KredEx energy efficiency schemes

Context
KredEx is Estonia’s "Credit and Export Guarantee Fund"; a revolving fund that supports financing of energy efficiency projects (among other services).

The context to KredEx is partly provided by European regulation; Estonia has undertaken measures aimed at complying with Directive 2002/91/EC of the European Parliament and the Council on the energy performance of buildings. Directive 2006/32/EC on the efficiency of final consumption of energy and energy services has been adopted since 2008.

KredEx is a state-owned credit and export guarantee fund which was founded by the Ministry of Economic Affairs and Communications. KredEx is a not-for-profit entity; however, sureties and guarantees issued by KredEx are backed by a state guarantee. KredEx has received loans from the Council of Europe Development Bank (CEB), guaranteed by the Estonian state, and also receives funding from the European Regional Development Fund (ERDF), and income from the sale of Assigned Amount Units (AAUs) under the Kyoto protocol.

Other stakeholders include the commercial banks Swedbank and SEB, which get favourable funding from KredEx and make loans to apartment building associations, and other commercial banks which participate only in the loan guarantee schemes. Apartment associations are important stakeholders, as loan and grant beneficiaries. Municipalities also occasionally work with KredEx, when they run complementary schemes.

Objective
KredEx was established in 2001 with the main aim of helping Estonian companies develop, raise finance, and expand their exports. It also aims to support the upgrade and renovation of domestic housing, including promoting energy efficiency through grants, loans and loan guarantees. A range of offers aim to ensure that various social groups in need of help can benefit from this funding.

Programme description

Measures and recipients
KredEx offers three types of mechanism for funding energy efficiency: loan guarantees, loans and grants.

KredEx offers Housing Loan Guarantees for the purchase of new living premises or renovation of existing ones, to decrease the down-payment obligation for certain eligible applicants (see below). To implement these guarantees, KredEx has agreements with most of the credit establishments in Estonia. A guarantee fee 3% of the guarantee amount is paid upon the conclusion of the contract as a one-time payment. The loan guarantee amount is up to 24% of the value of the loan guarantee property, but not more than €19,200.

Additionally, there is an Apartment Building Loan Guarantee for renovation
work. Guarantees are mainly necessary for buildings where the market value of apartments is low, or those which have only an apartment community, not a formal association (which are not required by Estonian law), i.e. the loan receiver is not an independent legal person. The guarantee covers up to 75% of the loan amount. There is a guarantee fee of 1.2-1.7% of the guarantee balance per year. Banks participating in this scheme are Danske Bank, Krediidipank, Nordea, SEB, Swedbank and Versobank.

An **Apartment Building Renovation Loan** was introduced in 2009 to provide long-term low-interest loans specifically for apartment renovations. A precondition for receiving the loan is an energy audit. The loan period is up to 20 years and the minimum loan is €6,400 ($9,500). No collateral is needed. Interest rates are up to 4.5%, fixed for no more than 10 years. This contrasts with conventional loans, which would typically offer higher interest rates, with a higher contract fee and shorter maturity\(^1\), often unsuitable for an apartment building. Self-financing is at least 15%, which can be covered by a reconstruction grant, as the schemes can be combined (see below). The loan is offered through the banks Swedbank or SEB.

![Figure 1: Structure of apartment building renovation loan scheme (UrbEnergy, undated)](image)

The **Apartment Reconstruction Grant** is suitable for apartment associations planning full-scale reconstruction. Only newly starting reconstruction work is supported. Larger grants are available for projects that involve more improvements; this encourages deeper retrofits. To obtain a 15% grant, an apartment building must achieve energy saving of at least 20% if its area is up to 2,000m\(^2\), or at least 30% in an apartment building of over 2000 m\(^2\); and also achieve energy label E. To obtain a grant of 25%, in addition to the above terms, it must achieve energy label D. To obtain a grant of 35%, it must achieve energy label C. Additionally, for this final category, design costs are supported by 90%.

\(^1\)(Adler 2011)
There was also an “Energy audit, building design and expert evaluation grant” for apartment associations planning to begin the renovation of their building. This covered:

- an energy audit – max €700 ($1,040)
- a technical inspection – max €700 ($1,040)
- building design documents – max €5,000 ($7,425)

These covered 50% of eligible costs. However, the scheme has been closed due to the exhaustion of funds.

There were also grants for families with many children to improve living conditions, originally with a maximum grant of 320,000 Kroon ($19,457). This could be used to purchase living premises, build, reconstruct, renovate or expand living premises, or construct or change technical systems in living premises. In April 2011, KredEx stopped accepting applications for these grants.

