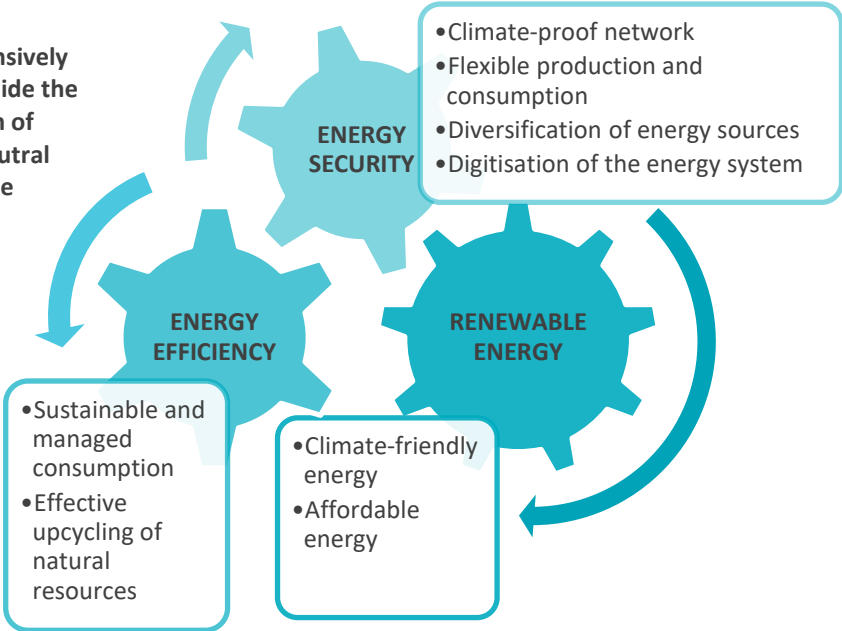


GENERAL GOAL OF ENMAK 2035

The general goal of ENMAK2035 is to deal comprehensively with the challenges of energy supply and demand, guide the development of the energy economy in consideration of climate policy goals, ensure a reliable and climate-neutral energy supply, minimize social costs and maximize the benefits of the energy economy

REACTION OF THE SOCIETY

1. Energy not consumed is energy without costs! Smartly consumed energy is an additional capacity resource
2. Let’s move together from fossil energy to the more affordable and sustainable renewable energy!
3. Local energy generation solutions (incl. community energy), battery parks, and storage devices are future-proof solutions!



CITIZEN ACTIVITY

1. I consume wisely - managed consumption is more affordable and enables additional income
2. I save – saved energy is generated energy! (saved energy creates resources for generating renewable energy)
3. I look for new solutions (for example, possibilities for using waste heat)
4. I use fossil fuels less and less
5. I generate and consume environmentally friendly renewable energy
6. Local (as well as community-based) climate-friendly and neutral energy solutions ensure energy security in the best way

OBJECTIVES

In order to achieve energy independence in Estonia, we must:

- generate renewable electricity in Estonia in a volume that is at least equal to Estonia's own annual final consumption
- establish energy networks and external connections sufficient to ensure security of supply and affordable energy prices
- encourage the generation of energy for self-consumption in buildings and using climate-neutral solutions for heat generation
- increase the use of residual heat and electricity in heat management
- reduce dependence on fossil fuels
- to ensure a sufficient volume of controlled capacities in the power system



MARKET ORGANISATION

In order to ensure security of energy supply in Estonia, we must:

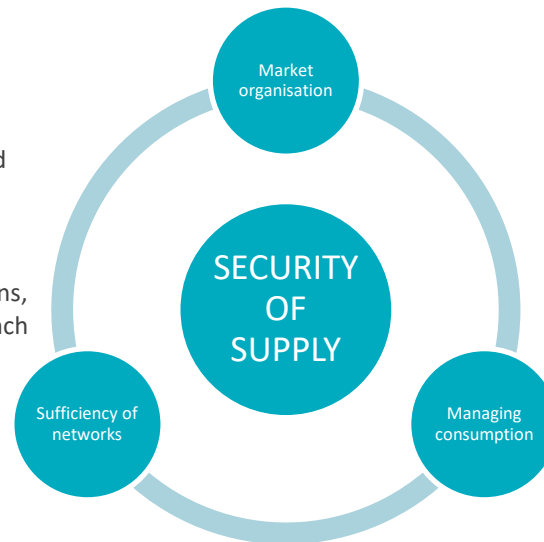
- implement a national electricity flexibility strategy and update the national security of supply principles
- mitigate the risks associated with the generation and use of renewable electricity
- increase the implementation of storage solutions, support the growth of storage know-how, launch hydrogen production
- procurement of system services on a market basis
- ensuring managed capacities, introducing a reserve capacity mechanism if necessary



