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Legislative analysis for the 4th generation district heating in Latvia

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4DH
4th Generation District Heating
Technologies and Systems

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Research Goal

To remove existing legislation barriers for the switch to the 4th generation DH systems based on analysis of the existing system.

CURRENT SITUATION FROM LEGISLATIVE ASPECT

Background:

- **Energy Law**: Owner of each building is entitled to choose the most appropriate heating for its building (Article 50).

- **Court ruling**: in 2013 the Supreme Court of Latvia ruled, that individual ownership rights of building owners supercede the district heating plans of municipalities.

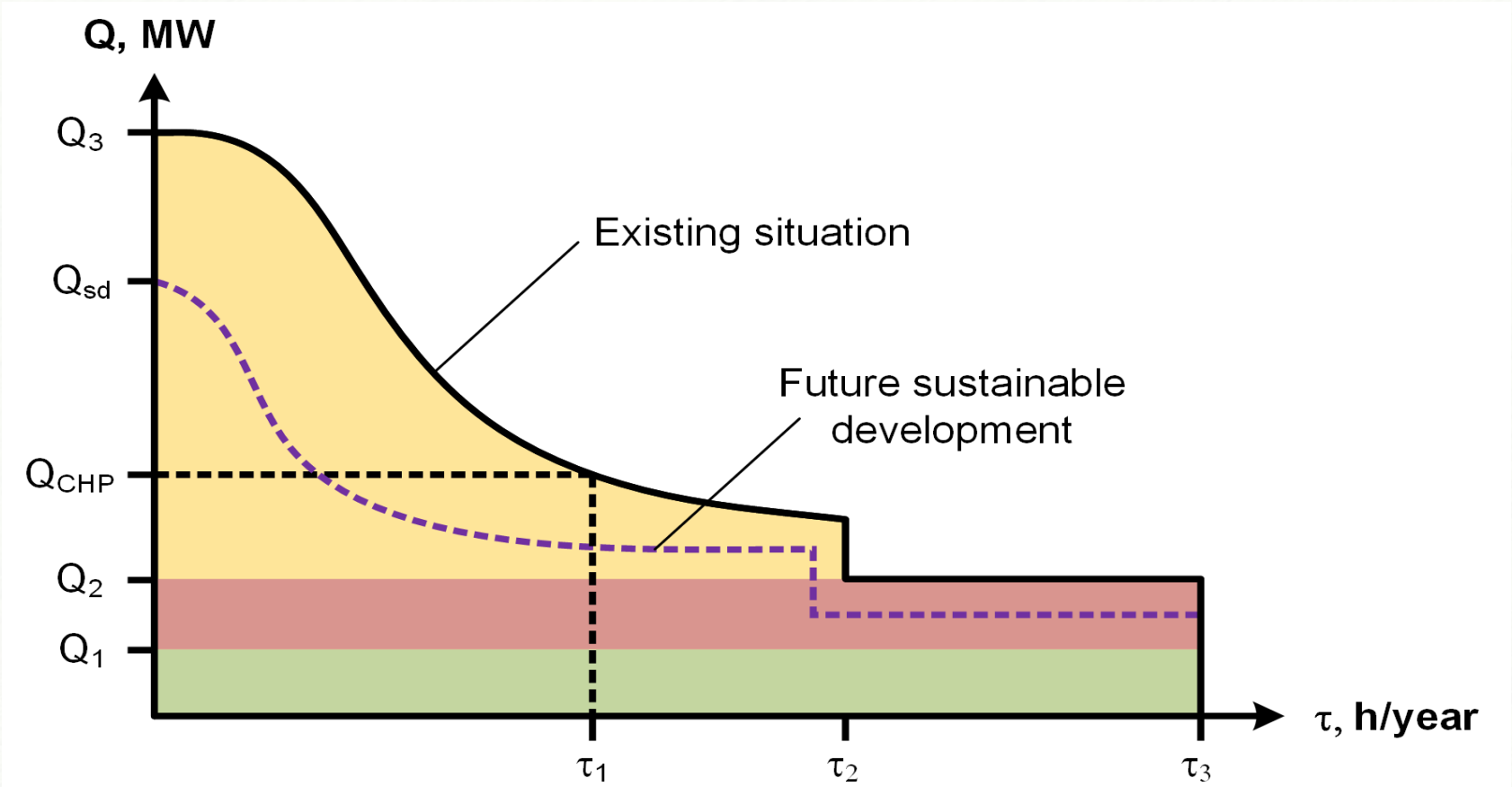
- **Articles 48 and 49 of Energy Law:** In case there is more than one heat producer unit connected to one and the same DH system, the system operator is ordered by law to buy heat under weekly tenders from that producer who offers the lowest price.

