



Energy efficient housing renovation in Estonia

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The Estonian Union of Co-operative Housing Associations
Chairman of the Board

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Tirana

ANDRES JAADLA



- 10.03.1965.
- Tartu University – Faculty of Law 1991
- Member of City Council of Rakvere 1993...-
- **Chairman of the Board Estonian Union of Coopertative Housing Associations 1997 ... - www.ekyl.ee**
- **Mayor of Rakvere 2002 – 2012,**
- The initiator of the European - Covenant of Mayors - in Estonia www.eumayor.eu , 2008 -2012
- Committee of the Regions – **member of the commission of Environment and Climate Change** - 2010 - 2012
- Vice President of UBC (Union of the Baltic Cities) - 2011-2013
- Director of Development – Rakvere Smart House Competence Centre since 2012...
- **Member of the Board - Housing Europe CECODHAS 2014 ...**
<http://www.housingeurope.eu/>

Current situation in Estonia



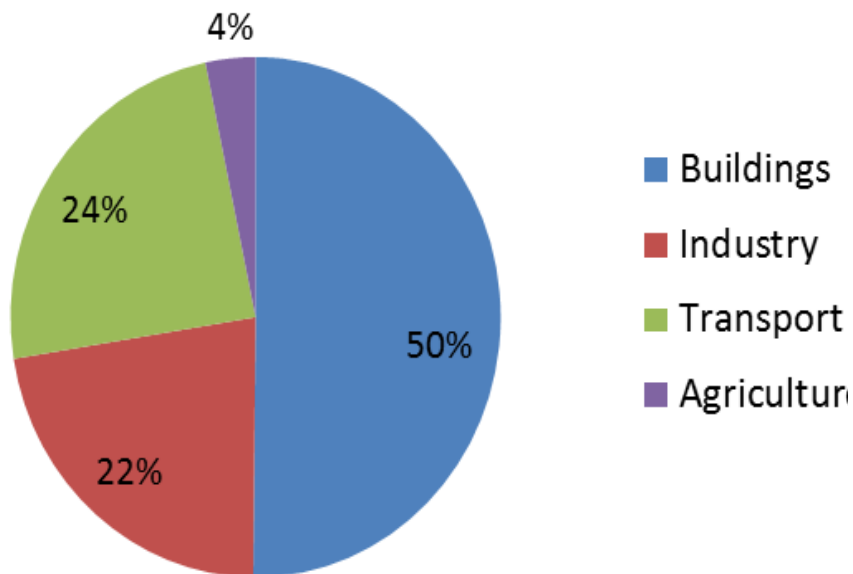
Population 1,34 million

Territory 45,227 km²

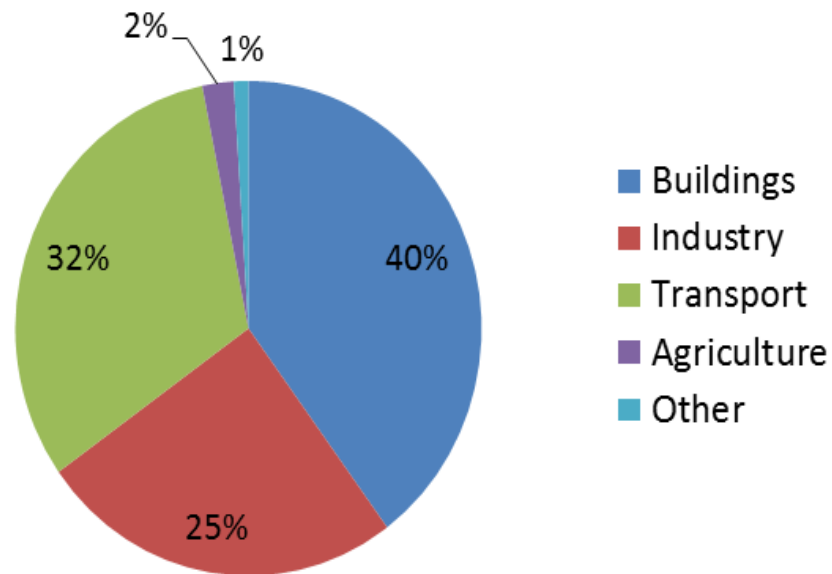
- 98% of all the apartments privatised
- 75% population living in apartment buildings
- Over 10000 apartment associations today
- 1 umbrella body – The Estonian Union of Co-operative Housing Associations (NGO)
- Wide range of different backgrounds and financial capacity of owners
- In all cases all apartment owners (private persons) are responsible for the condition of the building and decisions and payments

