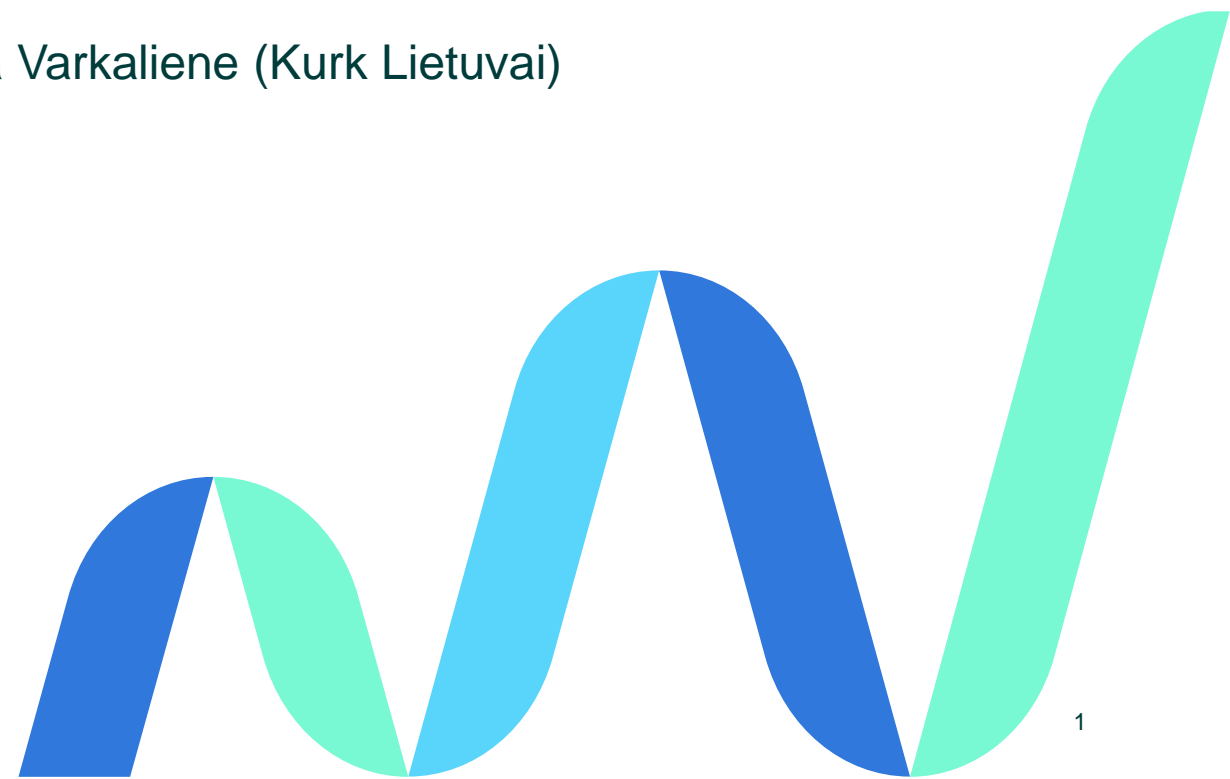


Ukraine's Recovery: Energy sector cooperation

Project managers: Dalia Krapavickaitė and Mariana Varkaliene (Kurk Lietuvai)
Project owner: Artūras Žarnovskis (CPVA)



Project timeline & expected results



Current situation analysis: Research process (Phase I)

- Total number of consultations made: 30
 - With businesses (selection criteria – past experience in working with Ukraine; annual revenue; renewable energy):
 - 38 companies contacted;
 - 12 responded.
 - With experts: 14
 - Other stakeholders (associations): 4

Current situation analysis: Research process (Phase I)

Companies:

- Antara
- Euromediana
- Solet
- Battec
- Ambergrid
- Baltpool
- Litgrid
- Greenup
- GreenGenius
- Energy Cells
- International Cluster MoE
- Graanul Invest

Associations:

- UABIO
(Ukraine)
- LITBIOMA
- Ukrainian
Association of
Renewable
Energy
- LŠTA

Experts / others:

