603.44	216.95	9,000	4,950	2,250	1,237.50	1,012.50	3,840.94	-1,590.94

The data provided in the table allows concluding that investments into measures of Package 5 for one calendar year is big, therefore, a longer credit period is needed. Given the calculations, it is proposed to support housing modernisation measures of Packages 3 and 4 only, meanwhile measures of Package 5 – thermo-insulation of façade walls and installation of individual accounting systems in apartments – could be implemented by homeowners by using their own funds.

Tables 1-9 provided in Annex 4 present investments needs for the compensation of interest rates depending on the selected package of housing modernisation measures, credit period and interest rates.

2.8. Support for Low Income Families and Persons Residing Alone

Taking into consideration the Law on Financial-Social Support for Low Income Families and Persons Residing Alone[45], it is foreseen to allocate LTL 165 million from the budget for the compensation of heating expenses in 2009, which would be LTL 1,398/person entitled to a heating compensation on average.

Further calculations assume that one standard multi-apartment house has 8 apartments where a person who has their heating expenses compensated lives. In this case, LTL 11,184 per year must be allocated from the state budget for the compensation of heating expenses of low income families (persons residing alone).

In the course of the implementation of multi-family housing modernisation measures, eventually the amount required for compensations will reduce because of two reasons: 1) the reduction in heating energy consumption will allow not only to compensate heating expenses but also to cover expenditure experienced per year; 2) some persons will lose their right to the compensation of heating expenses as a result of a reduction in heating energy consumption.

Possible savings of the budget funds for heating compensations per apartment per year, when different-scope energy saving measures are implemented, vary from LTL 489 (in case of Package 3 of heating energy saving) to LTL 629 (in case of Package 5 of heating energy saving) per year. Thus, if a model of 15-year subordinated loans is selected, it will be possible to save a lot of state budget funds foreseen for the compensation of heating and hot water expenses per year (see Table 12). It should be noted that the calculations do not take notice of the fact that some residents will lose their right to the compensation of heating expenses after the reduction in energy consumption.

Table 12. *Possible savings of the state budget funds for compensations of heating expenses depending on energy efficiency packages implemented*

	2009	2010	2011	2012	2013	2014
No of modernised houses	500	1,000	1,000	1,000	1,400	3,000
Energy efficiency packages	Possible savings of the state budget for compensation of heating expenses, LTL					
Package 3 (million LTL)	1.956	5.868	9.780	13.692	19.169	30.905
Package 4 (million LTL)	2.104	6.312	10.520	14.728	20.619	33.243
Package 5 (million LTL)	2.516	7.548	12.580	17.612	24.657	39.753

As Table 12 shows, depending on the package of energy efficiency measures implemented, in 2009-2014 it would be possible to save from LTL 81.37 million to LTL 104.66 million of the state budget funds because of the reduced heating expenses.

[45] Law of the Republic of Lithuania No IX-1675 of 1 July 2003 On Financial-Social Support for Low Income Families and Persons Residing Alone (Official Gazette No 73-3352 of 2003)

The state undertaking to cover investments for those who are entitled to the compensation of heating expenses could choose one of the two options:

1. Compensation of a part of investments during the heating season;
2. Compensation of all investments for people entitled to the compensation of heating expenses.

When calculating a demand for state assets to cover these investments, an assumption is made that a standard house of 55 apartments has 8 apartments the owners of which are entitled to the compensation of heating expenses.

Table 13 presents a demand for state assets for compensations pursuant to the options above.

Table 13. *Demand for state assets for the compensation of investments for people entitled to a compensation of heating expenses, where a 15-year credit is granted with the annual interest rate of 6 per cent and compensation of 2 per cent of the interest rate for all homeowners*

	Total investments per apartment (LTL)	Total investments per apartment per year (LTL)	The amount required to be compensated for 8 apartments per year (LTL)
Package 3 with compensation only during the heating season	14,200.50	946.70	3,786.80
Package 3 with compensation during the whole year	14,200.50	946.70	7573.60
Package 4 with compensation only during the heating season	23,746.50	1,583.10	6,332.40
Package 4 with compensation during the whole year	23,746.50	1,583.10	12,664.80
Package 5 with compensation only during the heating season	39,051.53	2,603.44	10,413.76
Package 5 with compensation during the whole year	39,051.53	2,603.44	20,827.52

When an investment project is implemented pursuant to the existing procedure, standard heating energy consumption is calculated for persons entitled to the compensation of heating expenses during the heating season. A difference between standard heating energy consumption and factual energy consumption is directed to cover the credit and interest. The main weakness of such support is that a person entitled to the compensation of heating expenses is unaware how much of the credit and interest rate the state will cover; moreover, there is an unsolved question whether such person must return the credit with interest during months without heating.

The analysis of the currently implemented investment projects show that during one heating season the state covers the share of credit and interest rate which would have to be paid within 1 year and 4 months for persons entitled to the compensation of heating expenses. However, a fact that after the end of the heating season a person can lose its right to the compensation due to the improved financial situation is not taken into consideration.

The average standard heating energy consumption of the recent year is 32 kWh/m² per month. In such case, savings for the apartment of 60 m² by packages of the implemented measures would be as presented in tables 12, 12a and 12b.

Table 14. *Investment savings per apartment between standard and factual heating energy consumption*

Packages of heating energy saving measures, 60 m², 55 apartments	Investments into 1 m² (LTL)	Credit period (years)	Interest compensated (%)	Total investments into 60 m² apartment (together with inertest)	Investments into 60 m² apartment with interest per year (LTL)	Investments into 60 m² apartment with interest per month (LTL)	Heating energy consumed before the modernisation (kWh)	Standard energy consumption for heating	Heating consumed per heating season after the modernisation (kWh)	Calculated to pay for heating per 60 m² apartment under standard heating energy consumption per heating season (LTL)	Paid for heating of 60 m² apartment after the modernisation (LTL)	Amount payable for heating and credit with interest per year per 60 sq. m. apartment (Lt)	Difference between payments made by 60 m² apartment for standard and factual heating energy consumption and investments per year (LTL)
Package 3	180	15	2	14,200.50	946.70	78.90	9,000	11,520	5,850	2,880	1,462.50	2,409.20	470.80
Package 4	301	15	2	23,746.50	1,583.10	131.93	9,000	11,520	5,580	2,880	1,395	2,978.10	-98.10
Package 5	495	15	2	39,051.53	2,603.44	216.95	9,000	11,520	4,950	2,880	1,237.50	3,840.94	-960.94

Table 14a *Investment savings per apartment between standard and factual heating energy consumption, if Package 4 payback for disadvantaged persons*

Packages of heating energy saving measures, 60 m², 55 apartments	Investments into 1 m² (LTL)	Credit period (years)	Interest compensated (%)	Total investments into 60 m² apartment (together with inertest)	Investments into 60 m² apartment with interest per year (LTL)	Investments into 60 m² apartment with interest per month (LTL)	Heating energy consumed before the modernisation (kWh)	Standard energy consumption for heating	Heating consumed per heating season after the modernisation (kWh)	Calculated to pay for heating per 60 m² apartment under standard heating energy consumption per heating season (LTL)	Paid for heating of 60 m² apartment after the modernisation (LTL)	Amount payable for heating and credit with interest per year per 60 m² apartment (Lt)	Difference between payments made by 60 m² apartment for standard and factual heating energy consumption and investments per year (LTL)
Package 3	180	10	2	13,005.30	1,300.53	108.38	9,000	11,520	5,850	2,880	1,462.50	2,763.03	116.97
Package 4	301	17	2	24,576.96	1,445.70	120.48	9,000	11,520	5,580	2,880	1,395	2,840.70	39.30
Package 5	495	15	2	39,051.53	2,603.44	216.95	9,000	11,520	4,950	2,880	1,237.50	3,840.94	-960.94