Energy in Estonia

Estonia, 2010

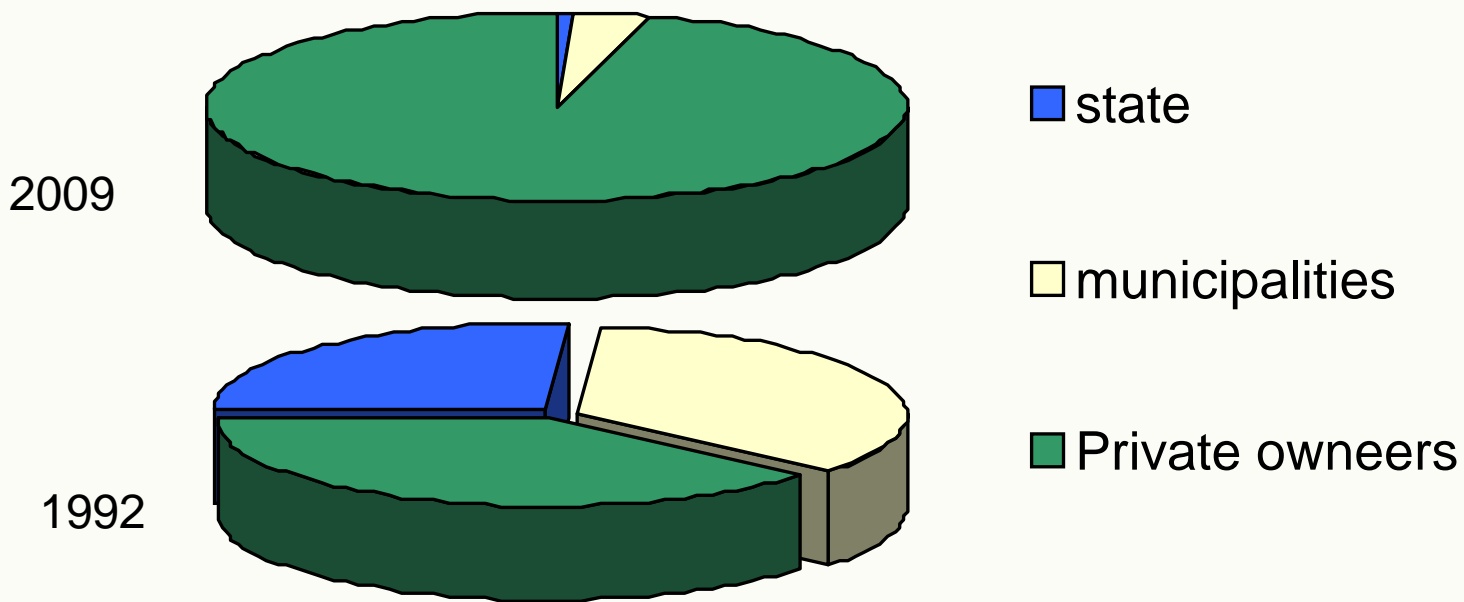


EU-27, 2010



http://www.energiatalgud.ee/img_auth.php/c/c1/ENMAK-Hoonete-uuring-20.09.2013.pdf

Ownership in apartment buildings stock





ÕISMÄE – Housing Steck winner project

Problems, needs and obstacles

- **Problems:**

- Low quality and level of energy efficiency of apartment buildings (average energy consumption per year in buildings which have not been renovated 200-250 kWh/m²)
- Energy issue is becoming a social issue

- **Obstacles:**

- **Low awareness and motivation**
- Lack of financing energy efficiency
- Limited technical knowledge on energy efficiency