Briefly, during 2012, the offer of Renovation Grants was extended to houses (demand soon exceeded the available funds). Grants were divided into two packages; efficiency renovations and renewable energy. Grants for efficiency renovations covered 25% or 40% of eligible costs (depending on whether energy class D or C was achieved). Grants for renewables covered 60% (for solar thermal) or 70% (for photovoltaics or a wind turbine) of equipment purchase and installation costs. The minimum grant award amount was €1,000 ($1,485) and the maximum €30,000 ($44,550).

**Target audience**

Eligible groups for the Housing Loan Guarantee are: young families (a parent or parents raising a child of up to 15 years), young specialists and tenants living in restituted buildings. A young specialist is an up to 30-year-old person, who has acquired secondary or vocational secondary education, and is employed or self-employed. A tenant living in restituted premises is a person having a tenancy contract in living premises restituted (returned to a former owner) as unlawfully expropriated property through ownership reform. (This restitution is a common issue in ex-Soviet states).

The target groups for the apartment loan, grants and guarantee are apartment associations, building associations and communities of apartment owners. The apartment loan guarantee is suitable for apartment buildings that wish to take a loan from a bank to finance renovation but whose risk is evaluated higher than average by the bank (e.g. a high share of debtors, the apartment building is located in an area with low market value of apartments or in a mono-functional settlement, investment per m² is higher than the average), or who wishes to use the KredEx guarantee to insure the risk of payment difficulties. The association or community must be creditworthy. The loan and grants are also aimed at these apartment associations, with the Reconstruction Grant being especially aimed at those wishing to undertake a major programme of works.

As noted above, there was briefly a grant for private individuals who own houses and a grant for families with at least four children, under an income threshold (both now closed).
Buildings and measures

The apartment measures (grants, loans and guarantees) are available to apartment buildings, which are defined as buildings having at least 2 (or for certain schemes, 3) apartments. The target groups for the apartment loan are apartments built before 1993. The apartment grants (both the Reconstruction and the Audit/design grants) and the Apartment Loan Guarantee include apartments built in any year.

The Apartment Renovation Loan is mainly used for insulation and heating systems. Measures can include: full or partial insulation of frontages of apartment buildings; reconstruction and insulation of roofs; replacement of windows and exterior doors; insulation of cellar ceilings; insulation of roof ceilings; replacement, reconstruction or rebalancing of heating systems; replacement of ventilation system; and certain facilities for the use of renewable energy in apartment buildings.

The Apartment Reconstruction Grant is mainly meant for apartment buildings with several floors, including at least three apartments. The main eligible measures are: insulation of envelope structures; exchange of windows and front doors; replacement or reconstruction of the heating system; reconstruction of the ventilation system or installation of a system with heat recirculation; installation of equipment necessary for using renewable energy; reconstruction of the control system or drive of lifts; and design, project management and supervision.

Renovation Grants for houses covered: insulation, heating, ventilation, new windows and doors; solar thermal; photovoltaics or a wind turbine.

The housing loan guarantee is for residential buildings. It covers purchase of new living premises or renovation of existing ones.

Finance and funding

KredEx is a self-sustaining revolving loan fund in the jurisdiction of the Ministry of Economic Affairs and Communications. Initial funding was provided by the Government. According to the Enterprise Support and State Guarantees for Loans Act of 2003, KredEx's housing loan guarantees (for renovation and purchase) are counter-guaranteed by the state, up to a limit of €96 million ($143 million).²

From June 2008, the “Energy audit, building design and expert evaluation grant” was financed by structural funds from the European Union. In addition, from summer 2009, KredEx funded its “Renovation Loans” for apartment buildings with financial resources from European structural funds (€17 million; $22.6 million) and an additional loan from the Council of Europe Development Bank (CEB) (€28.8 million; $38.3 million).

A condition of the CEB loan was a guarantee from the Estonian state. This was used to provide low interest loans to two commercial banks, Swedbank and SEB Estonia, with a term of 20 years. The banks then provide loans to apartment

² (Adler 2011)
associations, (as explained above) with credit risk taken by the banks.

The loan contract is between the bank and the apartment association; the bank can legally claim against the association in case of default. The association can in turn claim against apartment owners, following agreement at a general meeting. If a person is not fulfilling obligations to the association it is theoretically possible they will lose their apartment, but these cases are very rare because usually people fulfil their obligations (Adler, personal communication). It is possible that taking a loan as part of an association of neighbours encourages people to meet their obligations more than an impersonal bank loan would, due to social pressures.

From 2010, the source for the apartment Reconstruction Grant funds is the sale of Assigned Amount Units (AAUs) under the Kyoto Protocol by Estonia to Luxembourg. The total fund provided by the agreement was €30 million ($39.7 million).