Entry of market by new investment (2):

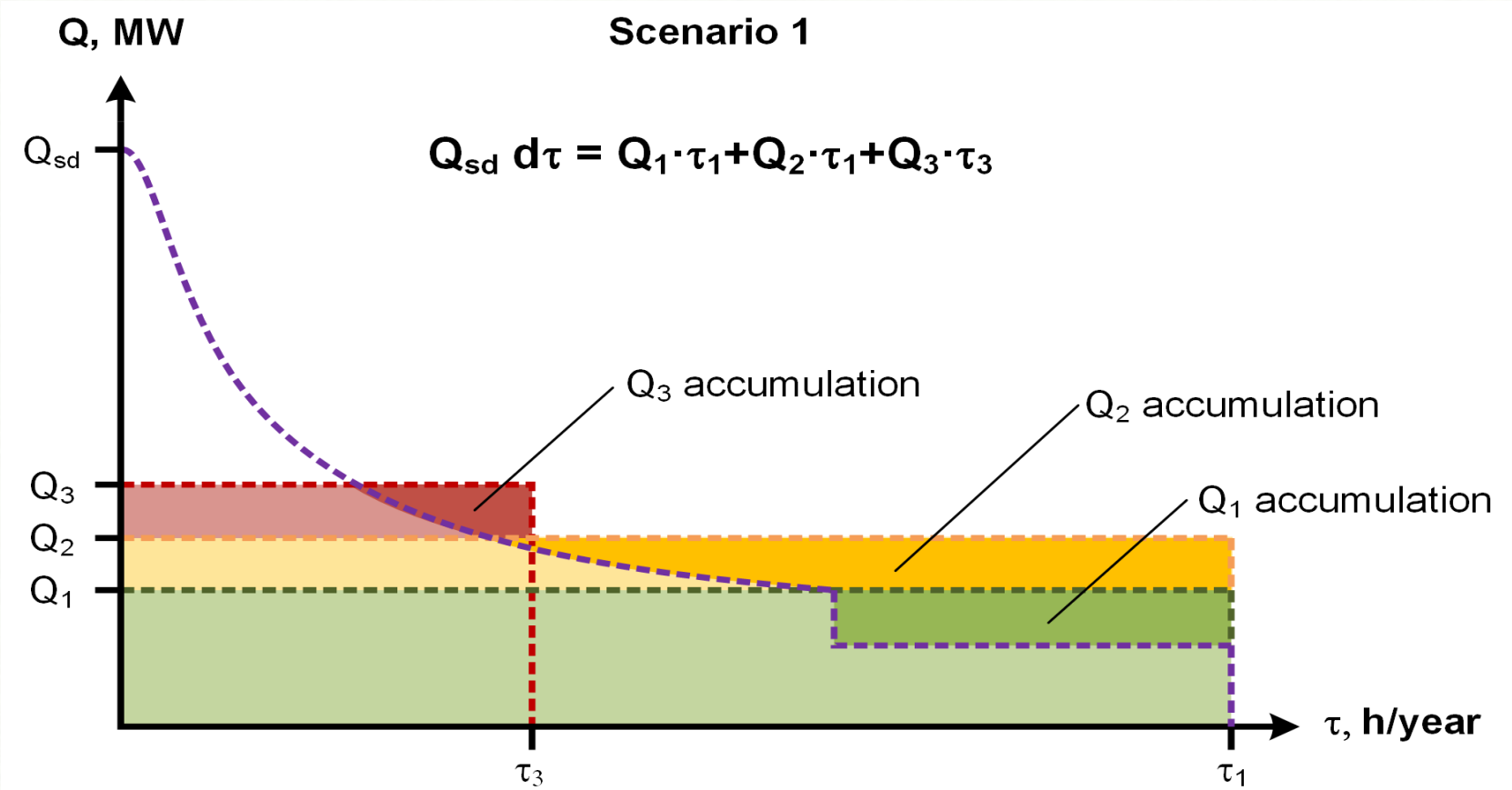
- Under current legislation state cannot prohibit new investment.
- Practical outcome: in case investor enters existing DH market and is able to sell heat weekly for the lowest price, investor squeezes out of the market existing heat producers, as they loose their heat off-take.
- However, state aid was granted to the previously built facilities. Investment is not yet returned and benefitial result of state aid is not yet achieved.