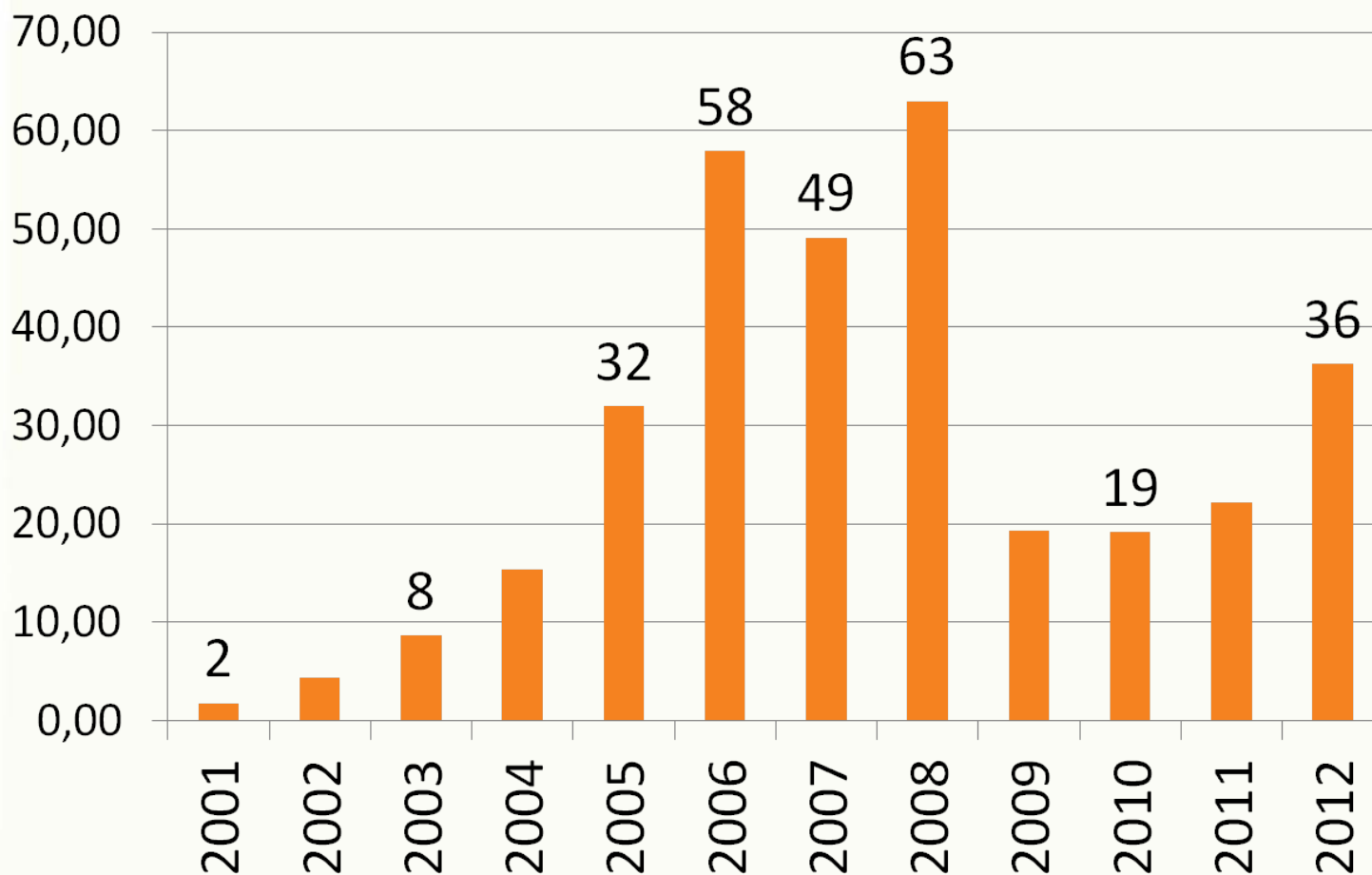
- **Need for information:**

- Financing and funding
- Technical aspects of energy efficiency

Measures for energy efficiency in housing

- **Studies about situation in buildings**
- Favorable loan from revolving fund
- **Grants (from state and municipalities):**
 - **energy audits, project design documents**
 - **renovation**
- Consultants to help by decision making
- Awareness raising campaigns, trainings for apartment associations
- **Best Practice Projects**

Loans for apartment buildings in Estonia, mio €



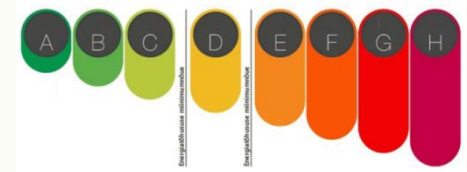
Renovation loan for apartment buildings

- Main purpose - **energy efficiency (at least 20 or 30% energy saving depending of the size of the building)**
- Energy audit is obligatory, renovation according to energy audit (by priorities)
- Loan maturity: up to 20 years
- **Interest: up to 4,5% fixed for 10 years, average 4%, from 2013 below 3,5%**
- No collateral is needed

Grant for reconstruction

35%, 25% or 15%

- **Fund for the grant from Green Investment Scheme (selling AAU)**
 - An **Assigned Amount Unit (AAU)** is a tradable 'Kyoto unit' or 'carbon credit' representing an allowance to emit greenhouse gases comprising one metric tons of carbon dioxide equivalents calculated using their Global Warming Potential
- In total 30 million € ~ 140 million € for investment
- Goal is to **renovate multi-apartment buildings completely**, to achieve:
 - energy saving from **heating costs, considering all requirements for indoor climate**
 - **Achieve higher energy class**
 - To increase use of **renewable energy**



Results (data: Fund KredEx)

Loan (€ 49 mio)

