

The Joint Baltic Nordic Energy Research Programme



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The Joint Baltic Nordic Energy Research Programme



REPUBLIC OF ESTONIA
MINISTRY OF ECONOMIC AFFAIRS
AND COMMUNICATIONS



Ministry of Economics
Republic of Latvia



MINISTRY OF ENERGY
OF THE REPUBLIC OF LITHUANIA



Nordic Energy
Research

The Joint Baltic Nordic Energy Research Programme

The overall aim of the programme is to “*promote energy research and analysis in the Baltic States and inspire intra-Baltic and Baltic-Nordic co-operation*” by using the total funding of 22 MNOK (\approx 2 MEUR).

- Funding of 9 research projects.
- Funding of 4 mobility projects.
- In total over 100 individual researchers/PhDs participating in different projects.

Background

Connecting Energy Challenges with Energy Research – Baltic opportunities in Nordic Energy Research

- Conference in Kaunas, Lithuania in 2016.

Baltic Energy Technology Scenarios 2018

- Scenario analysis from 2018 covering the Baltic energy system until 2050.



Background

- Steering group meeting I, Hotel Bergs 22.02.17.
- Letter from Latvia 13.06.17
- Consultations throughout 2017-2018
- Last signature - Friday the 26th of October 2018.



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Aims:

- Action no 1:
Promotion of intra-Baltic and Baltic-Nordic research projects with participation of Baltic researchers
- Action no 2:
A Baltic-Nordic Doctor of Philosophy (PhD) collaboration
- Action no 3:
Exchange of energy researchers between the Baltic and Nordic countries.





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The thematic scope:

- Decarbonisation of the transport sector
- Energy efficiency in buildings and industry
- Energy system analysis
- Challenges and opportunities for regional electricity grids

Highlights

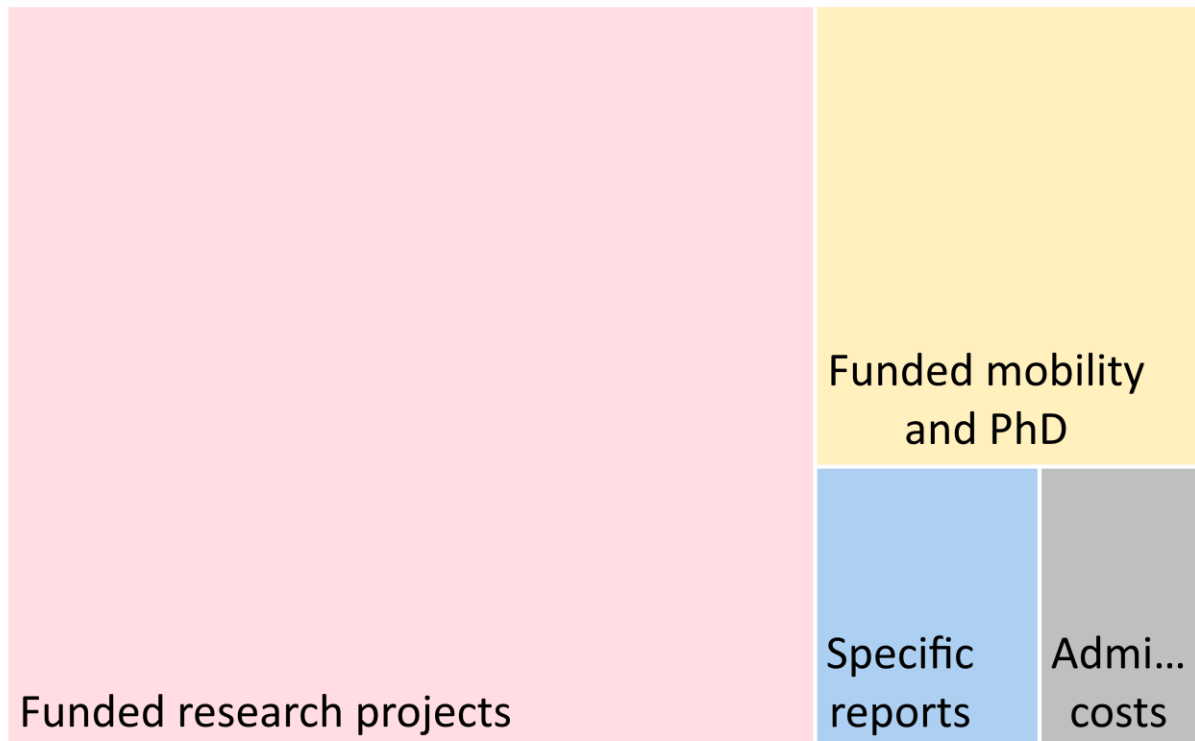
- Total funding of 22 MNOK (\approx 2 MEUR).
- The call for proposals has a sought-to-funded ratio of \approx 5 (five times more funding sought than available from the programme).
- In total over 100 individual researchers participating in different projects.



