

The European Union – Turkmenistan Sustainable Energy Days

International Conference

Sustainable Energy in Turkmenistan: prospects and challenges

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Energy management systems in municipalities – from obligation to practical implementation (experience of Riga city, Latvia)

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Obligation by law

Article Nr.5 of Energy Efficiency Law

(2) Local governments of State cities shall introduce and maintain a certified energy management system.

Entry into force: 29.03.2016

[Link: Energy Efficiency Law](#)

Energy Management System (EMS) according ISO 50001 standard

- Implementation
 - Description of all procedures;
 - Development of EMS management board;
 - Decision of city council about implementation of EMS;
- Certification
 - Internal audit;
 - External audit;
- Reporting to state

Information about energy consumption gives you possibility to make decisions for improvement.

Creation of EMS in Riga City

First setup of EMS in Riga

- List of schools and kindergartens;
- Collection of electricity, heat, gas, water consumption data;
- Energy/water consumption benchmarks;
- Potential savings;
- Description of EMS processes;
- Creating EMS management board;
- Internal coordination;

Political decision of City Council

- Planned savings 5% of energy related costs – promised to politicians;
- Involved 355 institutions;
- Director of every institution is responsible for EMS integration;
- List of energy efficiency measures which must be implemented in each institution;
- Financial, building maintenance and educational department leaders are involved in EMS management board;
- Riga Energy Agency implements EMS in Riga;

Certification of EMS

- Internal audits
- Yearly report
- External audit of EMS
- ISO 50001 Certificate

Energy efficiency budget of mEUR 4

- Change of lighting to LED
- Installation of PV for self consumption
- Changing fossil fuel heating systems
- Planting trees

Summer 2021

December 2021

March 2023

May – Dec 2023



Funded by
the European Union

Most important part!

Involvement of employees (20 000+)