Table 14 b *Investment savings per apartment between standard and factual heating energy consumption, if 4 per cent of the interest rate is compensated*

Packages of heating energy saving measures, 60 m², 55 apartments	Investments into 1 m² (LTL)	Credit period (years)	Interest compensated (%)	Total investments into 60 m² apartment (together with inertest)	Investments into 60 m² apartment with interest per year (LTL)	Investments into 60 m² apartment with interest per month (LTL)	Heating energy consumed before the modernisation (kWh)	Standard energy consumption for heating	Heating consumed per heating season after the modernisation (kWh)	Calculated to pay for heating per 60 m² apartment under standard heating energy consumption per heating season (LTL)	Paid for heating of 60 m² apartment after the modernisation (LTL)	Amount payable for heating and credit with interest per year per 60 m² apartment (Lt)	Difference between payments made by 60 m² apartment for standard and factual heating energy consumption and investments per year (LTL)
Package 3	180	10	4	11,868.70	1,186.87	98.91	9,000	11,520	5,850	2,880	1,462.50	2,649.37	230.63
Package 4	301	15	4	20,776.22	1,385.08	115.42	9,000	11,520	5,580	2,880	1,395	2,780.08	99.92
Package 5	495	23	4	36,708.32	1,596.01	133.00	9,000	11,520	4,950	2,880	1,237.50	2,833.51	46.49

Given the aforementioned facts, it is proposed to approve the following state aid model for persons entitled to the compensation of heating and hot water expenses:

When a house decides to implement an investment project, the state undertakes to pay the payment for persons entitled to the compensation of heating expenses for the whole calendar year. The payment share for this person is established taking into consideration factual expenditure experienced in the course of the investment project implementation. This undertaking of the state is effective as long as the person is entitled to the compensation of heating expenses but not longer than:

- in case of Package 3 – 10 years with a compensation of 2 per cent of the annual interest rate which is 6 per cent;
- in case of Package 4 – 15 years with a compensation of 4 per cent of annual interest rate which is 6 per cent;
- in case of Package 5 – no state aid.

A demand for a state contribution to cover investments to be paid by persons entitled to the compensation for heating expenses (the calculations assume that in a house of 55 apartments 8 homeowners are entitled to the compensation of heating expenses) is presented in tables 13a and 13b. Table 16 presents possible maximum savings as a result of the reduction in energy consumption when 8 apartments of the house are entitled to the compensation.

Table 15 a *Demand for a state contribution to cover investments to be paid by persons entitled to the compensation for heating expenses if 2 per cent of the interest rate is compensated*

	2009	2010	2011	2012	2013	2014	Total amount of funds needed for investments to cover housing modernisation by 2014 for people entitled to the compensation
No of houses to be modernised	500	1,000	1,000	1,000	1,400	3,000	7,900
In case of Package 3 (10-year credit) (million LTL)	5.202	15.606	26.011	36.415	50.981	82.194	821.935
Difference between the standard and factual payment for heating in case of Package 3 (million LTL)	5.670	17.010	28.350	39.690	55.566	89.586	895.860
In case of Package 4 (17-year credit)	5.783	17.348	28.914	40.480	56.671	91.368	1.553,264

(million LTL)							
Difference between the standard and factual payment for heating in case of Package 4 (million LTL)	5.940	17.820	29.700	41.580	46.332	93.852	1.595,484

Table 15 b *Demand for a state contribution to cover investments to be paid by persons entitled to the compensation for heating expenses if 4 per cent of the interest rate is compensated*

	2009	2010	2011	2012	2013	2014	Total amount of funds needed for investments to cover housing modernisation by 2014 for people entitled to the compensation
No of houses to be modernised	500	1,000	1,000	1,000	1,400	3,000	7,900
In case of Package 3 (10-year credit) (million LTL)	4.748	14.242	23.737	33.232	37.030	75.010	750.102
Difference between the standard and factual payment for heating in case of Package 3 (million LTL)	5.670	17.010	28.350	39.690	55.566	89.586	895.860
In case of Package 4 (17-year credit) (million LTL)	5.540	16.621	27.702	38.782	54.295	87.537	1.313,057
Difference between the standard and factual payment for	5.940	17.820	29.700	41.580	46.332	93.852	1.407,780

heating in case of Package 4 (million LTL)							

Table 16 *Possible maximum savings as a result of the reduction in energy consumption when 8 apartments of the house are entitled to the compensation*

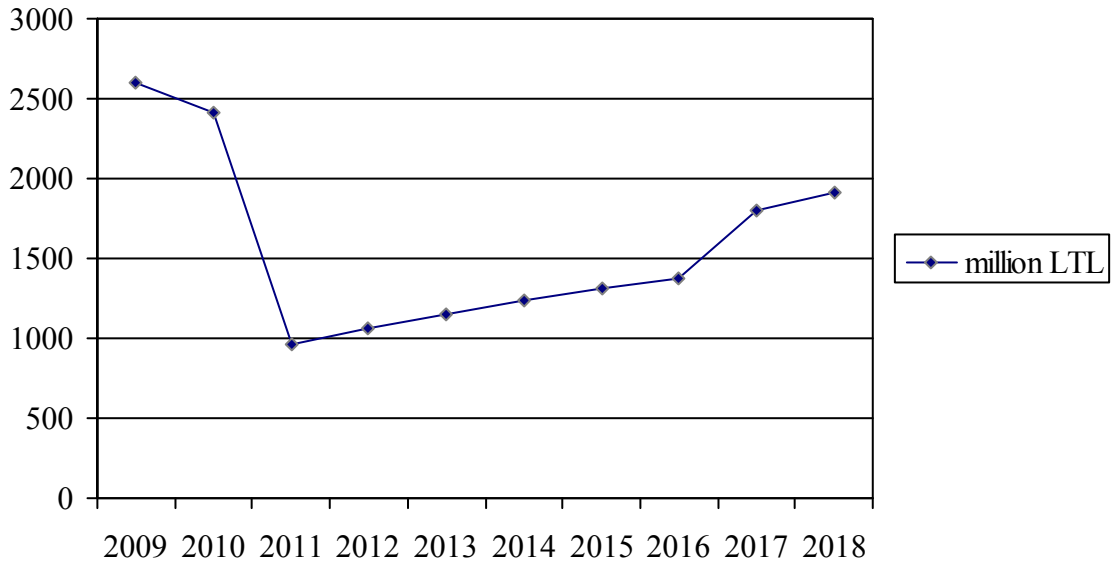
	2009	2010	2011	2012	2013	2014	Total savings during the credit period
No of houses to be modernised	500	1,000	1,000	1,000	1,400	3,000	7,900
Packages of energy efficiency	Possible saving of the state budget for compensations of heating expenses, LTL						
Package 3 (10-year with a compensation of 2 per cent of the interest rate) (million LTL)	3.150	9.450	15.750	22.050	30.870	49.770	497.700
Package 5 (15-year with a compensation of 4 per cent of the interest rate) (million LTL)	3.420	10.260	17.100	23.940	33.516	54.036	810.540

2.9. Investment Needs for the Modernisation of 2,000 Houses per year

The Action Programme of the 15th Government establishes an objective to make the modernisation of multi-apartment houses a mass phenomenon and focus on the renovation of 2,000 houses per year. To this end, when implementing the financing model of the multi-family housing renovation (thermo-insulation), a model where a subordinated loan is granted to implement measures of Package 4 within 15 years should be selected. According to this model, the contribution of a public subordinated loan would be 80 per cent in 2009 and then from 2010 reduce to 20 per cent. In such case, the said 2,000 houses could be modernised by 2010. 24,000 houses could be modernised by 2019, i.e. by this time the objective set in the Lithuanian Housing Strategy and Programme for the Modernisation of Multi-Apartment Houses could be achieved. Table 10 shows investment needs for the modernisation of at least 2,000 residential multi-apartment houses per year and application of the recommended model.

