Energy clusters as an example of energy communities in Poland – policy and results

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WinWind
Increasing the acceptance of Wind Energy

Factors having impact on on-shore wind energy development

WinWind project – Thematic Workshop

Riga, 21 June
2018

Co-funded by the Horizon 2020 programme
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Background

- Energy cluster is a concept implemented by the Ministry of Energy. The formation of energy clusters provides the opportunity to group local entities acting in a common interest in order to improve local energy safety and quality as well as reduce energy costs for the region.

- Energy clusters are civil law agreements between different entities including local governments, which aim at becoming energy efficient regions through a more effective use of local renewable energy sources. Energy clusters cover the area of one county or five municipalities.

- The concept of energy clusters was introduced for the first time in 2016 with the definition of energy clusters in the RES Amendment Act.

Background

Target groups:

- End-users;
- Prosumers;
- Legal persons;
- Scientific units;
- Research institutes;
- Local government units.

As the concept is interesting for numerous Polish municipalities and the regulations outlined in the RES Act do not include a clear description of the cluster formation process, a pilot projects defining the steps of such process are necessary.

Supportive institutes:

- National Fund for Environmental Protection and Water Management (NFOŚIGW);
- Ministry of Investment and Development;
- Ministry of Energy.

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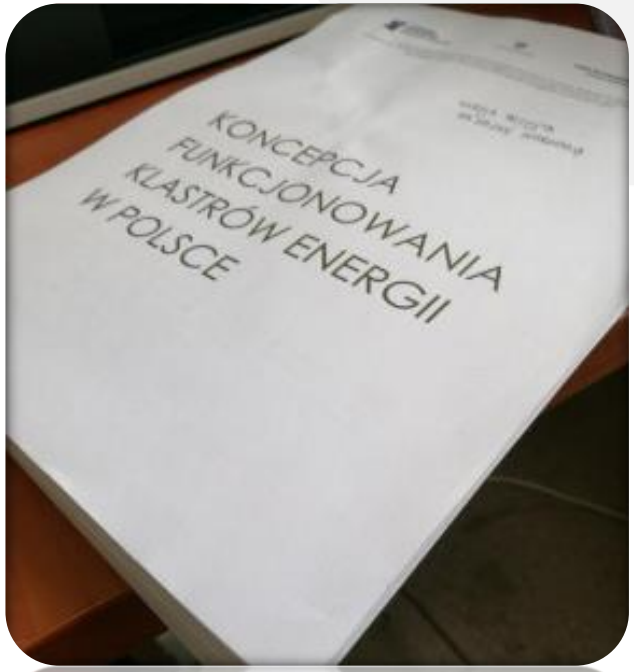
‘The concept of the energy clusters operation’

- The Ministry of Energy in November 2016 ordered carrying out an independent expertise
- On 9 March, the report on ‘The concept of the energy clusters operation’ study was published by the Ministry of Energy.
- The study was prepared by The Polish National Energy Conservation Agency (consortium leader), WiseEuropa and the ATMOTERM, with the participation of KIER Institute.
- The report was the starting point for further works and discussions with the parties concerned regarding the future of energy clusters in Poland.



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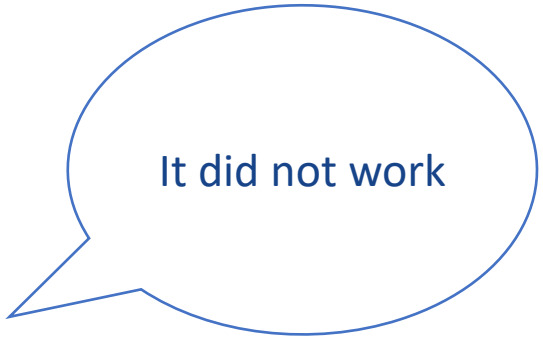
Main goals of establishing energy clusters at the local level