Housing and energy efficiency are a relatively small part of KredEx’s business. For example, in 2012, housing guarantees were 16% of all guarantees; €11 million ($16.3 million) out of €68 million ($101 million). The latest available annual report is for 2011. The following figures are from that report unless stated otherwise.

**Apartment loans**
From 2009 to 2012, the “Renovation Loans” fund for apartment buildings was worth €49 million ($72.8 million). For the apartment loan issued to banks; interest income was earned in the amount of €674,500 ($937,315) in 2011 (at an interest rate of 2.0–2.7%). The outstanding balance of apartment loans, as of December 31st, 2011 was €37.5 million ($52.1 million). The banks take a fee; for Swedbank this is currently 1% of the loan amount, minimum €191.73 ($285).

**Housing loan guarantee**
The amount of actual (paid) claims for the housing guarantee in 2011 was €291 thousand ($404,387). The housing loan guarantee portfolio valid on December 31st, 2011 was €42.3 million ($58.8 million). In 2012, housing guarantees were issued that were worth €11 million ($15.3 million). KredEx’s income from housing guarantees in 2011 was €311,147 ($432,000).

**Housing and apartment grants**
Grant funding has come from several sources, including the Kyoto agreement with Luxembourg, for apartment grants.

In 2011, the Ministry of Economic Affairs and Communications provided €2.6 million ($3.6 million) in funds for housing support measures, mostly for direct grants to families with many children (as outlined above). (The rest was for

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3 (Pugri)
4 (Shahidur R. Khandker 2012)
5 (Adler 2013)
6 Figures from 2011 are converted from euros using exchange rate of 1.39243 USD to a euro the average for the year).
7 (Adler 2013)
8 Ibid.
development projects connected with housing, such as training and surveys, and the administration of grants and development projects.)

In 2011, grants connected with housing (refurbishment and purchase) were paid totalling €3.7 million ($5.1 million). This included:

- €0.5 million ($695,000) from EU structural funds for apartment grants
- Grants for families with many children: €2.9 million ($4 million) (this was mostly from the Estonian state budget, from the Ministry of Economic Affairs and Communications, as above).
- It also included a contribution to the Apartment Grants, development projects connected with housing and a grant to the Kiviõli Town Government

In total, from September 2010 to March 2013 apartment grants were given worth €20.9 million ($31 million)⁹.

**Administrative costs**

In 2011 grants for apartment buildings involved administration expenses of €137,707 ($191,400). Administrative costs to KredEx are lower for revolving loans than for previous grant-only schemes because most of the work is done by the banks; these may also have lower costs per account due to their existing loan business.

Banks provide monthly reporting about the loans given (to apartments). This includes: information about buildings; description of investments; Number of dwellings concerned; date of energy audit, savings; total investment cost; loan amount; supplementary bank loan; loan maturity; and loan interest rate / margin.

When applying for a Renovation Loan, applicants must submit an energy consumption report for three calendar years preceding the application for a loan. Together with the audit and building designs submitted, this enables assessment of the potential energy savings. An evaluation was also carried out by the Technical University of Tallinn (available only in Estonian, and not reviewed here).

### Impact/Evaluation

**Market Transformation**

Estonia has 17,000 multi-apartment buildings and 90% of the housing stock was built before 1990. 75% of the population live in multi-apartment buildings. The vast majority are in private ownership, and occupied by owners.

**Housing loan guarantee:** In 2011, KredEx issued housing loan guarantees worth €5.9 million ($8.2 million) on loans worth €45.2 million ($62.9 million). That year, the extant loan guarantees reached €31.1 million ($43.2 million). 558 young families purchased or renovated their homes in 2011 (loan guarantees of €3.3 million ($4.6 million). Since 2000, 14,133 young families and 69 tenants of restituted houses have improved their housing. The small growth of the housing market (17%) compared to the level of 2010 kept the housing loan guarantee volumes of KredEx fairly static (growth of 3.6%). Stricter terms for housing loans, an increase in payment risks and a remarkable fall in the value of guarantee property in 2011 kept the share of housing loans with a KredEx guarantee at 9.2% of the total volume of housing loans issued in Estonia in 2011 (compared to 10.4%)

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⁹ Adler, “Estonian Experience in Financing Renovation of Apartment Buildings.”
Apartment guarantee: In 2011, the apartment building guarantee portfolio reached €11.1 million ($15.4 million), growing by €1.5 million ($2.1 million) in one year. Since 2004, the total number of apartment buildings that received a loan for renovation with a KredEx guarantee was 583, the total amount being €23.7 million ($32.9 million). The existence of the Reconstruction Grants has somewhat increased the issuing of loans and loan guarantees for apartment buildings, but people remain careful about acquiring new liabilities.