NETWORKS

In order to ensure adequate security of supply for energy networks, we must:

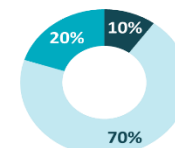
- develop the network service financing model, i.e. fulfil the development obligation regarding production
- expand the electricity system balancing market, including creation of power system frequency control markets
- strengthen the infrastructure of the transmission and distribution network, improve the reliability of the electricity network through its renovation and expansion (weather resistance, connecting to the Central European synchronous area), more effective use of flexibility mechanisms and monitoring of the networks



Final consumption of energy from renewable energy

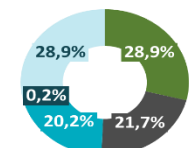


Final consumption of electricity from renewable energy



PRODUCTION

- Biomass hydro
- Wind
- Sun



POWERS

- Manageable
- Storage
- Solar energy
- Hydro energy
- Wind energy



CONSUMPTION

In order to manage electricity consumption, we must:

- Create a market model to enable independent aggregators to operate at all market levels
- Include consumption management to manage network constraints and take the resource into account in network development plans
- Encouraging the implementation of energy sufficiency principles

INVESTMENTS

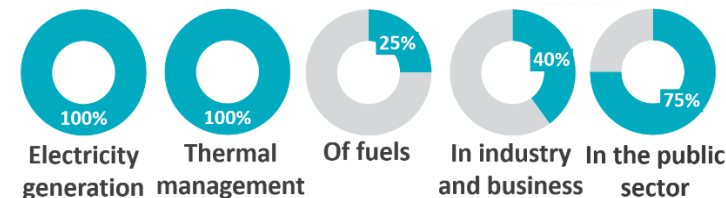
All of this requires investments in the following over the next 5–10 years:

- Storage: €1.186 billion (1,252 MW), (study of climate-neutral electricity generation)
- Batteries: 860–2,000 MW 2030 -> €170–441 million
- Additional investment needs of distribution networks over the next 5 years in total
 - around €300 million (2028-2030)
 - €130–355 million (2050)
- Connection between Western Estonia and Latvia: €10–74 million (2030)
- Development of hydrogen technologies: €49.1 million (2026) (transport, chemical industry) + €67 million (emissions trading) (hydrogen road map)

OBJECTIVES

For the success of renewable energy, it is necessary to increase the share of renewable energy:

- to produce the total electricity of all Estonia's annual final consumption electricity locally and from renewable energy sources
- to use renewable energy sources and waste heat as much as possible for heating and cooling buildings



ELECTRICITY

In industry and business

Of fuels

Electricity generation

Thermal management

In industry and business

In order to fully switch to renewable electricity, we must:

- build solar parks and onshore and offshore wind farms
- build storage devices and encourage/preferentially develop local consumption to reduce the network load and maximise local resource use



COMMUNITY

In order to create strong energy communities, we must:

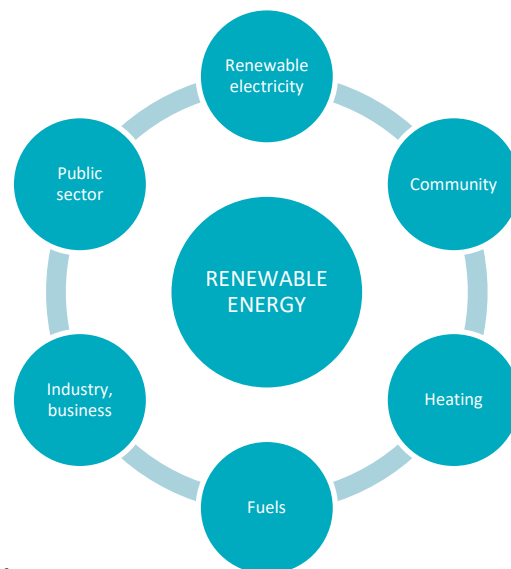
- support the creation of communities to accelerate the deployment of local electricity generation



FUELS

In order to increase the share of renewable energy in fuels, reduce dependency on natural gas, and increase the use of biogas, we must:

- review the regulation on the taxation of alternative fuels and the market organisation that allows different fuels to remain on the market
- promote the decarbonisation of the gas network (strategic reserves, transition plan to green gas, market organisation suitable for the use of gaseous fuels, specifying the role of local fuels, biomass roadmap)
- develop support measures for biogas and biomethane facilities
- develop hydrogen technologies



INDUSTRY, BUSINESS

In order to increase the share of renewable energy in the industry and the business sector, we must:

- promote industries that generate energy locally for their own use and for regional consumption, which support energy affordability and security of supply (upcycling of energy)



In order to switch to renewable sources in heating and cooling and to the use of waste heat and heat storage devices, we must:

- promote the renovation of the existing district heating and cooling systems and the transition to climate-neutral solutions via complete renovation
- review taxes and regulations
- enable the more widespread deployment of waste heat
- foster the implementation of pilot projects



PUBLIC SECTOR

In order to increase the share of renewable energy in the public sector, we must:

- increase the competence of local specialists
- plan to reduce the carbon emissions of heating and cooling at the local level (local energy and climate plans)
- support the energy consumption management of local governments

INVESTMENTS

This requires investments in the following over the next 5 years:

- wind farms €5 billion, solar parks €543 million (RePower), public support €100–200 million
- district heating €18,789 million in 2050; local €18,027 million in 2050; electricity €19,066 million, technical neutral €17,837 million;
- reconstruction of residential buildings €1,583m; in the business sector €2,915m, in the public sector €3,149m (RePower); renovation support need (2040) €3,479 million
- development of biomethane infrastructure €750m (RePower)

OBJECTIVES

In order to make energy use more efficient, we must manage:

- efficiency of energy use (increase it)
- final consumption of energy and its volume (decrease it)
- cumulative energy saving (increase it)



CONSUMER

In order to foster energy-efficient behaviour, we must:

- review the principles of the taxation of energy consumption
- increase consumer awareness of energy efficiency and promote investments in energy efficiency



BUILDINGS

In order to improve the energy efficiency of buildings, we must:

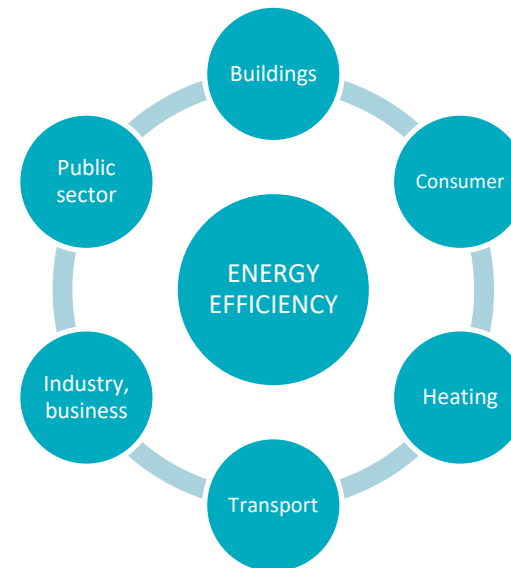
- combine renovation programmes with district heating and cooling renovations
- develop a financing model for energy efficiency/renewable energy systems (e.g. mortgages, property tax)
- create regional/local advisory centres/advisory points for advice on the energy efficiency of buildings
- support local governments in increasing the energy efficiency of buildings



TRANSPORT

In order to foster energy-efficient transport, we must:

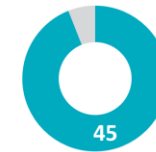
- tax means of transport on the basis of emission
- reconstruct the infrastructure (street lighting, pedestrian tracks) and develop the infrastructure for the integration of light traffic into the transport network within the settlement
- develop economical and innovative shared and demand-based transport in cooperation with local governments
- plan and build a smart charging infrastructure for electric cars in a timely manner



INDUSTRY, BUSINESS

In order to foster energy-efficient entrepreneurship, we must:

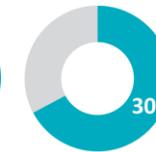
- encourage the production of renewable energy at factories/industries
- support energy management systems in companies



Consumption of primary energy (TWh), 2030



Consumption of primary energy (TWh), 2050



Final consumption (TWh), 2035



Cumulative energy savings (TWh) 2030+



HEATING & COOLING

Energy efficient heating & cooling:

- develop support measures for the introduction of waste heat in district heating networks and implement pilot projects
- develop support measures to increase the energy efficiency of boiler plants (including cogeneration plants)
- encourage the renovation of the existing district heating and cooling system
- continue to support the preparation of heat management development plans



PUBLIC SECTOR

In order to achieve an energy-efficient public sector, we must:

- implement energy management systems in public sector institutions
- develop support measures for the reconstruction of public

INVESTMENTS

This requires investments in the following over the next 5 years:

- Reconstruction of buildings
 - residential buildings €1,583 million
 - business sector €2,915 million
 - public sector €3,149 million
 - CF 2021–2027 renovation support €1,061 million
- Energetics
 - Reconstruction of district heating €50 million in residential buildings
- Transport
 - electrification of highway transport €14 million