- Achieving a specific economic effect through: cheaper energy production, reducing energy distribution costs and rationalization of energy consumption
- Increase and rationalization of the utilisation of local resources
- Stimulating economic development
- Improvement of local energy security by creating energy self-sufficient regions – increasing energy efficiency
- Improvement of air and water quality as well as energy supply
- Renewable energy development
- Acquiring co-financing for planned investments



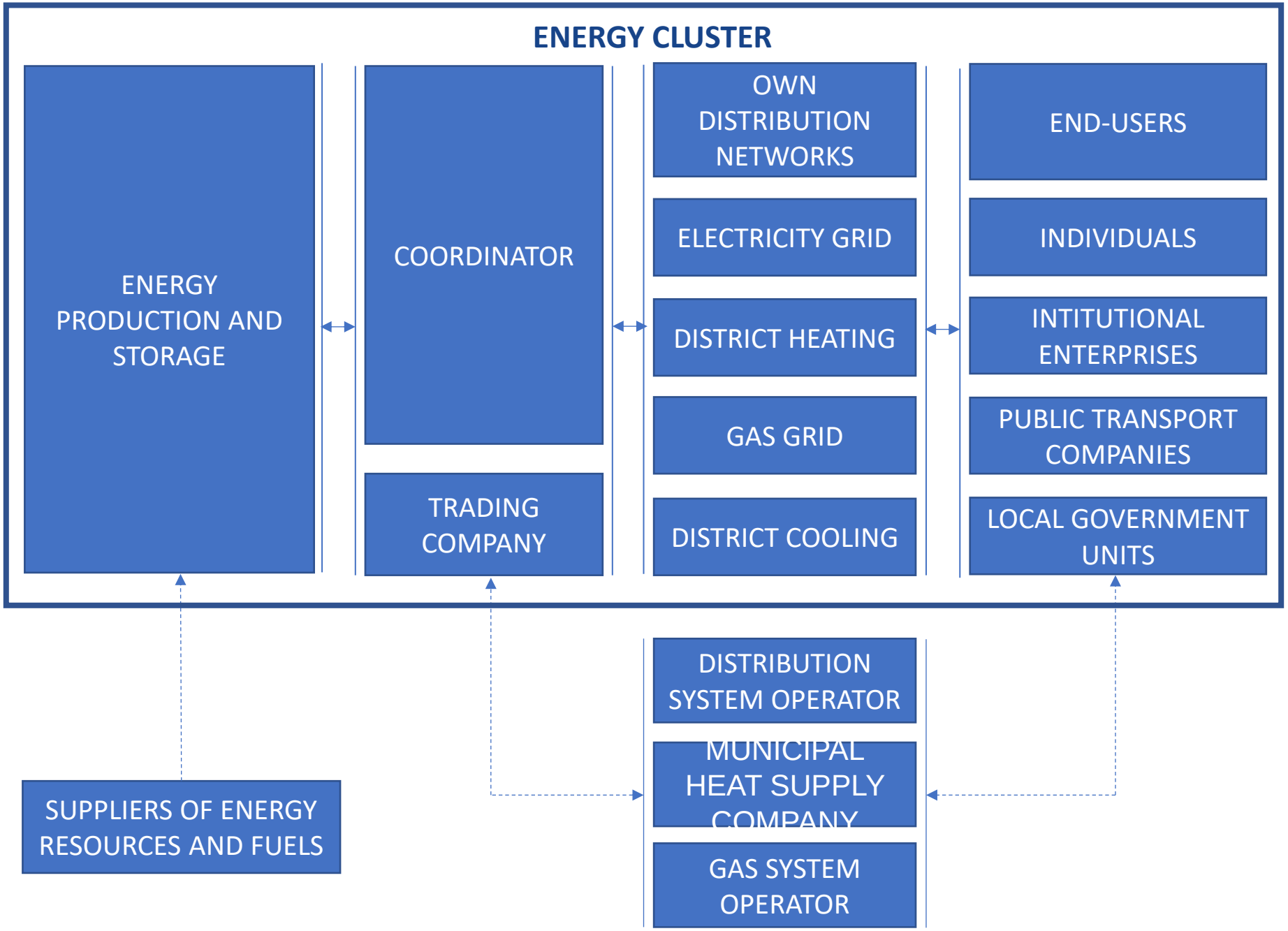
- Participation in energy auctions dedicated to clusters

