



Renovation of multi apartment houses and development of district heating in Estonia-examples

Climate Conference For Finnish Municipalities

Andres Jaadla,

Chairman of Board, Estonian Union of Co-operative Housing Associations

Board member of Housing Europe

Member of the Rakvere City Council,

Mayor of Rakvere 2002 -2012

17.05.2018

Andres Jaadla

My background information

- **ANDRES JAADLA**
- **My municipal background**
- Member of City Council of Rakvere 1993 -...;
- **Mayor City of Rakvere** 2002 – 2012,
- 2008 - ... The **initiator and promoter of the European - Covenant of Mayors** in Estonia and Europe www.eumayor.eu 2016 – Nominated CoR Ambassador of the European - Covenant of Mayors
- **Committee of the Regions – member of the commission of Environment and Climate Change (ENVE)** 2010 – 2012, 2015 ...
- **Committee of the Regions - Covenant of Mayors Ambassador 2016..**
- CoR Rapporteur „EU environment law: improving reporting and compliance“ 2016
- CoR Rapporteur „ **Space Strategy for Europe** „ 2017
- Coordinator CoR ALDE political group in CoR ENVE commission.
- **Vice President of UBC (Union of the Baltic Cities)-** 2011-2013
- Member of the Advisory Board **UBC Sustainable Cities Commission** 2015 - ...
- **Director of Research & Development (R&D) Smart House Competence Centre** (first nerally Zero Energy Building in Estonia) 2012 - 2015



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My background information

- **ANDRES JAADLA**
 - **10.03.1965.**
 - **Tartu University – Master of Law , 1991**
 - **My housing background**
 - **Founder and Chairman of the board - Estonian Union of Housing Cooperatives EKÜL (largest Housing Organisation In Estonia) - 1996. – ..**
 - **Member of the board - BUCHA - Baltic Union of Housing Cooperatives 1999...**
 - **Member of the UNECE Housing and land management UNECE Real Estate Market Advisory Group (REM) 2015 - ...**
 - **Member of the board – Housing Europe – 2014 - ...**
- Housing Europe – Largest Housing organisation in Europe of 42 national & regional federations gathering about 41.400 providers in 22 countries who manage over 25 million homes)



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The Rakevere Energy Agency: A story of growth

Ceremony

mayors.eu

ter

August 2012

Covenant

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Rakvere, Estonia

2009, Rakevere became the first municipality in Estonia to adopt a Sustainable Energy Action Plan (SEAP) to meet EU climate and energy targets. This SEAP, which fostered the emergence of an energy efficiency movement

Working towards a shared vision for 2050

Implementing or even going beyond the EU 2030 climate and energy targets

- At least **40%** lower CO₂ (and possibly other greenhouse gas) emissions by 2030 through improved energy efficiency measures and greater use of renewable energy sources
- Enhanced **resilience** to the impacts of climate change
- Increased cooperation with fellow local and regional authorities within the EU and beyond to improve **access to secure, sustainable and affordable energy**

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Covenant of Mayors Ambassadors



Covenant of Mayors
for Climate & Energy

www.eumayors.eu

CITY OF RAKVERE

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We made a plan ...

SUSTAINABLE ENERGY ACTION PLAN



6 steps to smart and sustainable development of Rakvere

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SUSTAINABLE ENERGY ACTION PLAN (SEAP) IN JUNE 2009

District heating – from fossil fuels to biofuels

Heat consumption – efficient use in municipal and residential buildings, reconstruction and insulation of buildings

Water consumption – efficient use in municipal and residential buildings, possible use of green electricity in this sector.

Street lightning – Green energy, efficiency and green electricity in this sector.

City planning – sustainable development, car free movement, alternatives to motor vehicles.

Urban transport – from fossil fuels to biofuels

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Heat consumption –

efficient use energy in
municipal and residential
buildings, reconstruction and
insulation of buildings

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Creative people converge to creative
cities and regions

The concept of „Smart City“

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SMART CITY RAKVERE

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JAN & KEN 0



SUSTAINABLE CITY PLANNING

CONCEPT OF SMARTVERE

Etapi peamiseks eesmärgiks on kujundada olemasolev linnaruum veelgi sidusamaks ning kasutajasõbralikumaks.