Given the situation in Lithuanian financial market, it is suggested selecting another model: a contribution of a public subordinated loan would be 80 per cent in 2009, 70 per cent in 2010, 30 per cent in 2011 and 20 per cent from 2012. In this case, 2,000 houses could be modernised by 2014 and 24,000 buildings – by 2020.

Figure 1. *Investment needs for the modernisation of at least 2,000 residential multi-apartment houses per year by providing direct support to the investment project*



As the figure above shows, investment needs for the implementation of the objectives set are very big every year. A presumption should be made that in the face of a financial crisis the state does not have the required financial capacities and will not be able to ensure necessary cash flows for the state aid provision. A reduction of investment needs in 2010 and 2011 may be explained by a fact that, considering the financing model proposed, a contribution of a public subordinated loan will reduce from 80 per cent in 2009 to 20 per cent in 2012. Later this percentage will not change since greater financial resources will be required as a result of the increasing number of houses to be modernised. Such financing mechanism would make preconditions to modernise 24,000 houses by 2020 and, thus, implement the objective established in the Lithuanian Housing Strategy.

2.10. Summary and Recommendations for the New Financing Model

Currently the Programme for the Modernisation of Multi-Apartment Houses foresees a state support for investment projects of up to 50 per cent of the investment value depending on measures reducing energy consumption. The financing model set is not optimum (comparative data is provided in Table 10) because it requires a large amount of state financial assets to be contributed each year for the provision of support, therefore it is recommended to switch to other model of state support, i.e. compensating a part of interest paid to commercial banks when implementing projects of multi-family housing modernisation.

Considering a need to modernise multi-apartment houses as fast as possible in order to reduce energy consumption and dependency on fuel suppliers, at least two means of financing are possible:

1) covering a part of the interest rate of credits granted for the implementation of the modernisation project;
2) providing a state grant of the amount set for investment projects under implementation.

Persons entitled to the compensation of heating expenses may have their investment share covered by choosing one or several models:

1) covering the input of such persons the whole year;
2) covering the input of such persons during the heating season only;
3) establishing a fixed standard heating energy consumption per 1 m² and directing a difference between the standard heating energy consumption and factual heating energy consumption to cover the input of the current year.

A proposed financing model for investment projects should be as follows: agreements of the Participation in the Programme are concluded with commercial banks selected. The agreements lay down a maximum credit margin, administration fee, commitment fee (the Consultant suggests not applying it since the project funding in ensured before the tender for construction works and usually the credit approved is not fully used), other bank fess and commitments applied to the house implementing the investment project. The agreement also specifies the proportions of the subordinated loan grated for investment projects.

Subordinated loans

It is possible to choose one of two models for issuing of subordinated loans:

1. Signing an agreement of subordinated loans with all banks which would like to participate in the Programme. The bank will obligate to issue loans for the financing of renovation projects with the conditions approved by the institution authorized by the Government;
2. Using a tender to select one or several banks which have offered the lowest interest rates and other commission/administration fees.

After the conclusion of agreement of subordinated loans, banks would estimate investment projects, other necessary documents (annual financial statements, confirmations from service suppliers that houses and homeowners have no bad debts, decision on the implementation of investment projects, etc.) and make a decision to finance the investment project. A loan would not be more than 95 per cent of the total value of the investment project. Other 5 per cent should be own funds of homeowners or funds received from other sources (support, grants funds, etc.). The loan maturity would depend on the investment project value. The practice shows that usually loan agreements are

signed for 15-25 years, however, citizens repay the loan quicker than specified by the loan repayment schedule. If such tendencies do not change, loans would be repaid within 7-10 years. Moreover, the Consultant would recommend not transferring loan funds to the account of a house implementing the investment project, but making direct payments to contractors which have already provided services and works.

Insurance of loans

In order to reduce a risk of underpaid loan, the Consultant would suggest the insurance of loans using one of two options: either the insurance of the loan portfolio of the bank or the authorization of a project administrator of a multi-apartment house to insure the loan. It is also recommended (considering the current situation) to reinsure all guarantees of Būsto Paskolų Draudimas UAB in a European insurance company with high ratings.

Interest compensation

One or several options may be chosen for the interest compensation: 1) compensation of 1 per cent of the interest rate; 2) compensation of 2 per cent of the interest rate; 3) compensation of 4 per cent of the interest rate; 4) compensation of the whole interest rate, i.e. inhabitants would be granted an interest-free loan. Detailed calculations for interest compensation options, depending on the credit period, are provided in Annex 4. After the repay of the loan the interest compensation is not continued.

In order to create an attractive financial mechanism and stimulate multi-apartment houses to implement energy saving projects, the Consultant would suggest for the State to apply partial interest compensation as financial assistance. Thus for instance, the state could undertake to compensate 2 per cent of the interest rate for the period of 15-20 years (depending on investments per sq.m). Such state support would form a precondition for homeowners to implement investment projects and the savings for heating would let/be enough to repay the loan and interest (See tables 12, 12a and 12b).

Hence, it is suggested for State to issue subordinated loans where a share of the state would be: 80 per cent in 2009, 70 per cent in 2010, 30 per cent in 2011, and 20 per cent from year 2012. It allow issuing loans for the implementation of investment projects with a lower interest rate than the interest rate applied for loans issued for the implementation of business projects by banks.

Transfer of funds to the banks

Once one of the models is selected, it is necessary to decide on the method to transfer funds to banks:

- refund of the expenditure experienced;
- transfer of funds in advance.

Refund of the expenditure experienced. The recovery of the expenditure experienced is more beneficial for the state since funds shall be transferred to the bank only after the bank pays for works performed in the credited investment project using its own assets.

When, under the order of the project administrator, the bank pays for the works performed using the credit assets, the bank shall inform the manager of state assets devoted to this Programme on the use of credit assets to pay for the works performed. The asset manager shall refund the amount of the credit assets specified in the Subordinated Loan Agreement within the period specified in the agreement with the bank. The shortcoming of this option is that assets are transferred in small portions, therefore, the state is not able to declare the eligibility of assets before long.

Transfer of funds in advance. If this option is selected, a Subordinated Loan Agreement is concluded with the bank(s), under which the manager of state assets devoted to the Programme implementation shall undertake to transfer to the bank a certain amount of assets and the bank shall undertake to use these assets for the crediting of multi-apartment housing modernisation projects within the period specified. The agreement may stipulate that the bank shall pay to the manager of assets the interest equal to the interest of a term deposit until the use of the assets and a penalty for the failure to perform liabilities of the Bank.