Cluster coordinator

- Energy cluster is represented by a coordinator. Coordinator is a body responsible for development and animation of interconnections and collaboration within the cluster, as well as for provision of specialised services for cluster members.

Functions and responsibilities:

- Energy trading;
- Intermediation in settlements between producers and end-users;
- Energy delivering or its carriers;
- Representing cluster interests as a whole body;
- Implementation of current cluster tasks.


ENERGY CLUSTER
ENERGY PRODUCTION AND STORAGE
COORDINATOR
TRADING COMPANY
OWN DISTRIBUTION NETWORKS
ELECTRICITY GRID
DISTRICT HEATING
GAS GRID
DISTRICT COOLING
END-USERS
INDIVIDUALS
INTITUTIONAL ENTERPRISES
PUBLIC TRANSPORT COMPANIES
LOCAL GOVERNMENT UNITS
SUPPLIERS OF ENERGY RESOURCES AND FUELS
DISTRIBUTION SYSTEM OPERATOR
MUNICIPAL HEAT SUPPLY COMPANY
GAS SYSTEM OPERATOR

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Pilot energy clusters

- Development of energy clusters idea
- Identyfication of investment needs in clusters
- Promotion of good practices within energy clusters
- External veryfication of cluster strategy
- Creating a platform for experience exchange

Competition for energy clusters – course of the process

Strategy of energy cluster

Formal evaluation

Assessment of correctness and completeness of submitted documents

Substantive evaluation

Panel of experts

Pilot clusters

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Strategy of energy cluster

- Description of energy cluster
- Scope of functioning
- Main goals of energy cluster
- Cooperation with DSOs
- Energy balance
- Planned investments
- SWOT analysis

Certification of energy clusters

- On May 9, 2018, the Ministry of Energy announced the results of the first competition for a Pilot Energy Cluster Certificate
- 33 out of 115 ideas for Energy clusters received certificates

What does certificate mean?

- Participation in various support programmes, where certain preferences for energy clusters are provided
- Long-term benefits provided