- Nerijus Striugas
- Romas Švedas
- DIXI Group
- Albinas Tebėra
- Rytis Kėvelaitis
- Statistics Lithuania
- APVA
- ENA
- EIB
- Andrius Šimkus
- Virginijus Ramanauskas
- Martynas Nagevičius
- Laura Pušinskaitė

Lithuanian - Ukrainian cooperation experience

Pre-war:

Yuzhne Energy (Lithuanian capital company) – 70 MW wind farm in Odessa, construction started in 2018

Solitek (Bodgroup) – 2 MW solar power plant in Volnohorsk (Dnipro region), opened in 2019

Green Genius – 13.5 MW solar power plant in Ivano-Frankivsk, 2020; solar park in Zhytomyr region, 33 MW in collaboration with EBRD

Bakhmut-energia (E-energija subsidiary) – heating project, supported by EBRD in Bakhmut

E-energija – biomass supply in Kyiv region

Enerstena – boilers and heating in Ivano-Frankivsk, 2016

Volyn-Kalvis – Lithuanian company Kalvis together with a Ukrainian company formed an enterprise in 2006, which produces solid fuel boilers with a capacity of 6 kW to 2500 kW

UAB AXIS Tech Boilers in Sumy region (2x20MW)

After the start of full-scale war:

International Energy Cluster – Mykolaivoblenergo, model of the energy grid

By 2050, renewables and maneuverable generation LT will have become the main sources of energy generation in Ukraine

Currently, Ukraine has outlined several priorities in the energy sector:*

- Emergency repairs
- Decentralized generation
- Energy efficiency and resilience
- Strengthening cross-border infrastructure
- Preparing for the next winter

*based on presentation given by Roman Andarak, Director General of the Directorate of Strategic Planning and European Integration of the Ministry of Energy of Ukraine at the RoundTable (May 9, 2023)

Results of consultations with stakeholders:

Focus on renewables:

- **Biomass, boilers & DHS;**
- **Biogas & biomethane:** UA and LT on a similar level of experience in biomethane, UA already opened the first plant;
- **Wind:** majority in UA under occupied territories;
- **Solar:** APVA call for proposals

Other directions & insights:

- **Klaipėda LNG terminal**
- **Energy diplomacy** on behalf of UA in the EU, support of UA integration to EU, assistance in entering EU trade markets
- **Afforestation** (poplars) as a direction to explore

Roundtable outcomes

The key direction for further analysis and development:

Biomass ecosystem

- Transition from gas to biomass
- District Heating System
- Biomass exchange



Scan to see the
full Report



RoundTable Discussion “Lithuanian Energy Sector Support for Ukraine”

REPORT

May 9, 2023

Prepared by Create Lithuania participants *Mariana Varkaliene & Dalia Krapavickaitė*