DH TECHNOLOGICAL SOLUTIONS AND INVESTMENTS

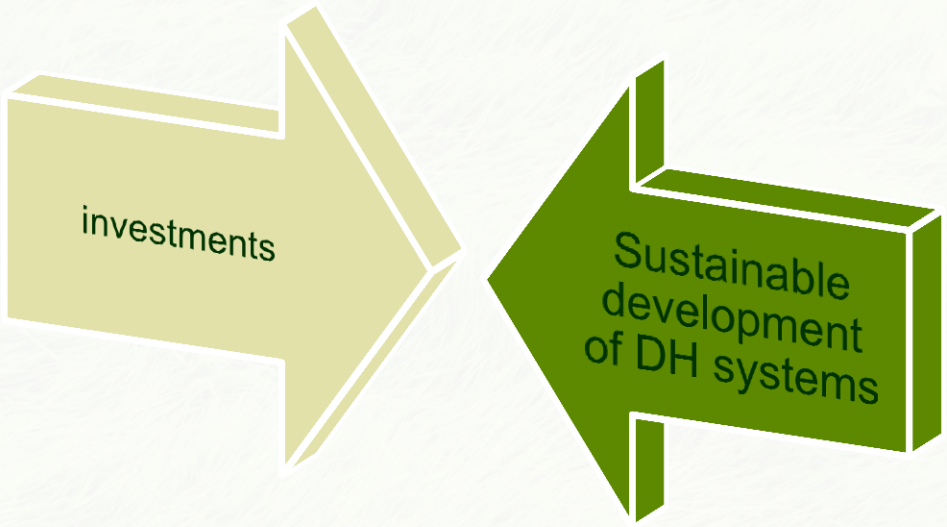
DH System Load. Existing and Future



