

Lithuanian Energy Institute



LEI in brief



250+ Employees



140 researchers



30 PhD students



11 scientific laboratories



12.700 sqm of lab facilities



8 MEUR R&D infrastructure





LEI Research directions

Thermal physics, gas and liquid dynamics and metrology research

Materials, processes and technologies for **renewable energy, hydrogen energy,** energy efficiency and reduction of environmental pollution

Safety and reliability research of **nuclear and thermal nuclear** power engineering and other industrial objects

Nuclear waste management

Simulation and management of power systems, **energy economy**



R&D competencies

RESEARCH ON ENERGY TECHNOLOGIES

-  Nuclear and thermonuclear
-  RES (wind, biomass)
-  H2 energy (fuel cells, storage)
-  Combustion and Plasma technologies

THERMAL ENGINEERING & METROLOGY

-  Thermal physics
-  Gas & Fluid dynamics
-  Metrology

ENVIRONMENTAL ENGINEERING

-  Hydrology
-  Combustion and Plasma technologies
-  Environmental impact assessment

MATERIALS SCIENCE

-  Materials synthesis
-  Materials analysis (surface, bulk)

ENERGY SYSTEMS AND ECONOMY

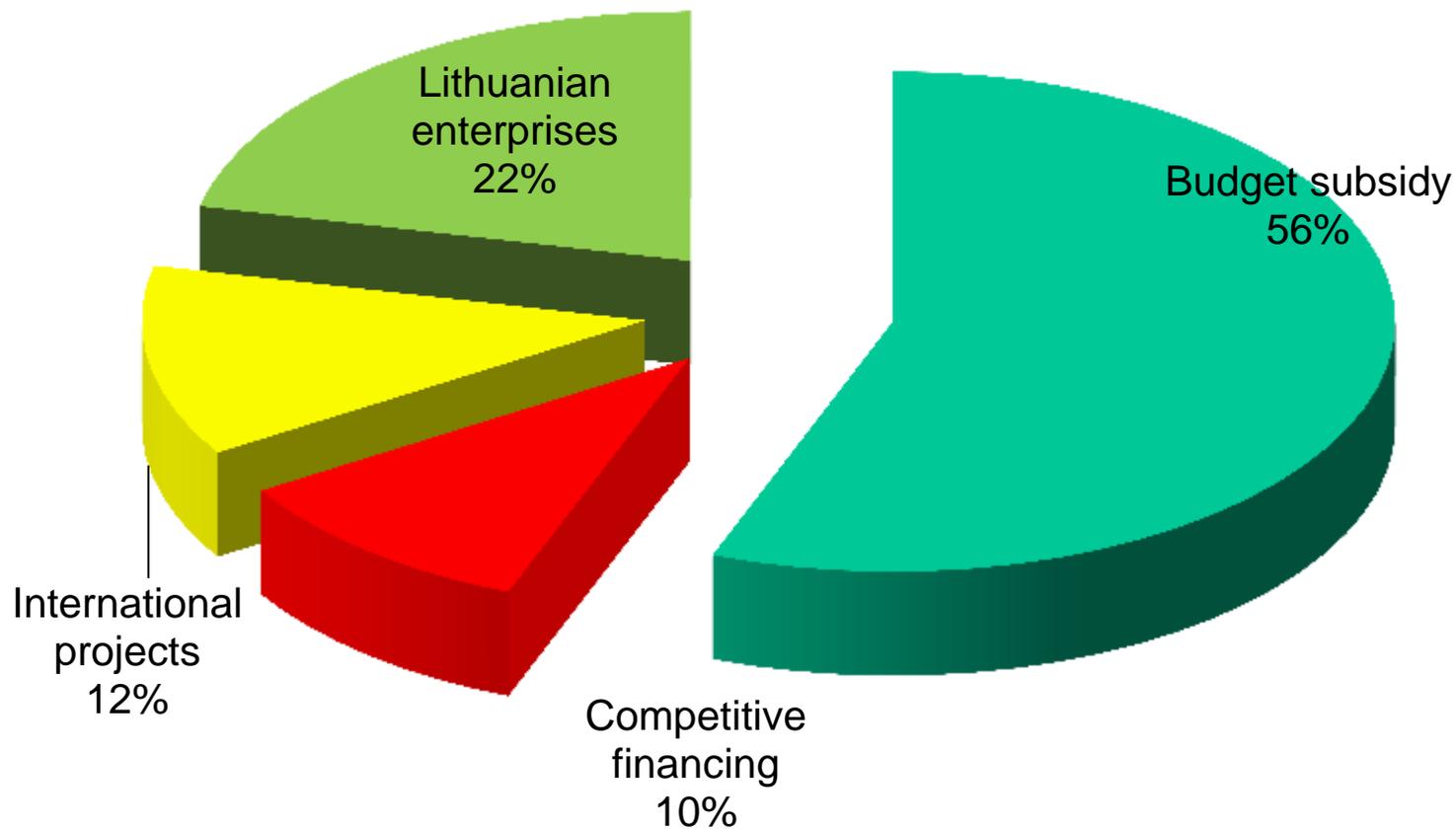
-  Energy economy
-  Energy systems modeling, smart grids