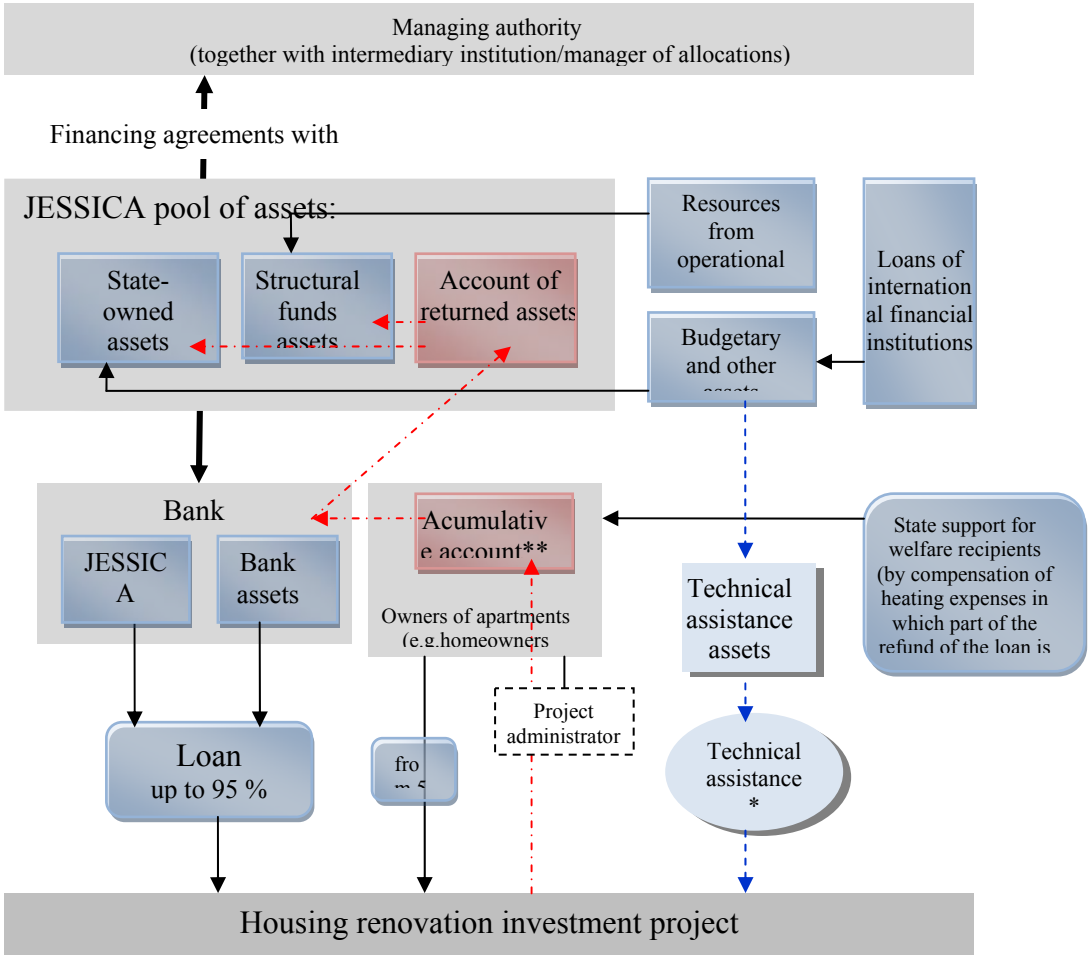
The advantage of this option is that after the transfer of assets the state may declare the expenditure as eligible for the refund of the EU Structural Funds. The disadvantage is that the bank(s) shall receive a great amount of assets, the absorption of which can take a while. In order to absorb the assets in a timely and proper manner, the bank shall organise raising awareness and the compliance of investment projects and project administrator with the requirements set, even though it is not a banking activity.

3. CONCLUSIONS AND RECOMMENDATIONS

1) Taking into consideration a potential contribution of the state budget, EU Structural Funds and commercial banks, to set the following sources of funding the JESSICA-type fund in the period of 2009-2011, which may be used to promote and financially support homeowners:

- **LTL 475 million**, i.e. 4 per cent of the European Regional Development Fund allocation for the housing renovation;
- A loan of the European Investment Bank amounting to **LTL 300 million** for the co-financing of the state's share in the EU Structural Fund projects;
- **LTL 163 million** for measure VP3-1.1.-VRM-03-R "Renovation of Multi-Apartment Houses Primarily by Increasing their Energy Efficiency" of the operational programme financed by the EU Structural Funds;
- **LTL 33 million** foreseen in Article 7 of European Parliament and Council Regulation (EC) No 1080/2006 laying down that Lithuania may additionally allocate 0.28% of all funds allocated by ERDF;
- Commercial banks could be an additional source of investments providing a potential financing of **LTL 1-2 billion**; the involvement of other international financial institutions such as European Bank for Reconstruction and Development, Northern Investment Bank, Council of Europe Development Bank.

2) The most expedient way to implement the multi-family housing renovation (thermo-insulation) model is by applying the JESSICA instrument and institutional approach of a block of finances as defined by Council Regulation (EC) No 1828/2006. A possible scheme of the financing model for housing renovation can be illustrated as follows:



Managing Authority, financial intermediaries and beneficiaries are three main actors in the proposed organisational arrangement.

- *Managing authority.* The national institution responsible for the implementation of financial engineering measures is the Ministry of Finance. The main responsibilities of the managing authority are to channel financial assets from operational programmes to housing renovation purpose-specific fund; to organise a public tender and select commercial banks to participate in the scheme and to enter into respective financing agreements; to assign the specific institution for providing the technical assistance for the final beneficiaries; to ensure supervision and control of the scheme and the funds recycled through it.
- *Financial intermediaries (commercial banks).* Lending should be carried out by the entities with the status of financial institution (commercial banks) and which fulfils the requirements of a financial institutions set in the legal acts. The main responsibilities of the commercial banks in the proposed organisational scheme are to manage the financial assets and to lend it to the final beneficiaries (homeowners); to co-finance them together with banks' assets to the amount envisaged in the financing agreement; to ensure the return of lent assets to the JESSICA fund.
- *Beneficiaries.* The beneficiaries in the proposed scheme are the associations of homeowners of a multi-apartment house, homeowners acting under the partnership agreement, and in particular, one or few homeowners, under the authorisation of other homeowners, and the administrator of parts of the building in common use, under a special authorisation of the homeowners as well. The beneficiaries for the purposes of state support are entitled to be organised in one of the required organisational forms (e.g., to establish the association of homeowners of a multi-apartment house); to accumulate the assets for the housing renovation i a special accumulative account; to prepare the housing renovation investment project and submit application for the state support.

3) Action Plan of implementation the JESSICA initiative for housing renovation projects:
   1. The decision of the Managing Authority on the allocation of funds to housing renovation fund by virtue of national legal act;
   2. Announcement of public tender to select commercial banks to participate in the housing renovation financing scheme and concluding of financing agreements;
   3. Selection of institution with necessary capacities and experience to provide technical assistance for beneficiaries for investment projects preparation;
   4. Transferring of funds to the commercial banks for the further disbursement of funds, on the conditions set out in the financial agreement;
   5. Announcing of invitation for the beneficiaries to apply for the state support.