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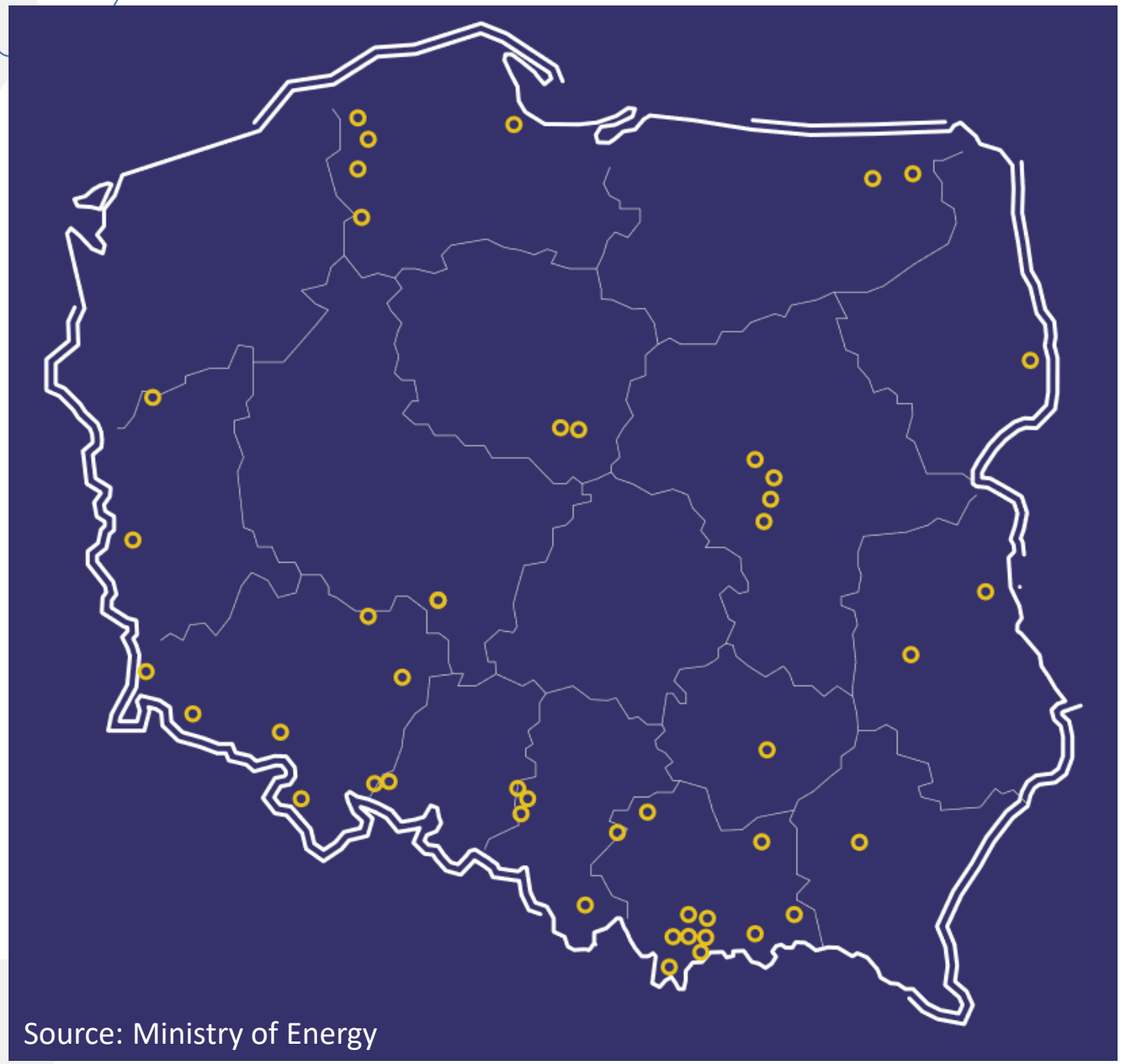
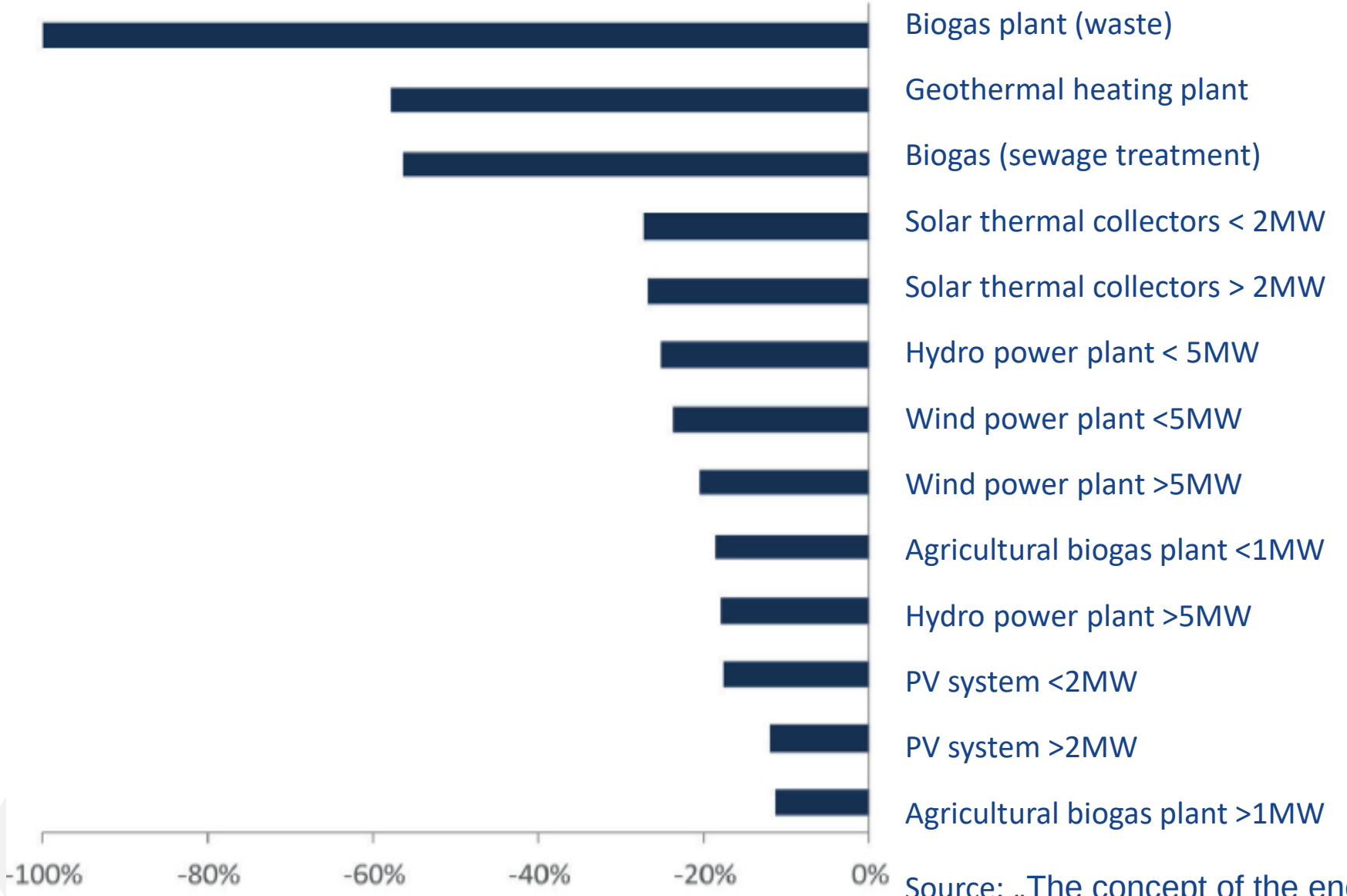