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Distribution on activities

- Administrative costs
- Specific reports
- Funded research projects
- Funded mobility and PhD



The first three research projects

Fast, flexible and secure decarbonisation of the Baltic states – possible progress in the next Ten years

FasTen will explore the potential to accelerate the decarbonisation of the Baltic states in the next 5-15 years.

Integrating energy sufficiency into modelling of sustainable energy scenarios

IntSuf will integrate sufficiency aspects into energy modelling tools that have been applied for development of sustainable energy scenarios.

Knowledge sharing on NZEB buildings in the Nordic-Baltic region

NB-NZEB will look into Nearly Zero-Energy Buildings in Denmark, Estonia, Finland, Latvia and Lithuania.



The second round of research projects

Impacts of ambitious energy policy pathways

Amber will analyse energy policy pathways for the Baltic countries until 2050.

Interconnecting the Baltic Sea countries via offshore energy hubs

BaltHub will analyse the cost-effectiveness of Baltic Sea energy hubs.

Techno-economic performance and feasibility study of the 5GDHC technology using agent based modelling and GIS

Agent-GIS-5GDHC will strengthen Baltic-Nordic knowledge in the areas of energy-efficient buildings and energy systems.



Research projects starting in 2022

Guidelines for Next Generation Buildings as Future Scalable Virtual Management of MicroGrids

Next-uGrid will investigate and analyse existing experience on Microgrids in Finland, Denmark, Latvia, and Estonia by real application example Case-Studies.

The role of hard to reach eNergy Users in reaching BAltics+Nordics Climate targets- a multidisciplinary analysis

NUANCE will identify characteristics of 'Hard to reach consumers' and how this can impact energy system modelling.

Waste heat in smart energy systems

WasteHeatSES aims to develop a decision-making model for relevant stakeholders and recommendations on suitable conditions for waste heat integration into the future smart energy systems in Nordic and Baltic countries.



PhD student- and researcher mobility activities

Establishment of Nordic-Baltic PhD and researcher mobility network in the field of the bioenergy

ReMoNet-Bioenergy will create an internationally recognized Nordic-Baltic mobility network for PhD students and researchers in the field of bioenergy.

Nordic-Baltic Co-Simulation Platform Towards Increasing the Stability of AC/DC Transmission Grids

COSPACT will form a cooperation and simulation platform for information exchange and system analysis and provide mobility to increase the knowledge on future power system development and control.

Experimental and Modeling Investigation of Bio and Thermochemical Conversion of Biomass to Electricity

BioELEC will promote mobility related to two major biomass conversion processes: One process deals with forest residue gasification for bioelectricity, and the other process is based on anaerobic digestion of organic fraction of municipal solid waste for bioelectricity.

Control and monitoring of power system under the discontinuous stochasticity of electric vehicle demand

CDS aims to facilitate collaboration for tackling the adverse impact of EV demand by developing advanced control strategies based on the available data from the monitoring system of distribution system.



Thank you for the attention



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