If the implementation of the holding fund shall be arranged within the admissible timeframe, the Managing Authority may transfer the funds to the holding fund and delegate the functions of announcement of public tender, selection the institutions to participate in the institutional arrangement, transferring the funds to the commercial banks (i.e., steps 2, 3, and 4 of the Action plan) to the manager of the holding fund. After launching of the proposed housing renovation financing scheme, possibilities in relation of establishing other financial engineering instruments (UDF's for other types of sustainable urban development projects) should be further examined.

4) Given a big number of houses to be renovated under the Programme for the Modernisation of Multi-Apartment Houses and increased demand for financial support, to focus on a priority group of houses which would be a starting point for the new housing renovation model, e.g. large-block multi-apartment houses consuming much and very much of energy.

5) Model for financing the renovation of multi-apartment houses currently set is not optimal, because it requires a large amount of state financial assets to be contributed each year for the provision of support, therefore it is recommended to switch to other model of the state aid, i.e. to the provision of loans under preferential terms instead of providing a grant. Conditions of a preferential loan to the final beneficiaries would be set in the tender requirements for banks' participation in the model.

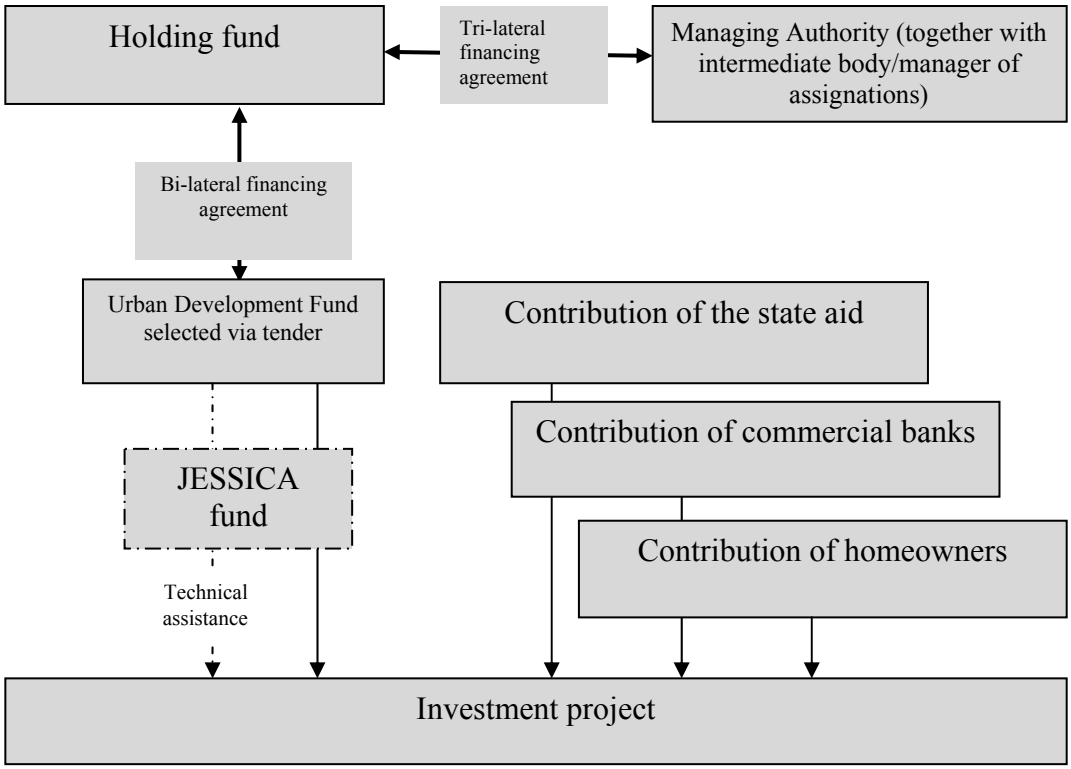
6) The above-mentioned model, where a part of interest of a preferential loan would be *de facto* compensated to the final beneficiaries, would require less of state budgetary assets, compared to the model operating at the moment, whereas the intensity of financial support, compared to the intensity of present level of financial support, would be greater. Additionally, assets for financial support could be used as assets of subordinate loan for the banks, while returning assets would be used to fund new projects of multi-apartment housing modernisation.

7) Considering that it would be difficult for low income families and persons residing alone to participate in the implementation of the multi-family housing renovation (thermo-insulation) model, the required input of such persons could be covered by the state.

8) When planning financial resources necessary for this model, it is recommended to focus on the amount required for the provision of preferential loans with the average compensation of 2 per cent of interest and differentiation of the credit period by different investment packages. The intensity of support under this model would match the current support intensity and ensure that, in case of the optimal investment package, after the renovation residents will pay less for heating and loan administration during the heating season than before the renovation.

Annex 1. Alternative Options for Organising JESSICA-Type Fund

Option 1. Establishment of a holding fund and urban development fund

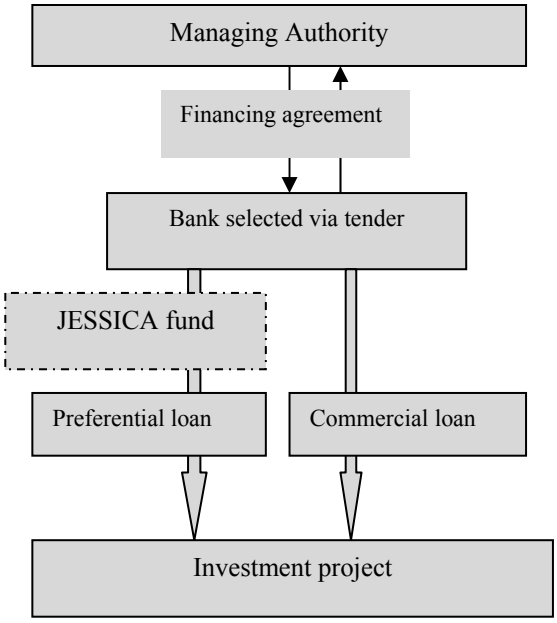


Advantages of the model. When implementing the JESSICA initiative in Lithuania, a selection of the financing model with a holding fund would have many advantages. Firstly, it is because the holding fund would provide technical assistance for the managers of urban development funds, simplify the management of financial flows channelled to several urban development funds and guarantee additional level of supervision and control of managers of financial engineering instruments. In addition, assets for each urban development fund could be re-distributed via the holding fund in case decision to establish several specialised urban development funds would be taken in a long perspective, which on its own behalf would provide an opportunity for rapid and flexible reaction to fluctuating demand for financial engineering products aimed at financing urban development projects in the market. A possibility to invite the EIB to be the fund manager also should be considered to be an advantage as the experience of international financial institutions (EIB) in implementing financial engineering initiatives may prove to be useful at the initial stage of the JESSICA implementation. In case the EIB is invited as a manager of the holding fund, its status of the international financial institution would increase credibility of the JESSICA fund as well. The EIB would be capable to provide technical assistance and ensure the dissemination of best practices of funding of urban development projects. In case there is a demand, the EIB, acting as a manager of the fund, would have a possibility to provide additional loans for the fund in order to balance its activity. Besides, EU Regulations provide a simplified procedure for the appointment of the EIB as a holding fund, which is an advantage in order to implement JESSICA with the minimum time-costs. These functions could be transferred to the national institution after a certain period of time (2-3 years).