Source: Ministry of Energy

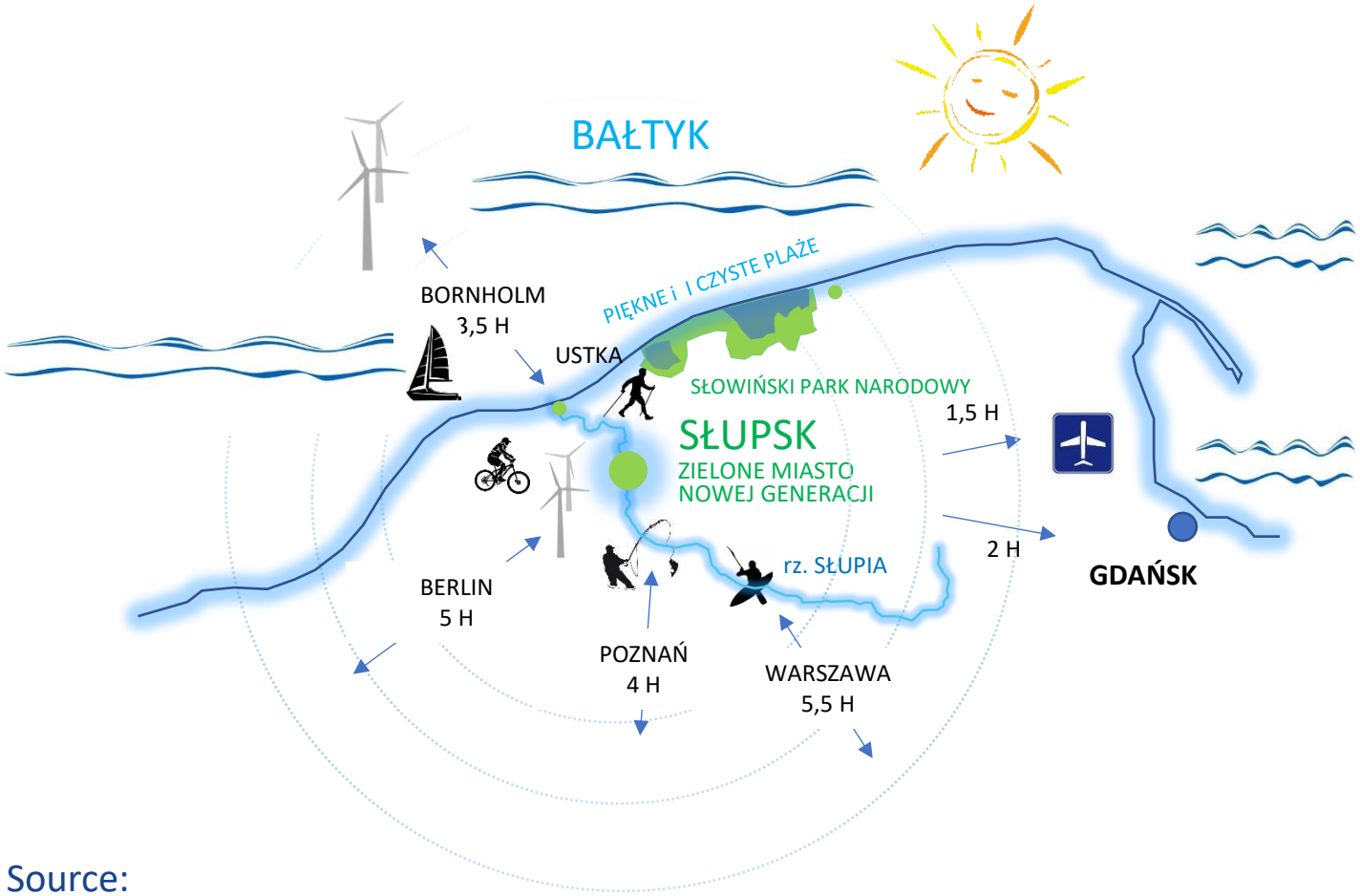
Map of energy clusters

Impact of installation's participation in cluster on size of necessary support