Apartment loan: During 2011, a total of 167 loan agreements were concluded in the amount of €16.7 million ($23.2 million), the total investment with the help of the loan was €23.2 million ($32.2 million). The average loan amount of the loan agreements concluded in 2011 was €100,000 ($139,000), the average self-financing was 27.9% and the average length of the loan period was 15.2 years. In 2012 the average area of the buildings having used the loan was 2,251 m², the average number of apartments was 3710.

In total, 391 loan agreements in the amount of €34.3 million ($47.7 million) have been concluded since 2009. In total, with the help of loans, €45.2 million ($62.8 million) have been invested in apartment buildings, 939,176 m² have been renovated, and the living premises of 14,680 apartments and 33,700 inhabitants have been improved. Over 60% of loans are to a single county, Harjumaa, which includes Tallinn; 48.8% of the buildings supported are in Tallinn. However, about a third of the population live in the city, so this is not seen as a problem11.

Apartment grant: By the end of 2011, grants had been allocated to 266 apartment buildings, including a 15% grant to 162 apartment buildings, a 25% grant to 78 apartment buildings and a 35% grant to 26 buildings. In total this is €5.8 million ($8.1 million), with the help of which, a total amount of €31 million ($43.1 million) will be invested in apartment buildings. From September 2010 to November 2011 the average grant was €26,192 ($36,000)12.

Grant for energy audit of apartment buildings, building expert evaluation and building design: 1,038 grants were paid in 2011, totalling €491,000 ($682,000).

Reconstruction grants for restituted apartment buildings: In 2011, grants were paid totalling €92,000 ($128,000), to renovate 20 apartment buildings.

Large family grant: Home grants were issued to 290 large families in 2011, totalling €2.2 million ($3.1 million). The families had a total of 1,254 children. Since the grant’s inception, the total amount of grants paid to these families is €9.1 million ($12.6 million), which has helped 1,324 families, with 6,423 children.

By 2004 just under 2,000 jobs were estimated to have been supported through KredEx’s activities.

Energy savings

The main purpose of energy efficiency measures in apartments was to save at

10 Ibid.
11 Adler, personal communication
12 Adler, “Financing EE in Housing in Estonia.”
least 20% of energy in buildings up to 2,000m² and to save at least 30% of energy in buildings more than 2,000m². For apartment loans, the average predicted energy saving achieved with the reconstruction work is 39.3%.

Perspectives

Credit guarantee agencies and funds are common across most EU member states, but generally do not offer the energy efficiency schemes that KredEx does. KredEx offers an example of best practice in that:

- It has also won credibility with the commercial banking sector in a short period, becoming an established player in the local financial market.
- Loan programmes are easier to administer, with potentially lower administrative costs than grants.
- Funds stay in constant use due to the revolving model
- There are opportunities for smaller buildings as well as apartments

Various barriers are addressed by these schemes. Upfront costs are addressed, both through grant and loan schemes. The cost of borrowing is addressed through the loan guarantee scheme. Another problem addressed is the renovation of apartment blocks – this could not be done flat-by-flat, so schemes are designed for apartment associations on a whole-building basis. The needs of specific vulnerable groups are addressed e.g. large families, tenants in restituted buildings.

Lessons learned include:

- Preparation takes a long time – for Estonia it was 2 years;
- A legal framework is needed to support measures; KredEx benefitted from a 2001 Government directive giving it a permit to grant state aid and a new law (Enterprise Support and State Guarantees for Loans Act, from 2003) meaning that KredEx's loan guarantees are counter-guaranteed by the state. Before that banks had no guarantee against the bankruptcy of KredEx.
- Combining different measures is beneficial
- An all-round approach - awareness raising, promotion, state and local support, legal and financial framework – is the key to success

Problems / adaptations

Weaknesses are that:

- End-beneficiaries are still careful with taking the loan, and take-up has not been as rapid as had been hoped.
- There are many documents to prepare before a loan application can be finalised; it is much easier just to get a usual commercial loan (with no energy audit or building design documents needed).
- Reporting is burdensome, as banks report to KredEx, and KredEx has to report to the Ministry and CEB and the Ministry to the EC (Adler, personal communication).

Accompanying measures

KredEx runs well-funded media campaigns to promote awareness of energy efficiency and to encourage householders to invest in such renovations. Engagement methods have included: press conferences; seminars/workshops

aimed at end beneficiaries (builders, energy auditors, project designers, local municipalities); advertisements in newspapers/magazines; use of the internet (website, news, articles); direct mailing; leaflets/booklets; and cooperation with banks.

References