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Rakvere Smart House/Smart City Hall



Smart City Hall in Rakvere

- The new building of the competence centre will be the **first public near-zero-energy building in Estonia** that utilizes different building automation technologies and has **been engineered from start to finish using the BIM methodology.**
- Different **sustainable energy sources, like solar panels and geothermal heating pumps** will be used for the heating of the building.





EESTI-ŠVEITSI KOOSTÖÖPROGRAMM
ESTONIAN-SWISS COOPERATION PROGRAMME

Rakvere Posti 29



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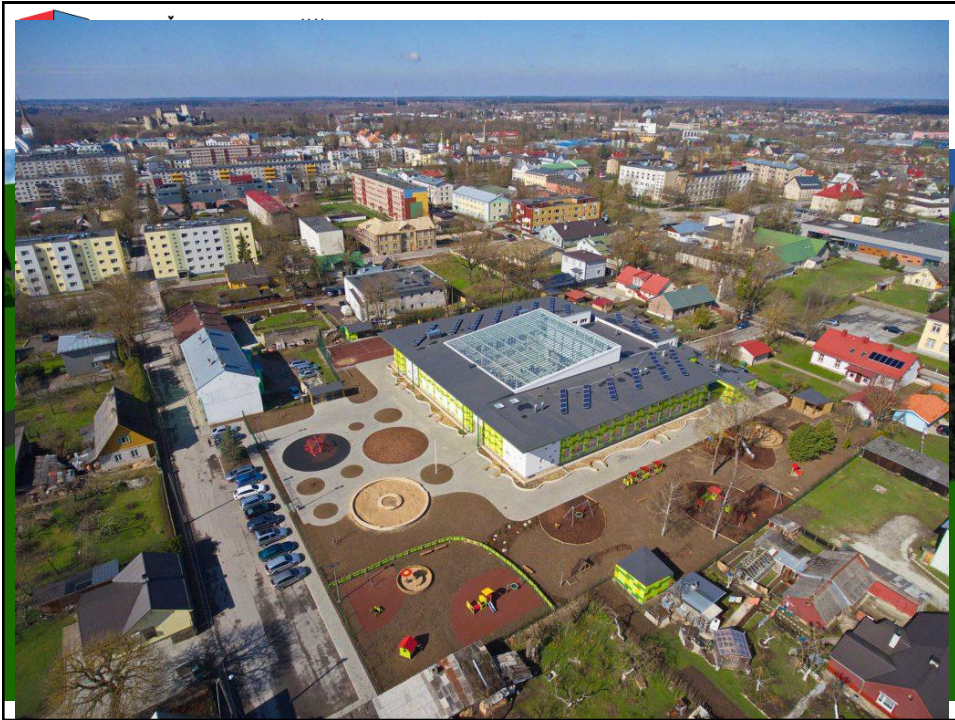
Rakvere Posti 29



Built in 1980- for 280 childrens

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Insulation of multiapartment buildings – Housing pilot project in Rakvere