Source: „The concept of the energy clusters operation", KAPE 2017

Bioenergetic Cluster in Słupsk – best practice case

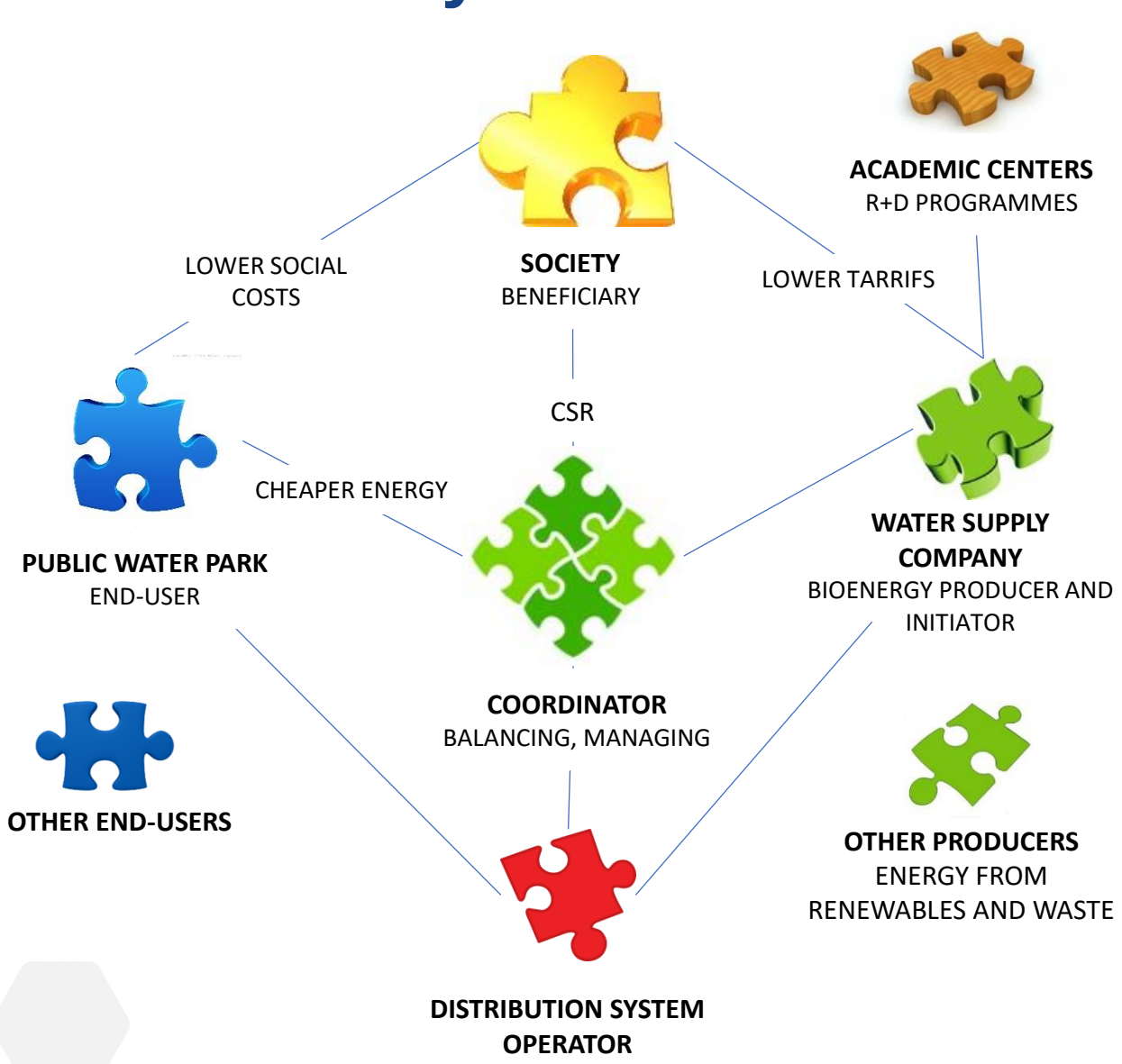


Source:
Wodociągi Słupsk" Spółka z o.o.