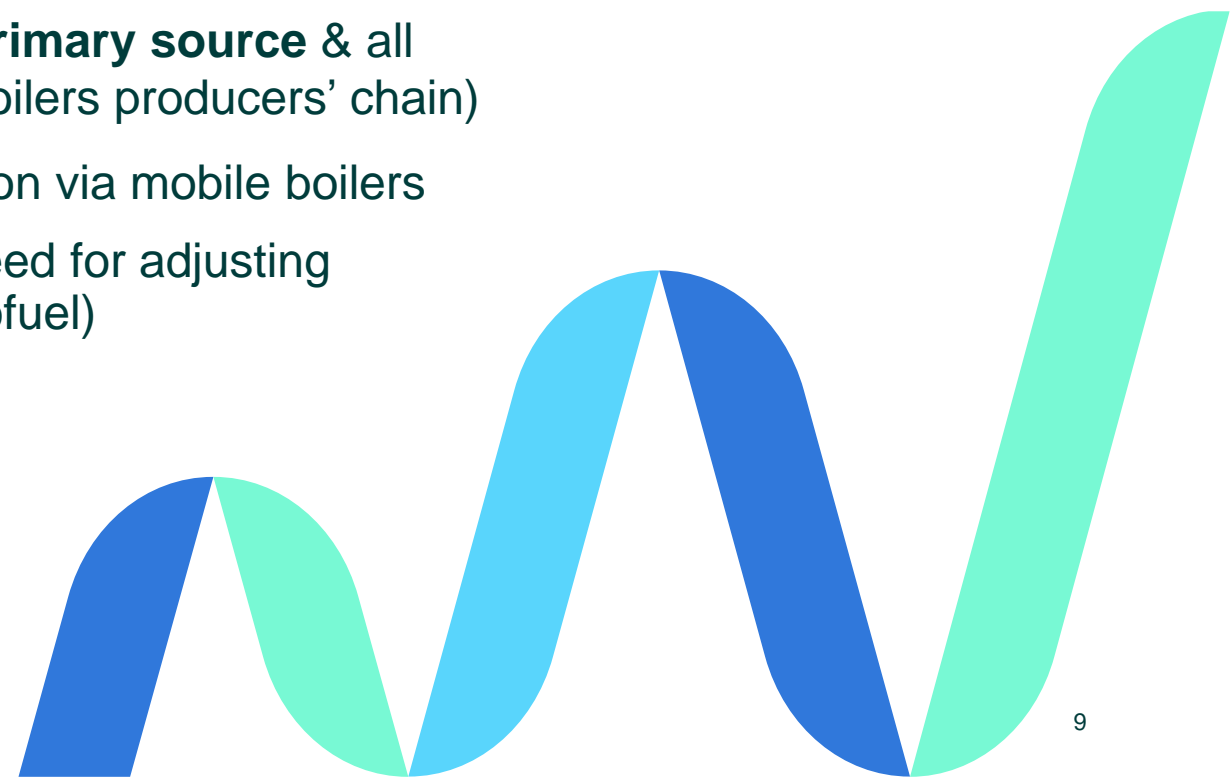


Photo from the RoundTable, published online by the Office of the Government of Lithuania as a part of the press release.