Seminari street in Rakvere



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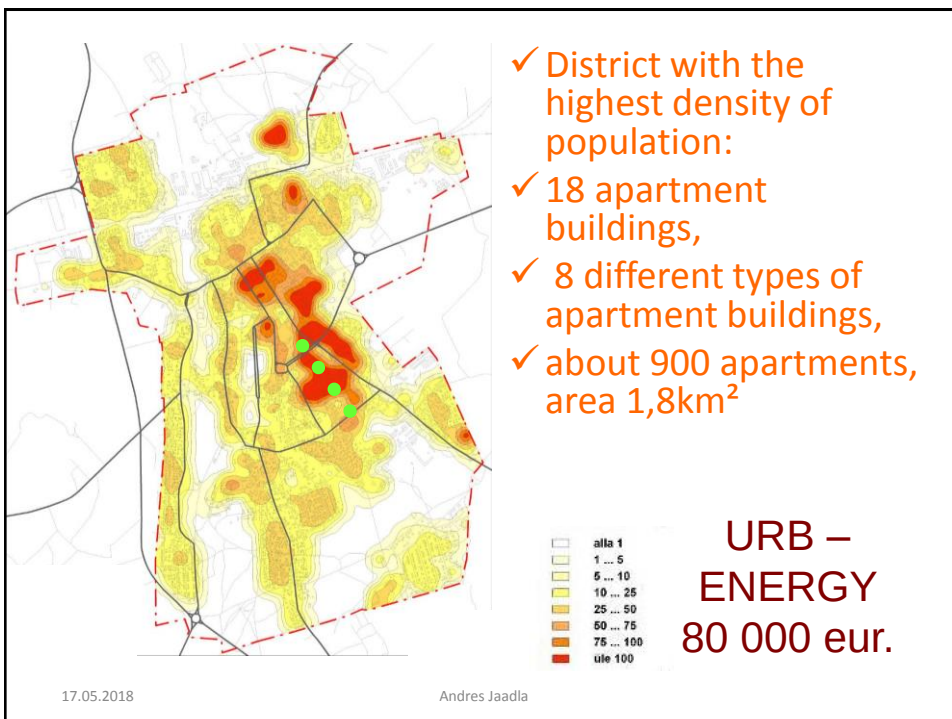
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Approx. 70% of Rakvere's citizens live in multi-apartment buildings.

The city produces ca 16 000 tons of CO₂.

CO₂ emissions would be diminished by 8,2% if all multiapartment buildings went through insulation works of houses





Architectural competition

VÕIDUTÖÖD

„Elementaalne” autorid: Kai Süda, Diana Taalfeld ja Risto Parve OÜ KARISMA Arhitektid

„Linna Metsa” autorid: Kadri Klementi, Aet Ader, Grete Soosalu, Kaidi Õis, Karin Tõugu, Mikk Meelak ja Kalle Komissarov



OSTUAUHIND: „Roheline Konstruktor” autorid Mihkel Tüür, Ott Kadarik ja Villem Tomiste Arhitektuuribüroo KOSMOS OÜ



OSTUAUHIND: „Liinid” autorid Eva Kedelauk, Kristel Niisuke, Maie Raud, Kristiina Remmelkoor, Olav Remmelkoor ja Siim Tiisvelt



OSTUAUHIND: „Fake Forest” autorid: Lea Järve- Eronen, Erik Joasare ja Tiina Tuulik Arhitektuuribüroo Järve & Tuulik

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IDEAS



OSTUAUHIND: „VOISTLUSTÕÖ Baruto” autorid Anna-Liisa Unt, Martin Mc Lean, Robert Kähr ja Tiit Sild Sport OÜ

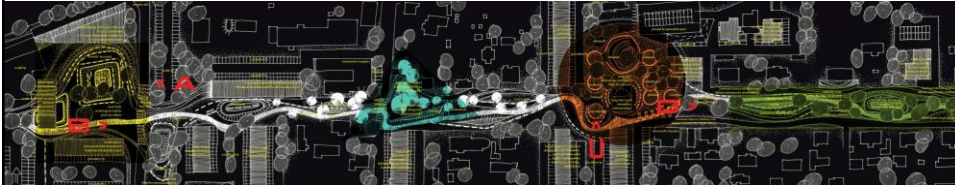
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Võistlustöö „Elementaalne” autorid: Kai Sõda, Diana Taalfeld ja Risto Parve OÜ KARISMA Arhitektid

SEMINARI tn.

strategy “A”