Shortcomings of the model. After a preliminary review of the capacity and status of operating national institutions, it can be concluded that at the present moment there is not a single institution which would meet all requirements and could perform a role of the holding fund. The invitation of an international financial institution to take the position of the holding fund, negotiations for conditions and conclusion of the funding agreement would still take a while, besides, the EIB as the manager of the holding fund

would provide its own criteria for the selection of financial intermediaries acting as financial engineering instruments and apply its internal procedures to conduct a tender for the selection of managers of urban development funds. It is likely that it may prolong the terms of the implementation of the JESSICA initiative in Lithuania.

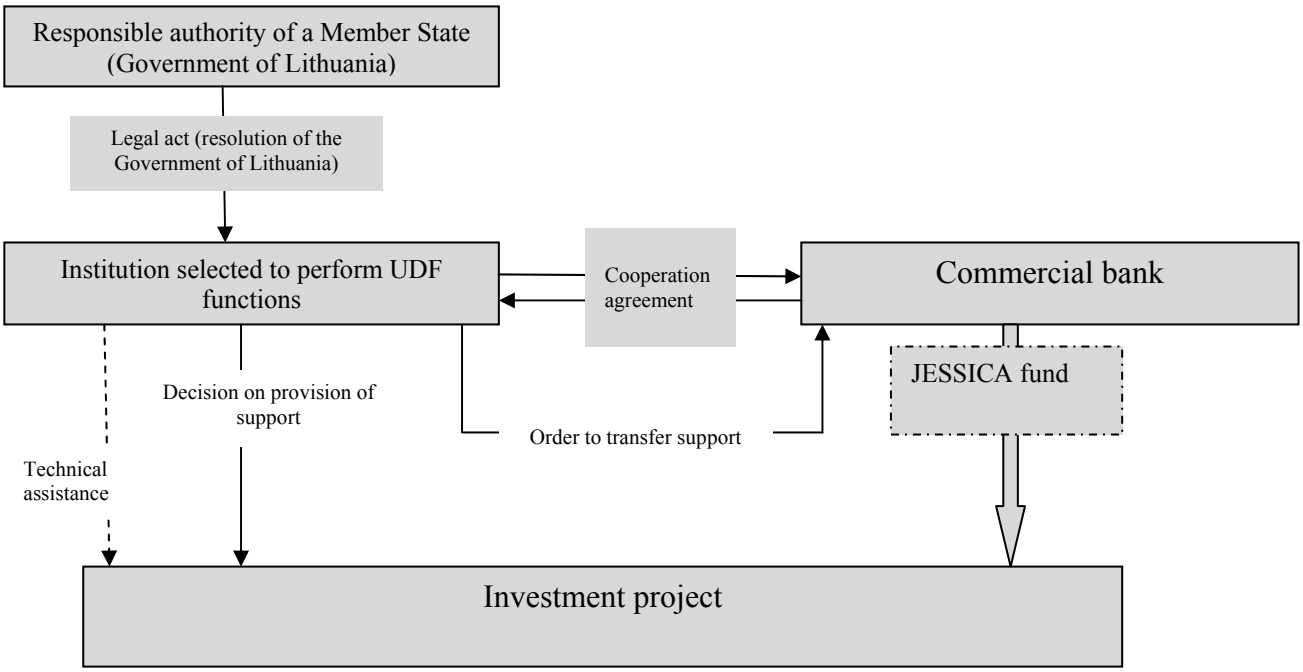
Option 2. Establishment of a financing model by using "block of finances" institutional approach



Advantages of the model. This option for the JESSICA implementation is more favourable as it could be more rapidly implemented. Time factor is crucial, considering current demand for financing multi-apartment housing renovation projects. Moreover, using this model the functions of the distribution of assets (on-lending) would be entrusted to financial institutions performing such functions in their every-day activity and possessing major experience in administrating financial assets and investment risk.

Shortcomings of the model. One of the shortcomings of this model is that by entrusting the distribution of JESSICA assets to commercial banks only, the provision of technical assistance to executors of multi-apartment housing renovation investment projects is not secured. This problem could be solved by entrusting the provision of technical assistance to the institution with necessary capacities, under a separate agreement.

Option 3. Assignment of urban development fund functions to the existing institution by national legislation



Advantages of the model. Entrusting urban development fund functions to an existing institution by a legal act would be a rapidly implemented alternative. The entrusted institution would have to possess necessary abilities and capacities to provide qualified technical assistance to organisers and executers of investment projects. This institution would take decisions on the support provision to investment projects with respect to their compliance with eligibility criteria. Under a preliminary evaluation of institutions currently operating in Lithuania, it might be assumed that the Central Project Management Agency (CPMA) might have sufficient administrative abilities and experience in evaluating projects related to investments into housing with an aim to increase their energety efficiency.

Shortcomings of the model. The main shortcoming of this model is a complicated distribution of risks and functions between the institution appointed to perform urban development functions and commercial banks, which as financial institutions have a right to provide financial services (to lend assets). A final decision on the project eligibility for JESSICA funding would be taken by the institution appointed to perform urban development fund functions and appraise investment projects with respect to their eligibility for funding. Nevertheless, a commercial bank providing support for a project under the order of the appointed institution (providing a preferential loan from the JESSICA fund) would have to re-evaluate the project in the context of its own investment risk assumed, therefore, the mechanism of the administration of the project financing is likely to be complex and inefficient in terms of time.

Annex 2. Legal Environment for the JESSICA Initiative to Support Housing Renovation Projects Aimed at Increasing Energy Efficiency

Even though the EU documents identify housing renovation as one of the priority areas in sustainable urban development projects, the EU Council Regulation (EC) No 1080/2006 establishes a number of limitations applied to Structural Fund investments into housing[46]. Housing projects may be funded only under measures of the European Regional Development Fund (ERDF) within the convergence objective.

Eligibility Rules for Funding the Housing Sector from the ERDF:

The imposed limitations applied to the EU structural support for the housing sector include:

1. Maximum amount of funds to be allocated to housing from the ERDF. At the moment the maximum amount of funds allocated to the housing sector cannot exceed 3 per cent of the ERDF assignations for a specific Operational Programme or 2 per cent of all ERDF assignations.

2. Requirements for potential beneficiaries. According to the requirements of the EU Regulation, a list of applicants entitled to apply for support for housing investments must be *thoroughly* established by national legislation of a Member State. Measures set in the Operational Programme in the housing sector include the following beneficiaries:

1) administrative bodies of municipalities of problem territories[47];
2) associations of owners of multi-apartment houses;
3) owners of multi-apartment houses acting under partnership agreement;
4) administrator of common objects appointed following the procedure established in the Lithuanian Civil Code.

3. Eligible areas. Requirements on support for the housing sector areas set in existing EU regulations limit a number of eligible activities, e.g. support for housing-related actions is possible only in territories meeting at least three criteria specified in Article 47 of Council Regulation No 1828/2006, two of which must fall within those listed under points (a) to (h):

(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) a 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.

The values for the criteria must be defined at national level.

In Lithuania there indicators are related to the conception of a "problem territory". Criteria distinguishing problem territories are specified in Resolution of the Government No 482 of 8 April

[46] Regulation of the European Parliament and the Council of 5 July 2006 on the European Regional Development Fund repealing Regulation No 1783/1999.
[47] A list of municipalities recognized as *problem territories* is approved by the Government Resolution No 112 of 31 January 2007.

2003 On Criteria for Distinguishing Problem Territories (new edition was adopted on 28 September 2008[48]), where the following criteria are indicated:

- Average annual ratio of the registered unemployed and working-aged population exceeds the national average by 60 per cent and more;
- Average annual ratio of welfare recipients and population exceeds the national average by 60 per cent and more.