Current situation analysis

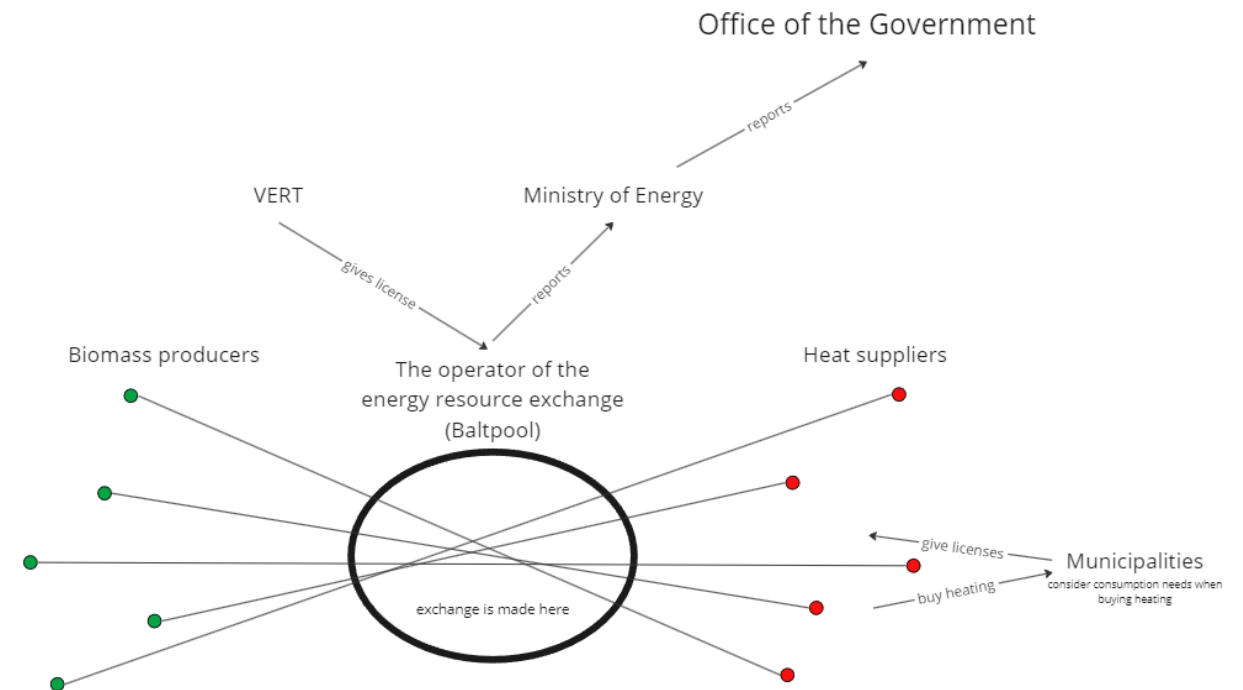
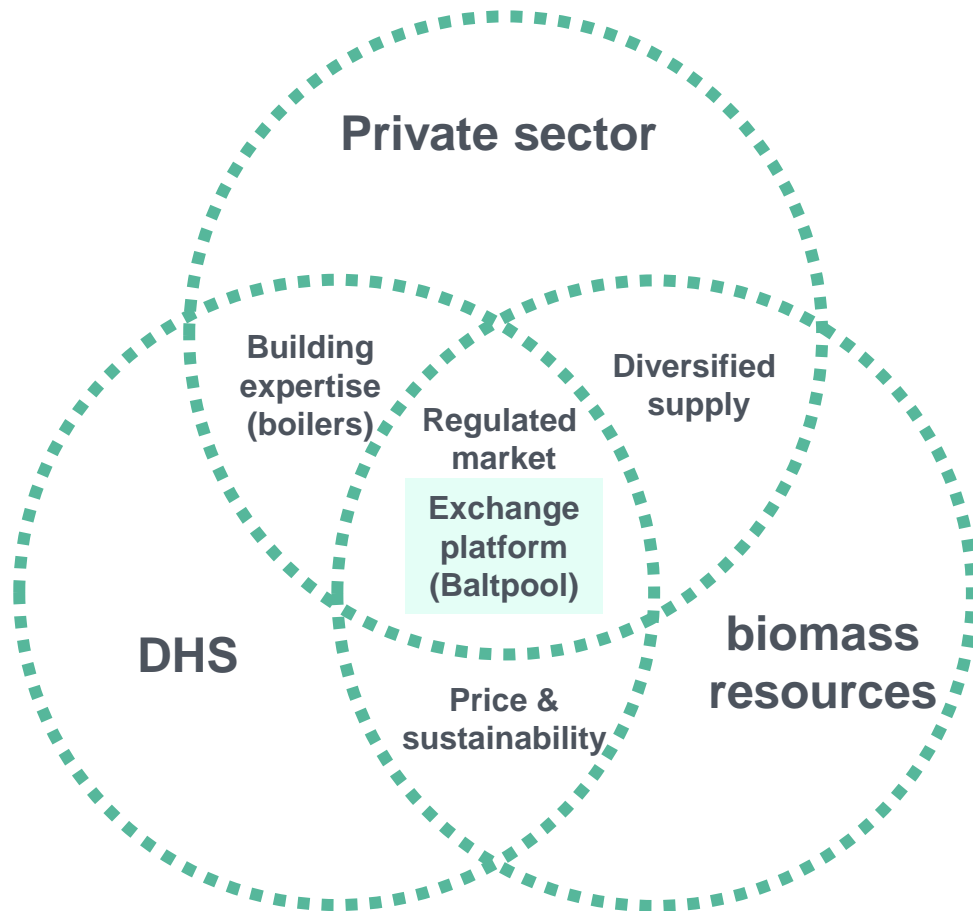
Lithuania's experience in transition from gas to biomass: biomass stock exchange platform (Baltpool) – regulated market corresponds to UA need of an **exchange platform**

- LITBIOMA research on UA biomass market to be prepared: **Ukrainian potential in biomass**
- LT experience was built around **wood biomass as primary source** & all chain of supportive industries correspond to it (e.g. boilers producers' chain)
- UA regions with heavy destruction: rapid modernisation via mobile boilers
- Limited resources and capacities on LT side – e.g. need for adjusting production of boilers for UA (capacity/MW+type of biofuel)



Where are we now?