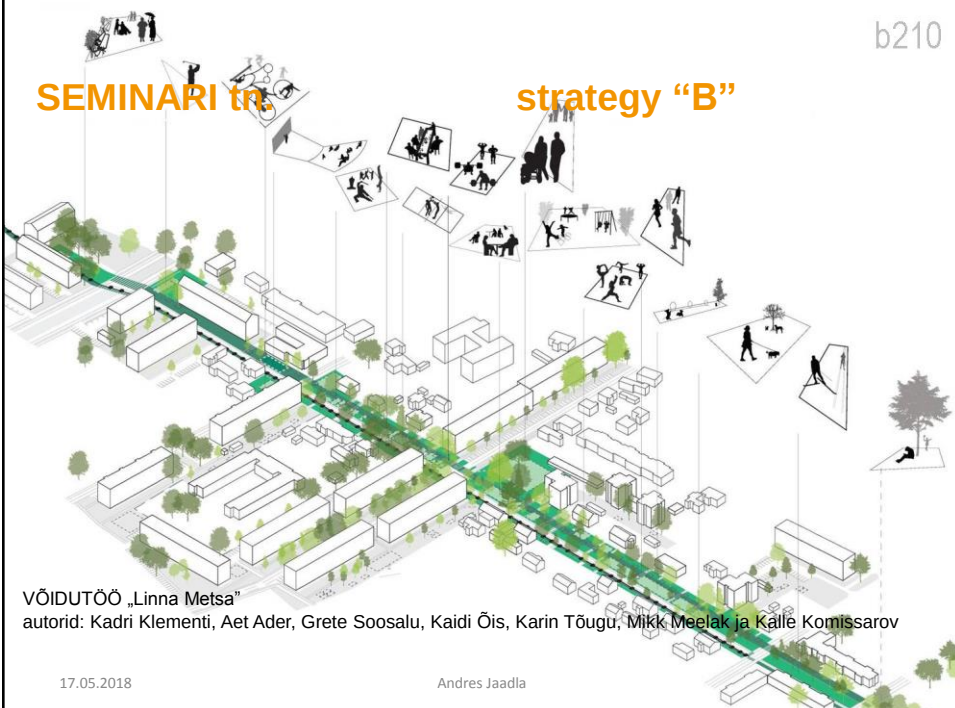
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SEMINARI tn.

strategy “B”

b210



VÕIDUTÖÖ „Linna Metsa”

autorid: Kadri Klementi, Aet Ader, Grete Soosalu, Kaidi Õis, Karin Tõugu, Mikk Meelak ja Kalle Komissarov

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Before



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Plans

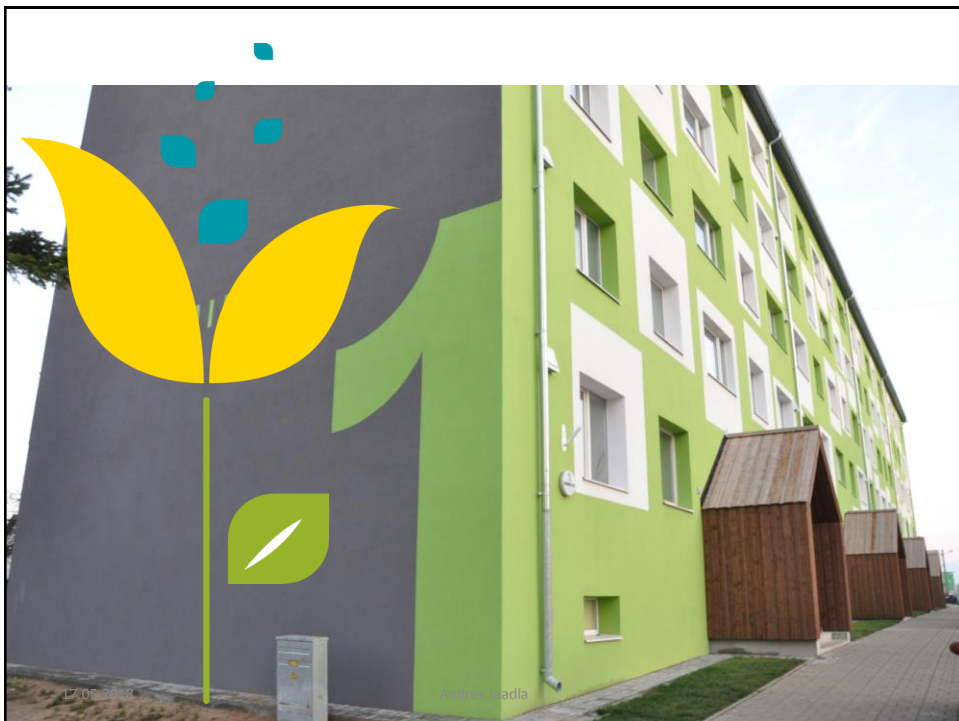


NU-NU Arhitektuur

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2018 Rakvere



2018 Rakvere



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The Estonian Union of Co-operative Housing Associations (EKYL)