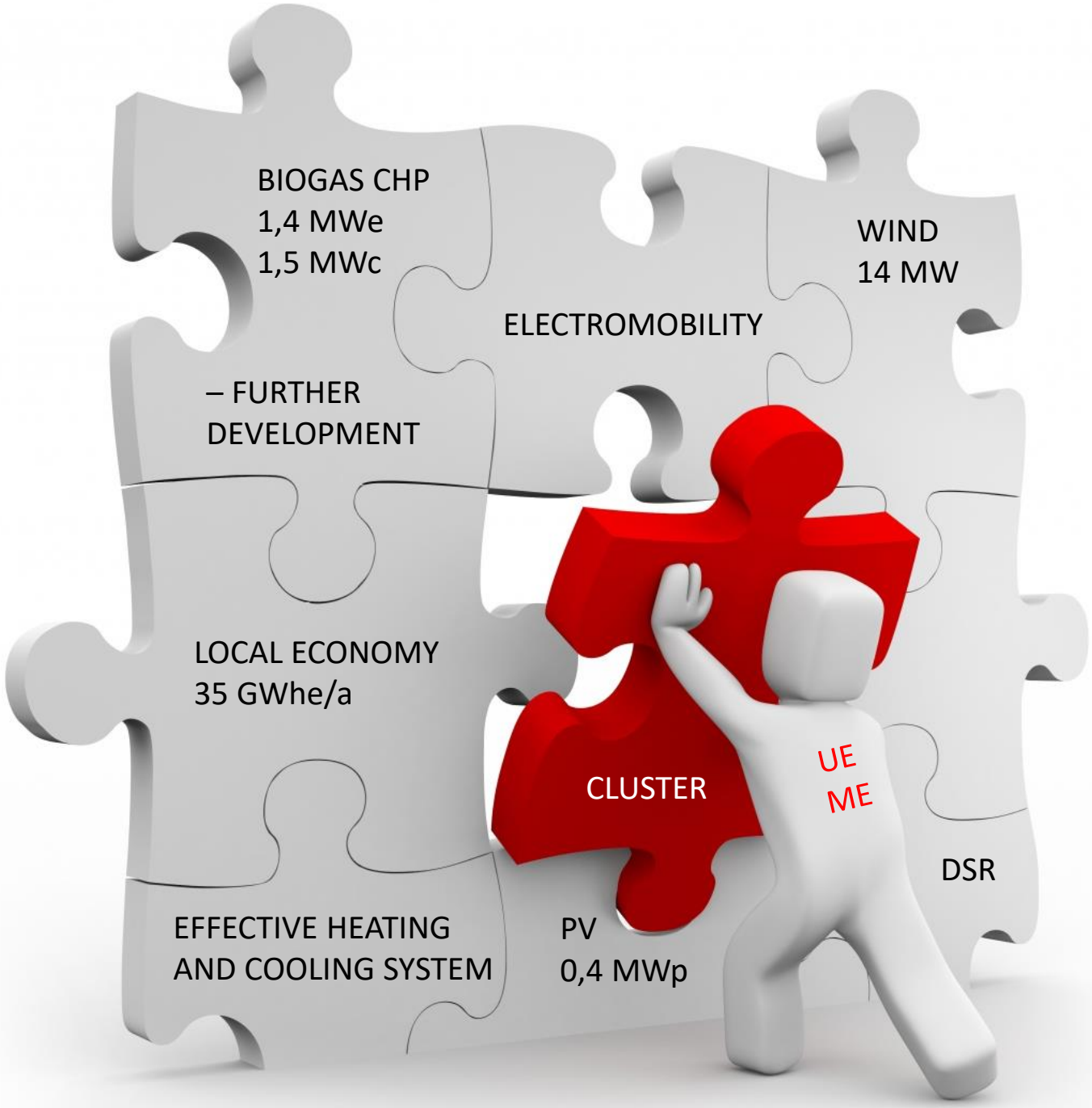
Bioenergetic Cluster in Słupsk

Source:

Project impact on society



Source: Wodociągi Słupsk" Spółka z o.o.



Bioenergetic Cluster in Słupsk – features of a good pilot

- Cooperation of key stakeholders
- Positive impact on the local economy
- Variety and synergy of many projects
- Energy efficiency improvement
- Size of the energy cluster

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Source:
Wodociągi Słupsk" Spółka z o.o.

Conclusions

- Energy clusters as an example of energy communities create a platform with favourable conditions for wind energy and other RES development.
- Energy clusters have gained many supporters and many of them have already started working on activities towards creating such units.
- Clusters as a form of mutual cooperation between different stakeholders are a hot topic nowadays in Poland supported by Ministry of Energy.

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Thank you for your attention

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