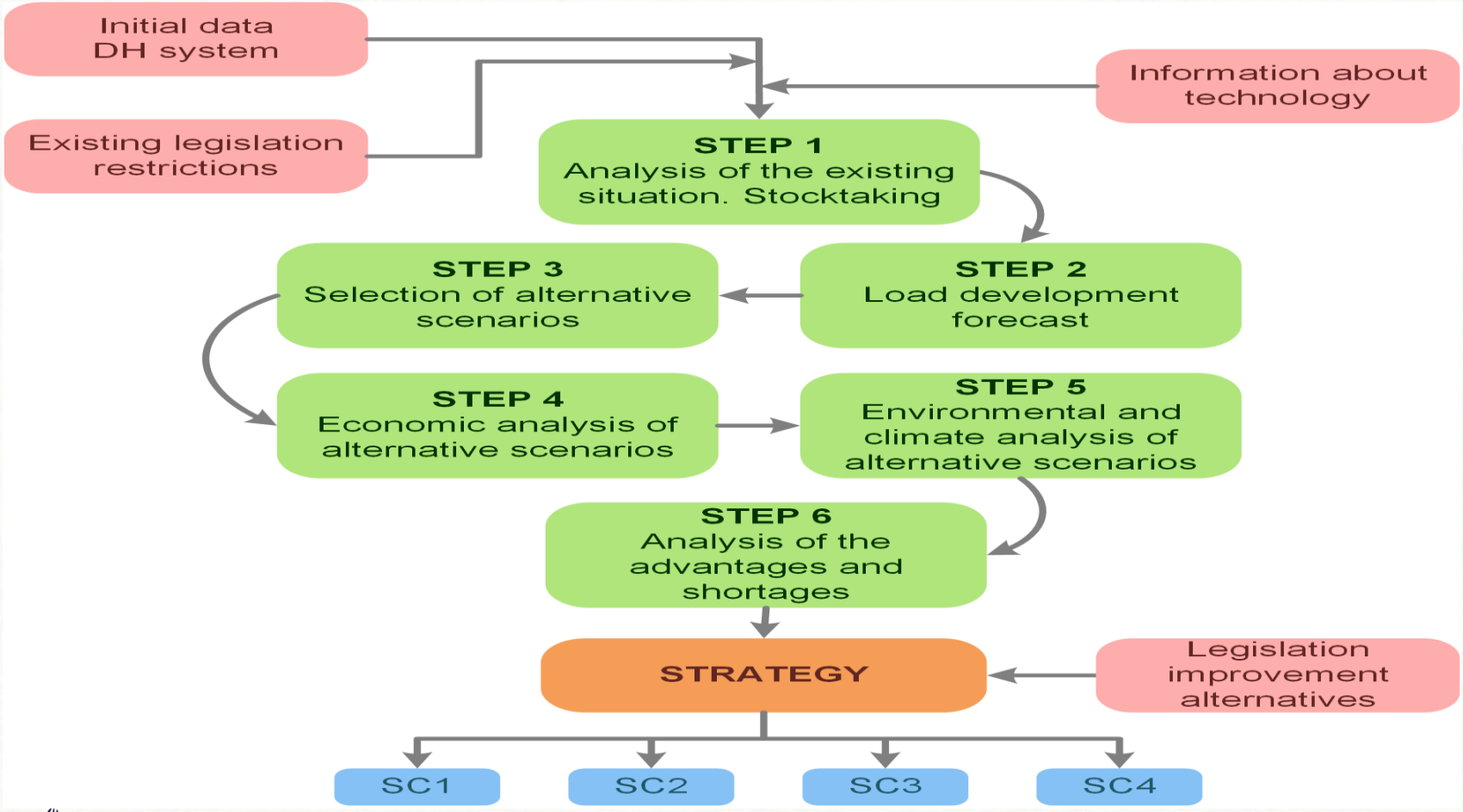
4 GDH System development. Scenario 1: three energy sources & accumulation