Involvement
of
department
heads

Support of
Mayor

Training of staff

Responsibility
of director of
each
institution

Visits of
institutions

Monthly
energy
consumption
reports

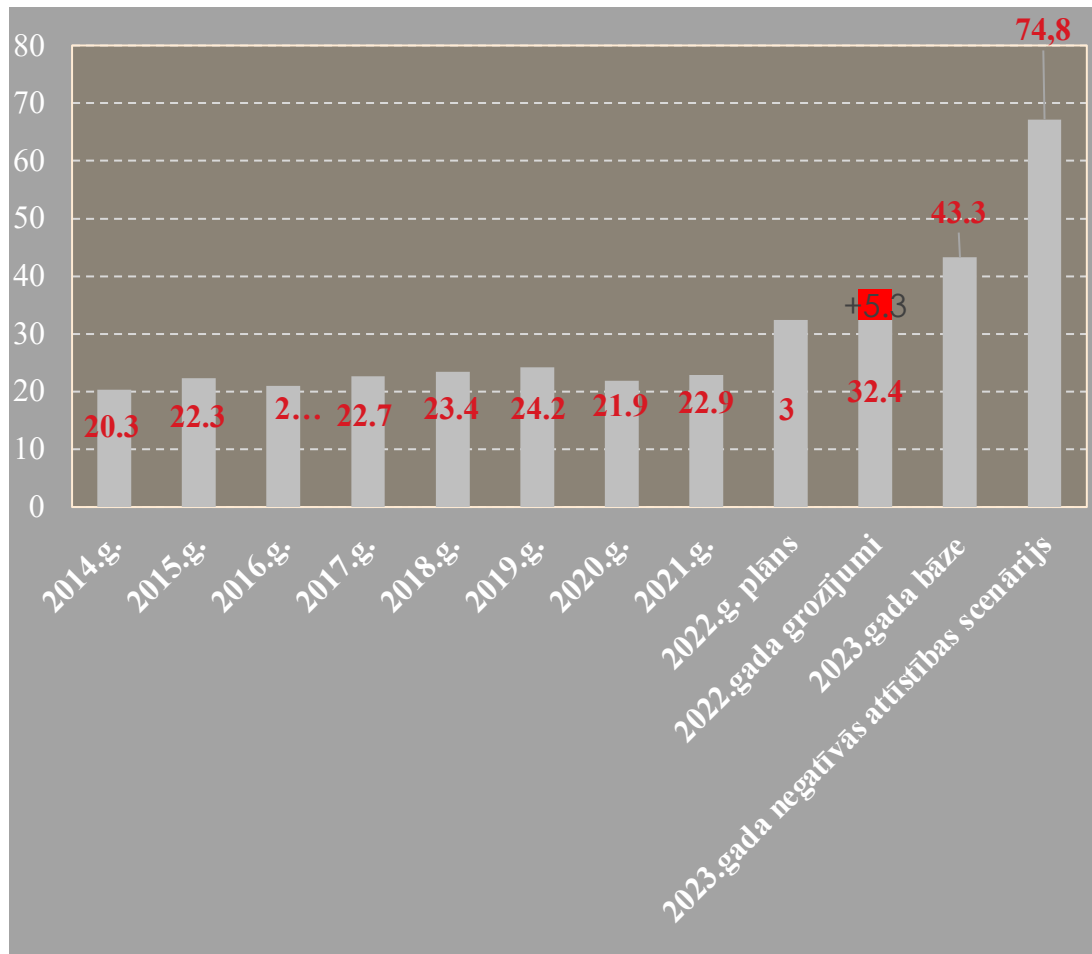
Mandatory
requirements

Return of
savings

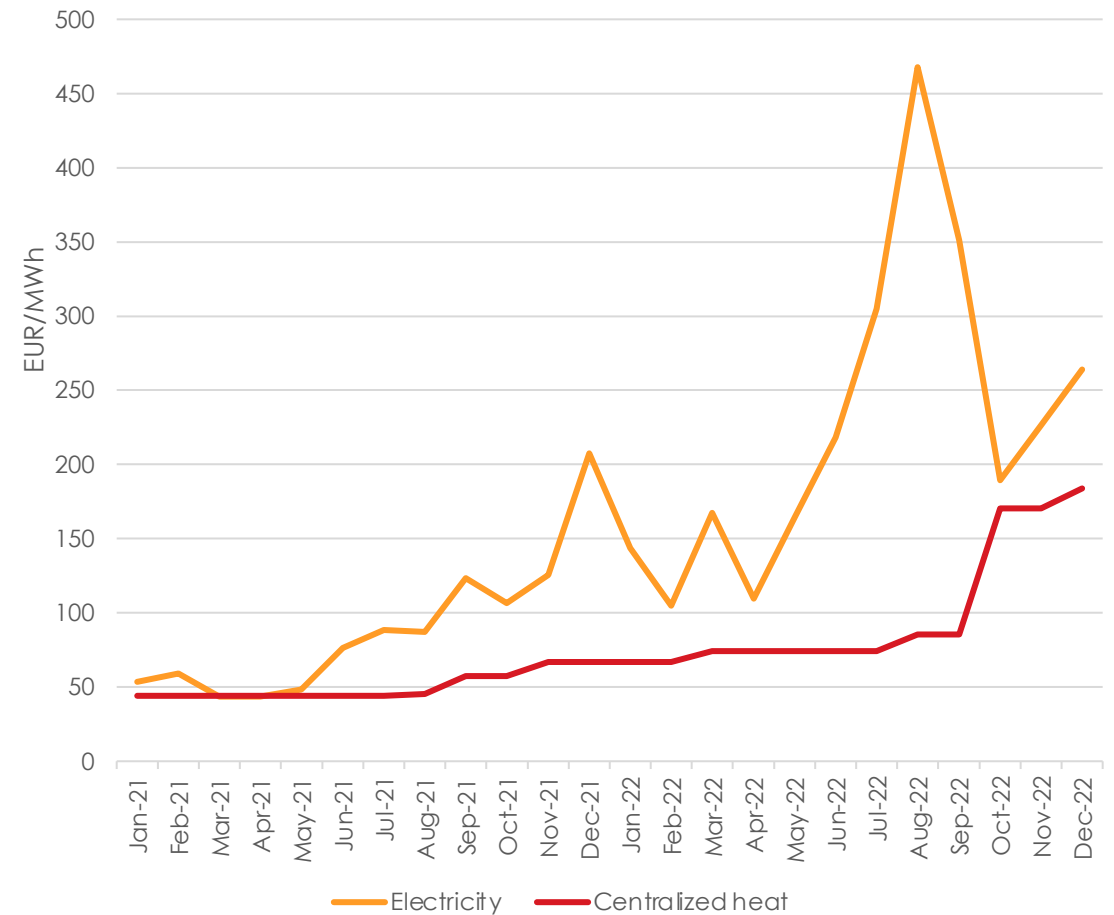
Benchmarking
of institutions

Energy price crisis 2022

Energy related budget of municipality



Energy prices jan.2021 – dec.2022



Energy efficiency measures for everybody in municipality

Mandatory 15% energy consumption savings for all municipal bodies

Heating and cooling temperature setpoints

Apkures režīms	Apkures sākums/Beigas	Neatīlas dienas
Lietošanas laiks 1	07:00-17:00	Pi, Ot, Tr, Ce,
Lietošanas laiks 2	07:00-19:00	Pk
Lietošanas laiks 3	07:00-13:00	Se, Sv
Nāktis t samazinājums	20.00 – 06.00 (16° C)	Pi, Ot, Tr, Ce,
Neatīlas nogales t samazinājums	Pk 20.00 – Pi 05.00 (16° C)	Pk, Se, Sv

Changed incandescent and halogen bulbs



Defined setpoints for ventilation systems



Dimmed and reduced working hours for streetlights



Municipality's budget
assignment in 2023

4 MEUR FOR ENERGY SAVING MEASURES

- Replacement of inefficient lights in buildings against LED lights
- Installation of PV panels on building roofs for self consumption
- Gas boiler replacement with environmentally more friendly heat source systems
- Planting of more than 4 000 trees in the city



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THANK YOU!