... is an independent organisation that brings together over

ap|

EKY



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Trainings in EKYL's training centre

to offer its members a **universal,
professional,
high-quality service - legal**



Trainings in EKYL's training centre

Today the housing managers
study in 160 – hours courses
which have **official licence from
the Ministry of Education.**

Manager of a housing co-operative
is a new profession in Estonia

GE UN Charter Center in Estonia



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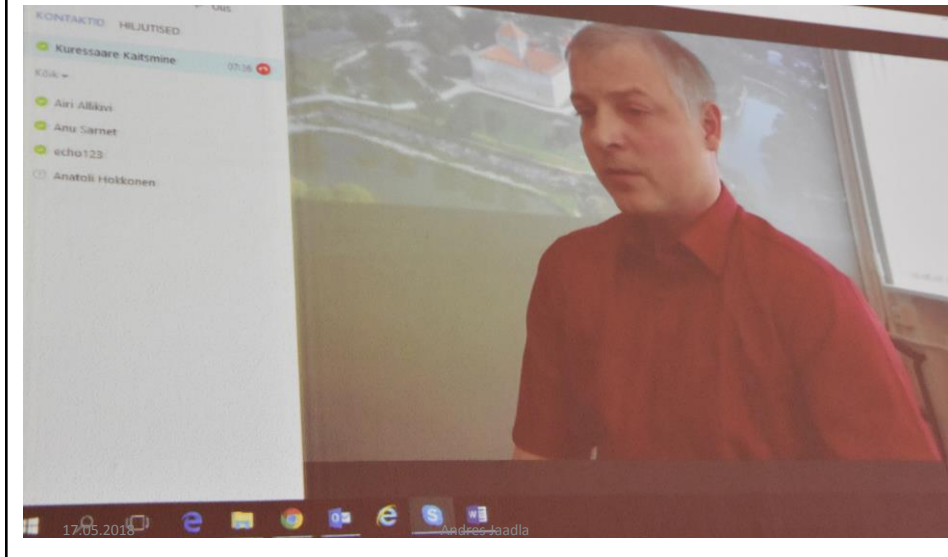
e- training



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e- training



EKÜL SUMMER UNIVERSITYS



Development of legislative and other acts of law



Publi **Elamu** materials, ne

Eesti Korteriühistuste Liidu ajakiri | www.ekyl.ee 3 (91) 2015

KUIDAS ELAD, EUROOPA?
REKONSTRUEERIMISSOOVITUSI TÕÜPPROJEKTI JÄRGI EHIATATUD KORTERMAJALE
MIDA TEHA, KUI MAJAS LAAMENDAB TERRORIST?

Kõige kaunim kortermaja, eri rahvuste kodu

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Elamu
LAGUNEVAID ASUMID

Elamu
KES TULE JA TÄNA TÕHETE VÄRVISET LUKKUMISED

Unite members, exchange of experiences



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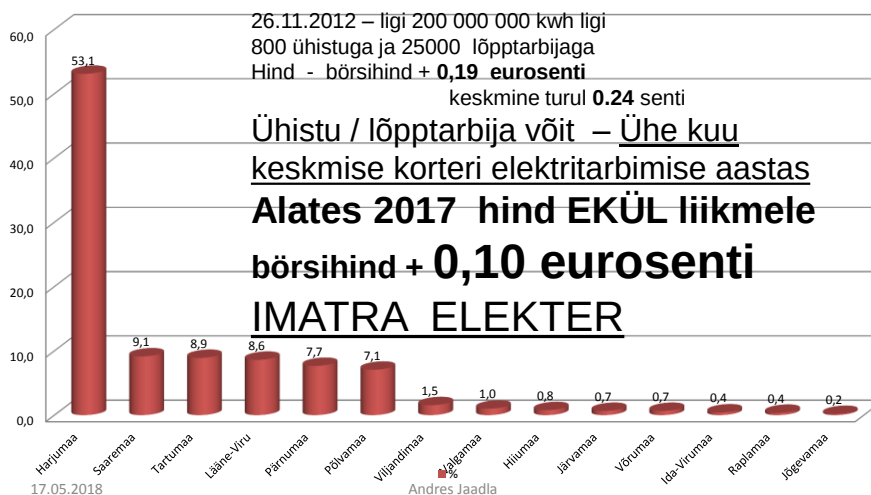
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Free electricity market In Estonia