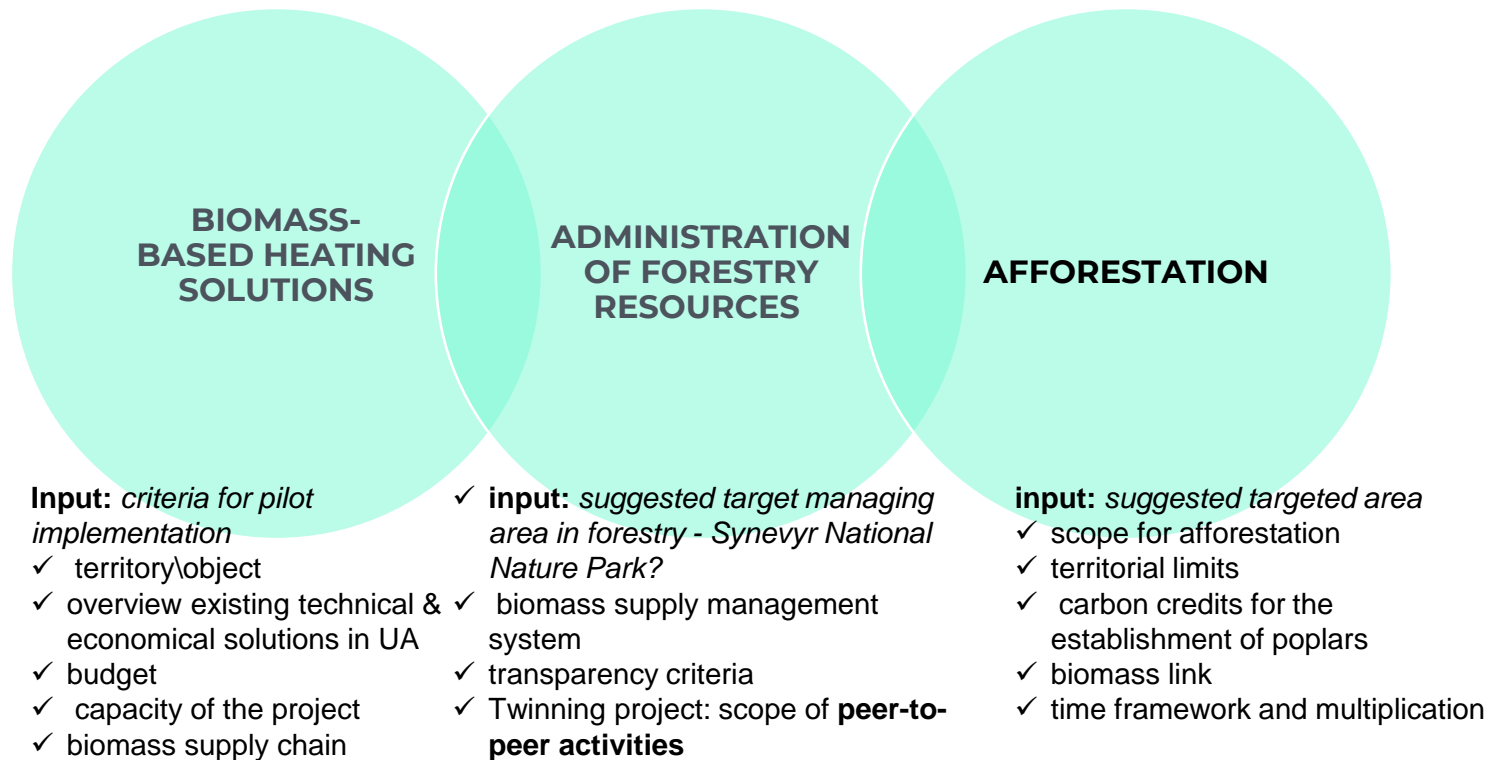
Researching different components of the LT's and UA's biomass ecosystems to map out possible areas for projects