4. Object-related restrictions on expenditure. Article 7 of Council Regulation 1080/2006 lays down the following expenditure to be eligible for contributions from the EU Structural Funds:

- 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 (social housing).

Paragraph 2 of Article 47 of Council Regulation 1828/2006 stipulates a list of objects the expenditure of which shall be eligible:

(a) renovation of the common parts of multi-family residential buildings, as follows:
  (i) 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;
  (ii) technical installations of the building;
  (iii) energy-efficiency actions.
(b) 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.

5. Other limitations. Legal regulations of the use of the JESSICA instrument (including its use to fund housing sector) provide a requirement to support instruments included in an integrated plan for sustainable urban development, definition of which under JESSICA is given in Explanatory Notes of European Commission.[49]

New EU Regulation Initiatives in the Housing Sector

The European Commission has initiated the preparation and introduction of the European Economy Recovery Plan which foresees strategic investments into the energy-efficiency measures as one of the areas to promote a fight against the climate change and create jobs[50]. This plan has become a political ground to revise the regulation of the contribution of the Structural Funds in the energy efficiency of multi-apartment houses.

One of the priority actions laid down in the Economy Recovery Plan is to improve energy efficiency in buildings. The Plan stipulates that

"*Acting together, Member States and EU Institutions should take urgent measures to improve the energy efficiency of the housing stock and public buildings […]: Member States should set demanding targets for ensuring that public buildings and both private and social housing meet the*

[48] Official Gazette No 111-4232 of 2008.
[49] Requirement of an integrated plan for sustainable urban development is provided in Art 44 of Council Regulation (EC) No 1083/2006. More elaborated explanation is provided in Point 2(b) of the second COCOF explanatory note on financial engineering instruments.
[50] Communication from the Commission to the European Council on European Economic Recovery Plan, 26 November 2008

highest European energy-efficiency standards and make them subject to energy certification on a regular basis. To facilitate reaching their national targets, Member States should consider introducing a reduction of property tax for energy-performing buildings. […] In addition, Member States should re-programme their structural funds operational programmes to devote a greater share to energy-efficiency investments, including where they fund social housing. To widen possibilities, the Commission is proposing an amendment to the Structural Funds Regulations to support this move and stresses the need for early adoption of the amendments. […]The Commission calls on Member States and industry urgently to develop innovative financing models, for example, where refurbishments are financed through repayments, based on savings made on energy bills, over several years."

Basing its decision on provisions of European Economic Recovery plan Commission proposed the following amendment of European Parliament and Commission Regulation (EC) on the European Regional Development Fund of 5 July 2006: "*in each Member State, 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.*" The proposed EU legislative amendments are targeted to devote more funds to energy efficiency and renewable energy investments in housing and will expand the number of possible beneficiaries for energy efficiency measures.

Amendments to National Legislation Necessary for a Successful Implementation of the Financing Model of Housing Renovation Investment Projects

The following directions for improvement of national legislation can be identified:

- Simplification of multi-family housing renovation administration and financing process and establishment of a new financing model:
  - National legislation should be adopted on the establishment of a new financing model, set up of the renewable JESSICA fund, its investment sources, support forms and directions;
  - Amendments to the Law on the State Aid to Acquire or Rent Housing and the Modernisation of Multi-Apartment Houses [51], with regard to the amount and form of state aid as well as change of present model for financing of modernisation of multi-apartment houses, should be adopted.
- Simplification of territorial planning and construction regulation in order to facilitate and speed up technical drafts of multi-family housing renovation:
  - Amendments to the Law on Construction of the Republic of Lithuania to simplify the design and the issue of construction permits;
  - Amendments to the Law on Territorial Planning to simplify the detailed planning process.
- Typing of investment project draft documents by different types of multi-family housing.
- Improvement of the regulation of multi-family housing associations.
- Improvement of the regulation of enterprises administrating multi-apartment houses.
- Improvement of the public procurement system in the implementation of housing renovation investment projects in order to ensure transparency of construction works and other tenders.

51 Law on State Support to Acquire or Rent Housing and the Modernisation of Multi-Apartment Houses of 27 February 1992, Official Gazette No 14-378

Annex 3. Groups of Multi-Apartment Houses by Energy Consumption for Heating

	Energy consumption for heating	Average heating energy price for residents (encl. VAT)	Heating energy price per 1 m^2 (encl. VAT)	Heating expenses per 60 m^2 aparmtnet (encl. VAT)	Share of such houses
I. Multi-apartment houses consuming the least heating energy (newly built, quality houses)	**8** kWh/m^2 per 60 m^2 apartment: **480kWh**	25.0 ct/kWh	8 x 25.0 = **2.00** LTL/m^2	2.00 x 60 = **LTL 120.0**	**4.6%**
		32 thousand apartments with the population 0.09 million			
II. Multi-apartment houses consuming little or average amount of heating energy (newly built houses at least a little bit saving energy)	**15** kWh/m^2 per 60 m^2 apartment: **900kWh**	25.0 ct/kWh	15 x 25.0 = **3.75** LTL/m^2	3.75 x 60 = **LTL 225.0**	**17.3%**
		121 thousand apartments with the population of 0.36 million			
III. Multi-apartment houses consuming much heating energy (old construction, not renovated houses)	**25** kWh/m^2 per 60 m^2 apartment: **1,500kWh**	25.0 ct/kWh	25 x 25.0 = **6.25** LTL/m^2	6.25 x 60 = **LTL 375.0**	**55.7%**
		390 thousand apartments with the population of 1.17 million			
IV. Multi-apartment houses consuming very much of heating energy (old construction houses with very poor thermo-insulation)	per 60 m^2 apartment: **2,100kWh**	25.0 ct/kWh	35 x 25.0 = **8,75** LTL/m^2	8.75 x 60 = **LTL 525.0**	**22.4%**
		157 thousand apartments with the population of 0.47 million			

Source: Data on the heating season of 2008-2009 provided by the Lithuanian District Heating Association

Annex 4. Dependency of the Number of Modernised Multi-Apartment Houses on the Compensated Interest and Credit Period

Considering the amount of state funds necessary for subordinated loans and compensation of 2 per cent of the interest rate as well as in attempt to ensure the sustainable financing of the Programme for the Modernisation of Multi-Apartment Houses without any additional financial assistance, except for the provided in the assumptions above (LTL 1 billion is allocated in 2009, LTL 100 million is allocated every year until 2014, addition LTL 1 billion – in 2014), from 500 to 2,000 multi-apartment houses could be modernised annually from 2009 to 2014 (see Table 8).