- Start **24.06.2009**
- By 31.12.2012:
- **512 contracts/493 houses**
- 18 281 apartments, 42 000 inhabitants
- **Ca 1 190 000 m²**
- Total € 49 mio
- Investment € 68 mio
- Average € 139 560
- **Expected saving 38%**

Grant (€ 24,2 mio)

- Start 30.09.2010
- By 31.03.2013:
- **597 appl./498 houses**
 - € 21,5 mio
- 577 pos decision/481 houses
 - €20,9 mio / Inv. € 81,8 mio
 - 15% € 4 mio 288
 - 25% € 6 mio 182
 - 35% € 11 mio 107
- **Ca 1 120 000 m²**
- Average 26%, 36 000 €
- **Saving 41,3%**

VÕIDU 42



VÕIDU 44



Supported works

- Thermal insulation of the roof
- Thermal insulation of the walls/facade
- Thermal insulation of the cellar roof
- New windows/staircase windows/outdoors
- **New heating system/renovation of the heating system**
- **Renovation of the ventilation system/new ventilation system**
- Installation of **renewable energy devices**
- **The fund supports comprehensive retrofitting**

Example of renovated building

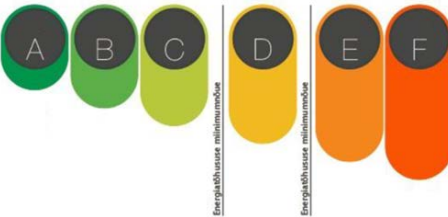
Rukki str 11, Tartu county

- 2 737m² (36 ap. 2011)
- Investment € 310 000, 113 €/m²
- Grant 35% € 108 500, 40 €/m²
- Credit € 201 500, 20 years
- Expected saving 65%



Savings after 1 year 45%

Plans for the 2014-2020

- Continue with similar measures for energy efficiency reconstruction of multi-apartment buildings:
- PLAN – ENMAK 2030 
 - Revolving fund for favori
 - Reconstruction grant - 40 %
 - Innovative e-solutions for multi-apartment buildings



The success of EKYL in promoting energy efficiency in Estonia

- Measures that target short- term savings and long-term savings – initiatives that provide timely and accurate information to different audiences
 - Information campaigns for housing associations on renovation of apartment buildings (components: conferences, seminars, round-tables, magazine, handbooks)
 - Information campaigns for apartment owners on individual energy consumption (components: regional seminars and round-tables, leaflets, newspapers, web-site)

WWW.EKYL.EE



TIRANA

Information campaigns for housing associations on renovation

ISS 17.06/1908

Elamu

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KÄIDUKORRALDUSE OLULISUSEST
EUROOPA KIIDAB EESTI ÜHISTUID
RENOVEERITUD MAJAD, MADALAD KULUD

Mida istutada kortermaja õ...

Kui Sinu kodu külmetab, siis...
Sina kaotad raha!

45%

voia küttekuludest aastas kuni

Etts on Põhjaaasia ja karmine ilm, aga energiat tarbita kuni 2 korda rohkem. See on ohtlikum, mille õigustamiseks saad ka Sinu arve summa arve – muuda oma kodu energiasäästlikuks!

Kui müü üh saada Sinu maja karmimisi viit viituna võivad küttesüsteemid küttesüsteemidele. Põhjaaasia ja karmine ilm on ohtlikum, mille õigustamiseks saad ka Sinu arve summa arve. Lisaks nõud jät Sinu võta oma korterimajade ühe viit küttesüsteemid. Kampaania kehtib kuni 28. novembrini.

lge viitend päev on täht Sinu rakuteid!

tel 683 5954, eidi@kredex.ee, www.kredex.ee

KREDEx

Elamu

orterühistute Liidu ajakiri | www.ekyl.ee

4 (85) 2013

KUI KAJA PÜSIVAD MEIE MAGALAD?
EESTI ELAMUMAJANDUSE TULEVIKUVISIOON
UUS KORTERIOMANDI JA ÜHISTU SEADUS

Maalid majadel

Training system

- Training system for specialists of apartment associations - 5000 person in year !
 - [Korterühistu juhi baaskursuse õpikeskkond](#)
- Advisory and consultancy services
(legal advice, accounting etc.)



E-map of the Estonian buildings

- E-map of the Estonian buildings. The map gives main data about the apartment buildings and their energy consumption and enables comparison of renovated and not-renovated buildings.
- Some examples of similar solutions could be found here: E-Map

<http://service.regio.ee/kredex/#e=535225&n=6529660&z=3&tsrv=0&l=mwh>

Key to success

- **Key to success: networking, information to different target groups via different channels of information**





Thank You!

Andres Jaadla

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ESTONIA

www.ekyl.ee