Shaping projects & drafting recommendations on cooperation

Next step

- Focus group discussions: possible projects proposed by experts



Our guiding principles

- Coordination with UA's strategic plan in areas for future projects
- Regional choices: building on existing experience first
- Synergy with other projects: **rehabilitation center and Typical Design Project**
- Possible partnership with global stakeholders (e.g. NEFCO).
- Private sector – key implementor
- Financial instruments (grants, guarantees, funds and others) that can support implementation & upscaling

Further consultations

Challenges



Legal: environment in UA regarding centralised biomass market exchange is lacking.



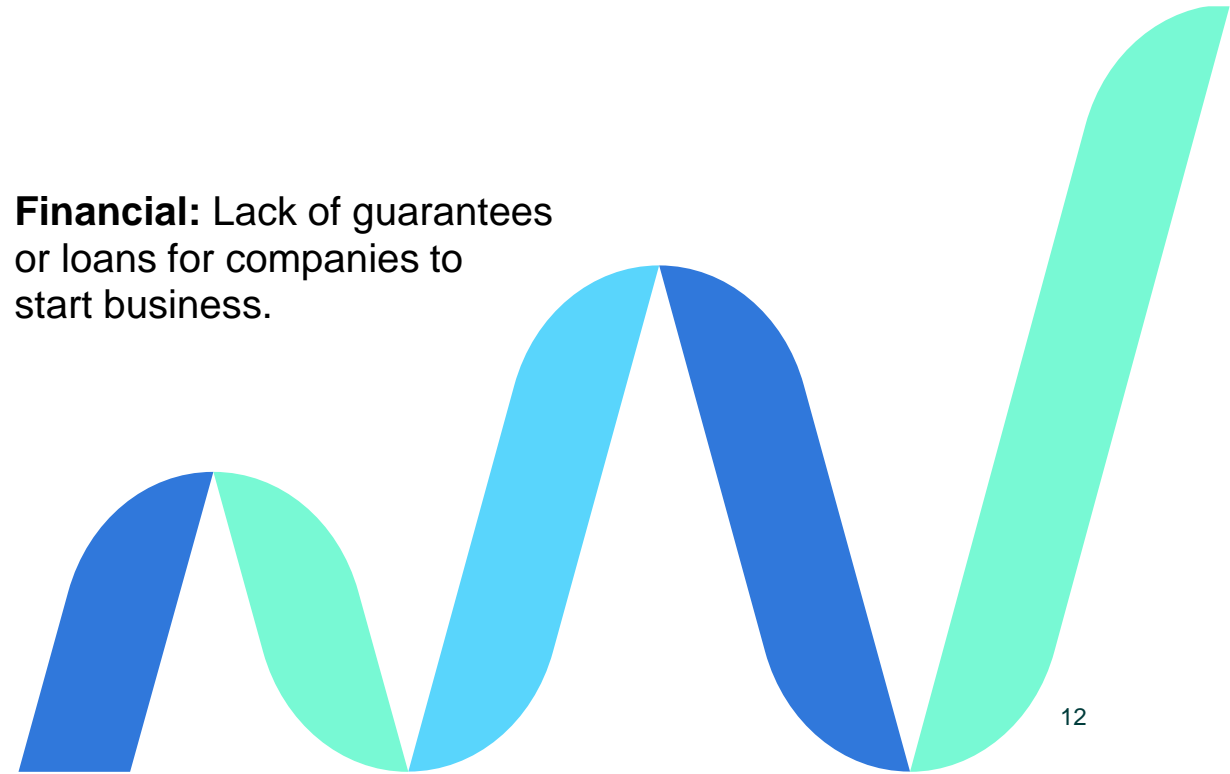
Gas subsidies in UA discourage transition to biomass-based heating.



Biomass supply: Forest resources owned by the state (80%), municipalities (20%), less than 1% privately owned.



Financial: Lack of guarantees or loans for companies to start business.



Thank you for your attention!
Feedback and suggestions are
welcome.

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