Table 1. *Possible maximum number of modernised buildings with a compensation of 2 per cent of the interest rate (15-year credit)*

	2009	2010	2011	2012	2013	2014
No of houses	500	1,000	1,000	1,000	1,400	3,000
Share of public subordinated loan (million LTL)	377.454	660.545	283.091	188.727	264.218	566.181
Remnant of the Programme for the Modernisation of Multi-Apartment Houses at the end of the year and after the payment of a portion of subordinated loan (million LTL)	622.546	756.615	297.957	283.924	430.747	1.495,124
Amount required for the compensation of interest (million LTL)	9.188	27.013	43.727	59.307	81.081	114.500
Remnant of the Programme for the Modernisation of Multi-Apartment Houses at the end of the year (million LTL)	613.358	729.602	254.230	224.617	349.666	1.380,624

Table 2. *Possible maximum number of modernised buildings when implementing Package 5 (20-year credit, compensation of 4 per cent of the interest rate)*

	2009	2010	2011	2012	2013	2014
No of houses	400	500	750	1,000	1,250	1,500
Contribution of a commercial bank (million LTL)	125.226	232.774	814.709	1.086,278	1.357,848	1.629,417
Contribution of the fund (million LTL)	496.584	543.139	232.778	310.365	387.956	465.548
Assets in the fund (million LTL)	1.000,000	685.638	357.868	426.605	533.215	1.608,838
Assets in the fund after the subordinated loans (million LTL)	503.416	142.499	125.094	116.240	145.259	1.143,291
Amount required for the compensation of the interest rate (million LTL)	12.264	27.254	49.462	78.648	114.556	156.916
Balance of the fund (million LTL)	491.152	115.245	75.632	37.592	30.703	986.375

Table 3. *Possible maximum number of modernised buildings when implementing Package 5 (20-year credit, compensation of 2 per cent of the interest rate)*

	2009	2010	2011	2012	2013	2014
No of houses	400	450	580	750	1,000	1,500
Contribution of a commercial bank (million LTL)	125.226	209.496	630.041	814.709	1.086,278	1.629,417
Contribution of the fund (million LTL)	496.584	488.825	180.012	232.774	310.365	465.548
Assets in the fund (million LTL)	503.416	196.813	230.099	280.386	343.498	1.271,440
Assets in the fund after the subordinated loans (million LTL)	12.264	25.721	42.759	64.470	93.128	136.140
Amount required for the compensation of the interest rate (million LTL)	491.152	171.092	187.340	215.916	250.371	1.135,300

Table 4. *Possible maximum number of modernised buildings when implementing Package 5 (15-year credit, compensation of 2 per cent of the interest rate)*

	2009	2010	2011	2012	2013	2014
No of houses	400	450	580	750	1,000	1,500
Contribution of a commercial bank (million LTL)	125.226	209.496	630.041	814.709	1.086,278	1.629,417
Contribution of the fund (million LTL)	496.584	488.825	180.012	232.774	310.365	465.548
Assets in the fund (million LTL)	503.416	195.954	227.380	274.483	332,670	1.253,334
Assets in the fund after the subordinated loans (million LTL)	24.529	51.442	85.519	128.940	186.255	272.281
Amount required for the compensation of the interest rate (million LTL)	478.887	144.512	141.862	145.543	146.414	981.054

Table 5. *Possible number of modernised houses when implementing Package 3 (10-year credit, annual interest rate of 6 per cent)*

Ratio of subordinated assets: 2009 – 80 per cent of fund assets, 20 per cent – of commercial banks;
2010 – 70 per cent of fund assets, 30 per cent – of commercial banks;
2011 - 30 per cent of fund assets, 70 per cent – of commercial banks;
2012 and later – 20 proc. per cent of fund assets, 70 per cent – of commercial banks.

	2009	2010	2011	2012	2013	2014
No of houses	500	2,000	2,000	2,200	2,300	2,500
Contribution of the fund (million LTL)	225.720	790.020	338.580	248.292	259.578	282.150
Amount required to compensate 1 per cent of the interest rate for all apartments (million LTL)	2.725	13.408	23.204	33.148	42.551	51.846

Amount required to pay for the investment without any interest of 8 disadvantaged apartments per year (million LTL)	0.500	2.700	4.860	7.236	9.720	12.420
Total expenditure of the fund (million LTL)	228.985	806.128	366.644	288.676	311.849	346.416
Subordinated assets returned within a year (million LTL)	21.570	97.283	138.705	169.218	202.195	236.581
TOTAL AMOUNT IN THE FUND AT THE END OF THE YEAR (million LTL)	792.585	183.740	55.801	36.343	26.690	916.855

Table 6. *Amount required to compensate 1 per cent of the interest rate for all apartments*

Package 3, 10-year credit, annual interest rate of 4 per cent

Ration of subordinated assets: 2009 – 80 per cent of fund assets, 20 per cent – of commercial banks; 2010-2012 – 30 per cent of fund assets, 70 per cent – of commercial banks; From 2013 – 20 per cent of fund assets, 80 per cent – of commercial banks;

	2009	2010	2011	2012	2013	2014
No of houses	500	2,000	2,000	2,200	2,300	2,500
Amount required to compensate 1 per cent of the interest rate for all apartments (million LTL)	2,715	13,336	22,993	32,734	41,877	50,873

Table 7. *Possible number of modernised houses when implementing Package 4 (15-year credit, compensation of 2 per cent of the interest rate, annual interest rate of 6 per cent)*

	2009	2010	2011	2012	2013	2014
No of houses	500	1,000	1,000	1,000	1,400	3,000
Contribution of the fund (million LTL)	377,454	283,091	283,091	283,091	264,218	566,181
Amount required to compensate 2 per cent of the interest rate for all apartments (million LTL)	9,255	27,353	44,603	60,953	83,750	134,818
Total amount in the fund at the end of the year (million LTL)	629,30	463,874	295,980	245,336	84,479	499,978
Amount required to pay for the investment without any interest of 8 disadvantaged apartments per year (million LTL)	0.6	1,806	3,010	4,214	5,900	9,512
Total expenditure of the fund (million LTL)	387,311	312,250	330,704	348,257	353,867	710,511

Subordinated assets returned within a year (million LTL)	16,010	45,016	59,800	71,494	87,110	116,499
Total amount in the fund at the end of the year (million LTL)	628,699	461,466	290,562	113,799	-52,958	

In this case, fund assets would be sufficient to compensate interest and pay for apartment with socially disadvantaged persons (if every house has 8 apartment of this kind) until 2013, to provide subordinated loans and compensate 2 per cent of the interest rate until 2016, if no contributions are made to the fund after 2014.

Table 8. *Possible number of modernised houses when implementing Package 4 (15-year credit, compensation of 2 per cent of the interest rate, annual interest rate of 4 per cent)*

	2009	2010	2011	2012	2013	2014
No of houses	500	1,000	1,000	1,000	1,400	3,000
Amount required for the compensate of interest	9,223	27,192	44,187	60,167	82,471	132,809

Table 9. *Possible savings per 1 m² by packages, credit period and compensated size of the interest rate*

Packages of heating energy saving measures, 60 m², 55 apartments	Investments into 1 m² (LTL)	Credit period (years)	Total investments into 1 m² (together with inertest)	Investments into 1 m² with interest per year (LTL)	Investments in to 1 m² with interest per month	Heating energy consumed before the modernisation (kWh)	Heating energy consumed after the modernisation (kWh)	Paid for heating of 1 m² before the modernisation	Paid for heating of 1 m² after the modernisation	Saved heating expenses after the modernisation (LTL)	Amount payable for heating and credit with interest per month per sq. m (LTL)	Difference between payments per m² before and after the modernisation	Packages of heating energy saving measures, 60 m², 55 apartments
Package 3	180	10	1	226.65	22.67	1.89	25	16.25	6.25	4.06	2.19	5.88	0.30
Package 4	301	15	2	380.72	25.38	2.12	25	15.5	6.25	3.87	2.38	5.99	0.26
Package 5	495	20	3	625.92	31.30	2.61	25	13.75	6.25	3.44	2.81	6.05	0.20