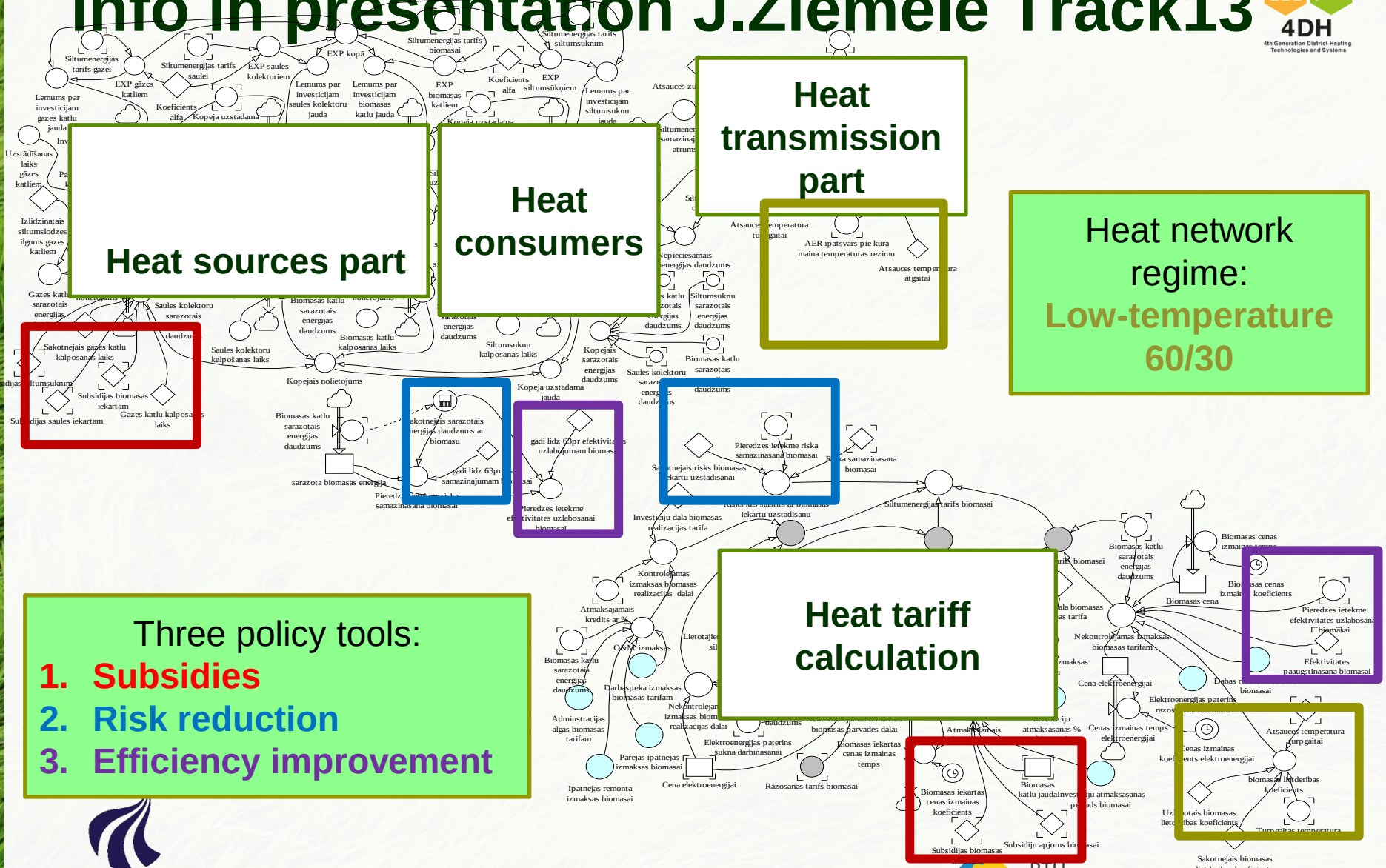
Contradiction



Methodology Algorithm



System dynamics model structure. More info in presentation J.Ziemele Track13



LEGISLATIVE SUPPORT FOR 4GDH

Essence of the proposed value-driven changes to legislation:

Consumers are not only interested to pay less for heat energy, but also in the long-term economicality and sustainability of system

Also in regulated market, several free market and competition tools can be introduced and employed by DH systems to become competitive

Policy tools

- Legislative support
  - efficiency improvements and RES share
  - risk reduction
- Financial support through subsidies

&

- Information package

What could be used as value driven criteria

- Sustainability criteria
- Tarifs for introduction of 4 G DH systems
  - Euro/unit of thermal energy
  - Euro/unit of exergy
  - Euro/unit of emergy
- Increase of CO_2 price
- Life cycle analysis. Indicators

Conclusions

- New criterias which express SUSTAINABILITY has to be defined for introduction of 4 GDH systems in Baltic States
- Legislative support is needed for development of sustainable energy systems with high share of renewable energy resources.

Additional information:
www.videszinatne.lv

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Exergy factors