ENERGY CONSUMERS IN ESTONIA pay together 2012/2014

Elektri ühisostus osalevate korteriühistute aktiivsus protsentuaalselt piirkonniti



Reconstruction grant



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Tallinn- Mustamäe tee 181 hot water for 144 appartements



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TARTU H2020 SMART CITY PROJECT



SMART HOME SOLUTIONS

- **Smart Home Management** – energy use, indoor climate, alarms etc
- **Sensors** – movement, smoke, CO₂, air moisture, temperature etc
- **Real-time information** – situation at home; outdoor climate; road conditions; city environment; availability of rental cars and bicycles

TARTU - H2020 SMART CITY PROJECT.



Welcome to Estonia 2018 !

100 Years of Republic of Estonia

6 – 8 June 2018 Tallinn, Estonia

**General Assembly Housing Europe,
conference and study visits**

**Open meeting of the HE Ad-hoc
working group for Housing
systems in transition**

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**HOUSING
EUROPE**



... goes to Tallinn

6-7-8 June 2018



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District heating from fossil fuels to biofuels

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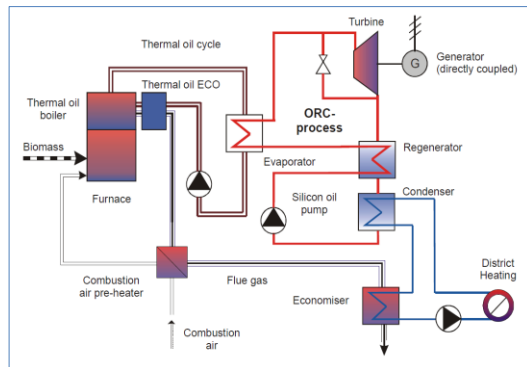
District heating – 100% from fossil fuels
(russian gas)to biofuels (wood chips)



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ORC (Organic Rankine Cycle)



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Reference of Technical Figure: <http://www.bios-bioenergy.at/en/downloads-publications/chp-orc-process.html>

Rakvere heat input 2016

The selling price of heat has decreased
68,86€/MWh -> 56,63 €/MWh



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Estonian Design Awards 2012
Graphic Design / Packaging / Nomination

ADC* Europe Awards 2013
Graphic Design / Packaging / Nomination

- Moe 1886 Old World vintage vodka
- Vodka, with a taste that preserves one period in the history of European vodka
- Smooth, unfiltered vodka, with a nature taste sensation
- Represents a classical hand-crafted and individualistic method of making vodka
- Produced with the methods perfected in the 19th century
- Without being familiar with any of Estonia's classical manor vodkas, the contemporary vodka world can only be partly evaluated

The world's consumer trends for 2016 place great value on "real things and real tastes". This has been true of Estonian vodka traditions since time immemorial. And it is not important how long it has taken the world to get to where we have been since 1886.



Andrus Kaasik



A product awarded with an honourable mention at the contest "Best Estonian Organic Product 2013"

We have stong winter in Estonia...



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www.MOEVODKA.EE

on Moes.

Sustainable and smart development of Rakvere

2009 – 2018

43 - financed project applications.

Investments **2009 – 2016**

ca 47 173 363 EUR

- Almost the total amount of **three year city budgets** !
- 2012 – most investments per inhabitant **268 EUR** in Estonia!

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Saving

Energy bill - well done...!



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Thank You !
Your Ambassador of Covenant of Mayors



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Even large things start from
small matters



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