Institute is certificated on **ISO 9001:2001** and **ISO 14000:2005** – quality management system.
Laboratories are accredited to **ISO 17020** and **ISO 17025**.



Contracts' structure in 2016





Membership in international nuclear-related organisations

- European Technical Support Organisations Network (**ETSON**)
- European Nuclear Safety Training and Tutoring Institute (**ENSTTI**)
- Sustainable Nuclear Energy Technology Platform (**SNETP**)
- Nuclear Generation II & III Association (**NUGENIA**)
- Implementing Geological Disposal of Radioactive Waste Technology Platform (**IGD-TP**)

ETSON

EUROPEAN
TECHNICAL SAFETY
ORGANISATIONS
NETWORK

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TRAINING & TUTORING NUCLEAR SAFETY

SNETP
SUSTAINABLE NUCLEAR ENERGY
TECHNOLOGY PLATFORM

NUGENIA
NUclear GENeration II & III Association





LEI in European Research Area

- Horizon 2020 – **13 projects (2 in negotiation phase):**
 - EURATOM (8 projects ongoing (in 1 – LEI leader) and 1 in negotiation with EC)
 - Secure, Clean and Efficient Energy (5 projects ongoing (in 1 – LEI leader) and 1 in negotiation with EC)
- FP7 – **24 projects**
- FP6 – **14 projects**
- Intelligent Energy Europe – **31 projects**
- Nordic Energy Research Programme – **2 projects**
- Baltic Sea Co-operation Programmes – **6 projects**
- Latvian-Lithuanian Cross-Boarder Co-operation programme – **2 projects**
- International Atomic Energy Agency – **12 projects**
- COST – **21 projects**
- EUREKA – **4 projects**
- Leonardo da Vinci – **1 project**



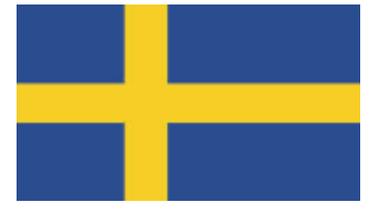
BRILLIANT

Baltic Region Initiative for
Long Lasting InnovAtive
Nuclear Technologies

Horizon 2020 project coordinated by the LEI

Countries involved:

- Estonia,
- Latvia,
- Lithuania,
- Poland,
- Sweden.

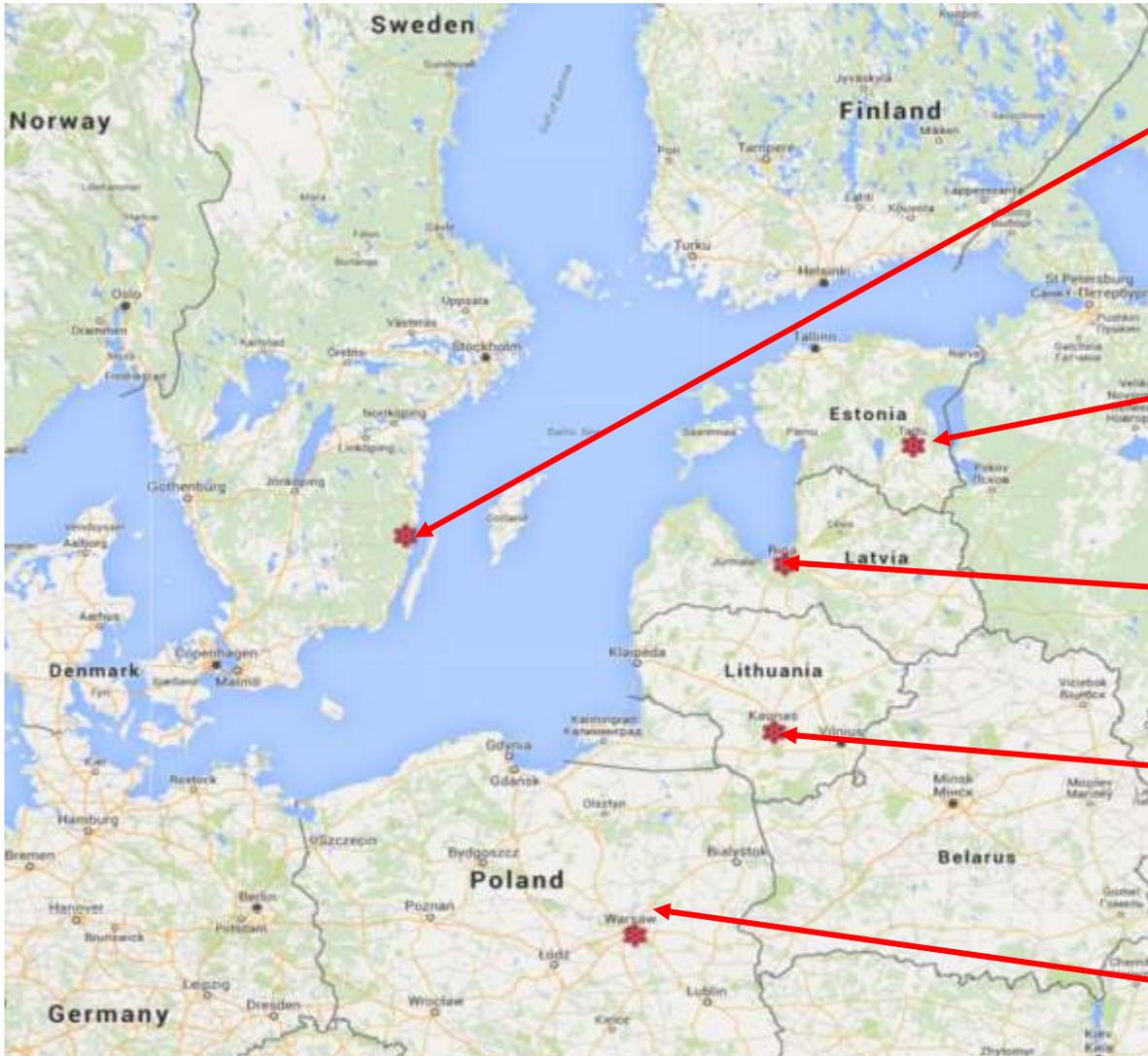


Goal:

To find optimal **regional** solution to create **cooperation** platform for modern electrical power solutions.



Concept of EUROBaltic Centre of Nuclear Research and Technology (BRILLIANT)



Baltic Center of Nuclear Fuel Studies – Oskarshamn

Baltic Center of Nuclear E-education - Tartu

Baltic Center of Advanced Nuclear Coolant Technology Development - Riga

Baltic Center of Nuclear Safety and Energy Security – Kaunas/Vilnius

Baltic Institute of Nuclear Reactor Research – Swierk



Some Success Stories in nuclear related field



Lithuanian Energy Institute and Ignalina NPP for developed technology ***Fuel reuse of Ignalina NPP Unit 1 in Unit 2 reactor*** was granted a golden medal of Lithuanian Industrialist Confederation competition “Lithuanian product of the year 2007”



Lithuanian Energy Institute for the implemented project ***Control system of leaktightness of heat releasing element shells, used during disarrangement of spent fuel assemblies in the “hot chamber”*** was granted a **golden** medal of Lithuanian Industrialist Confederation competition **“Lithuanian product of the year 2008”**

Lithuanian Energy Institute

Breslaujos str. 3

LT-44403 Kaunas

Lithuania

<http://www.lei.lt>

Telephone: +370 37 351403

Facsimile: +370 37 351271

