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## ENERGY CLUSTERS in Poland

Are energy storage systems in clusters necessary?

Are energy clusters a way to keep the pace of the development of prosumer PV installations and to integrate large scale RES plants into the grid?

**Barbara Adamska**

**ADM** Poland

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# ADM Poland

- We have been in the RES market since 2013. We advise in the scope of distributed generation, renewable energy sources, energy storage and energy clusters.

## START SINCE 2013



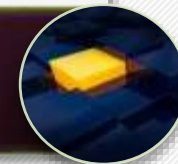
- Barbara Adamska, founder of ADM Poland is the expert in the field of renewable energy and the author of numerous publications in specialist press. Barbara Adamska is also the President of the Polish Energy Storage Association, Head of the Energy Storage Congress in Poland, Director of the Energy Storage Section in the Polish Photovoltaics Society, Expert of the Parliamentary Team of Climate and Energy.

## DISTRIBUTED GENERATION EXPERTS



- Cooperation with ADM Poland means working with a company specialized in providing services to entities in the renewable energy branch.

## A COMPANY SPECIALIZED



- As early as in 2015 Germany Trade & Invest pointed out to ADM Poland as the consulting company for German companies interested in the Polish photovoltaic market.

## A CONSULTING FIRM FOR RES MARKET



- We ensure a complex support to foreign entities entering the Polish RES market covering consulting, launching strategy, building and development of the distribution network, marketing and Public Relations.

## A COMPLEX SUPPORT



- Since 2016 we have been conducting PR services in the Polish market for clients of one of the leading German PR agencies.

## PR SERVICES



# ADM Poland – an Expert on Distributed Energy

- We have been providing consulting services in the field of distributed and renewable energy since 2013.
- In 2015 Germany Trade & Invest agency, which supports German companies in setting up in foreign markets, appointed ADM Poland a consultancy for companies entering the Polish photovoltaic market.
- We provide a comprehensive support for energy clusters, assistance in setting-up, in developing the cluster's strategy, assistance in all strategy implementation stages and in the certification process. All our clients received the Pilot Energy Cluster certificate. 3 of them a certificate with distinction (there are only 16 such certificates in Poland).
- We conduct technical, legal and economic due diligence of development sites for independent heat and electric power distribution systems.
- We help to choose the best energy storage system, also for the purposes of ensuring energy quality parameters for technological processes.
- We provide PR and marketing services for renewable energy companies.

# MY PROFESSIONAL EXPERIENCE

- Founder and the CEO of ADM Poland, which has been providing consulting services in the field of distributed and renewable energy since 2013.
- Advisor for companies operating within energy industry. The author of the strategy of operation and development for 4 certified energy clusters.
- Author of many publications on renewable energy, distributed energy and energy storage.
- President of the Polish Energy Storage Association
- Initiator and since 2016 the chairperson of the Energy Storage Congress in Poland.
- Initiator and since 2017 the chairperson of the Polish delegation to the Energy Storage Europe.
- Expert of the Parliamentary Climate and Energy Team.
- Member of the Panel on Renewable Energy Sources Industry Development and the Benefits for the Polish Economy, appointed by the Climate Minister.
- Member of the SKER Programme Council (term expires: 12/2021).



# AGENDA

- An energy cluster: what it is and who can participate in it?
- The certification of energy clusters
- What are the goals of energy clusters? Who benefits from the energy clusters? Is a local government unit necessary in a cluster?
- Cluster in Słupsk – consistent development of the local energy market
- The EKO Oława Energy Cluster– the biggest commercial energy storage system in Poland
- Is it possible to keep the pace of the development of prosumer PV installations without energy clusters and energy storage?
- Are energy cluster a way to integrate large scale RES plants into the grid?

## ENERGY CLUSTER – ARTICLE 2 (15A) OF THE RES ACT

**Energy cluster** – a civil-law agreement, which may include natural persons, legal persons, scientific units, research institutes or local-government units, concluded for the purpose of generating and **balancing** demand, distribution or sales of energy from renewables or from other sources or fuel in a distribution network with a rated voltage of less than 110 kV. An energy cluster should operate across an area not exceeding the borders of one district (powiat) or five municipalities (gminas); energy cluster is represented by a coordinator, a body appointed specifically for cluster-related purposes, it can be a cooperative, an association, a foundation or any member of the cluster.

## ENERGY CLUSTER – ARTICLE 2 (15A) OF THE RES ACT

- Form: a civil-law agreement
- Members: natural persons, legal persons, scientific units, research institutes or local government units.
- Objectives: generating and balancing demand, distribution or sales of energy from renewables or from other sources or fuel
- Business activity: within a distribution network with a rated voltage of less than 110 kV
- Area: within the borders of one district (powiat) or five municipalities (gminas)
- Representation: a coordinator, a body appointed specifically for cluster-related purposes, it can be a cooperative, an association, a foundation or any member of the cluster



# CERTIFICATION OF ENERGY CLUSTERS

- 1st competition – the results were announced on 9th May 2018. 33 out of 115 clusters received the Energy Cluster Pilot Certificate. 10 best clusters were awarded the Certificate with distinction.
- 2nd competition – the results were announced on 6th November 2018. 33 clusters out of 85 received the Certificate. 6 clusters were awarded the Certificate with distinction.

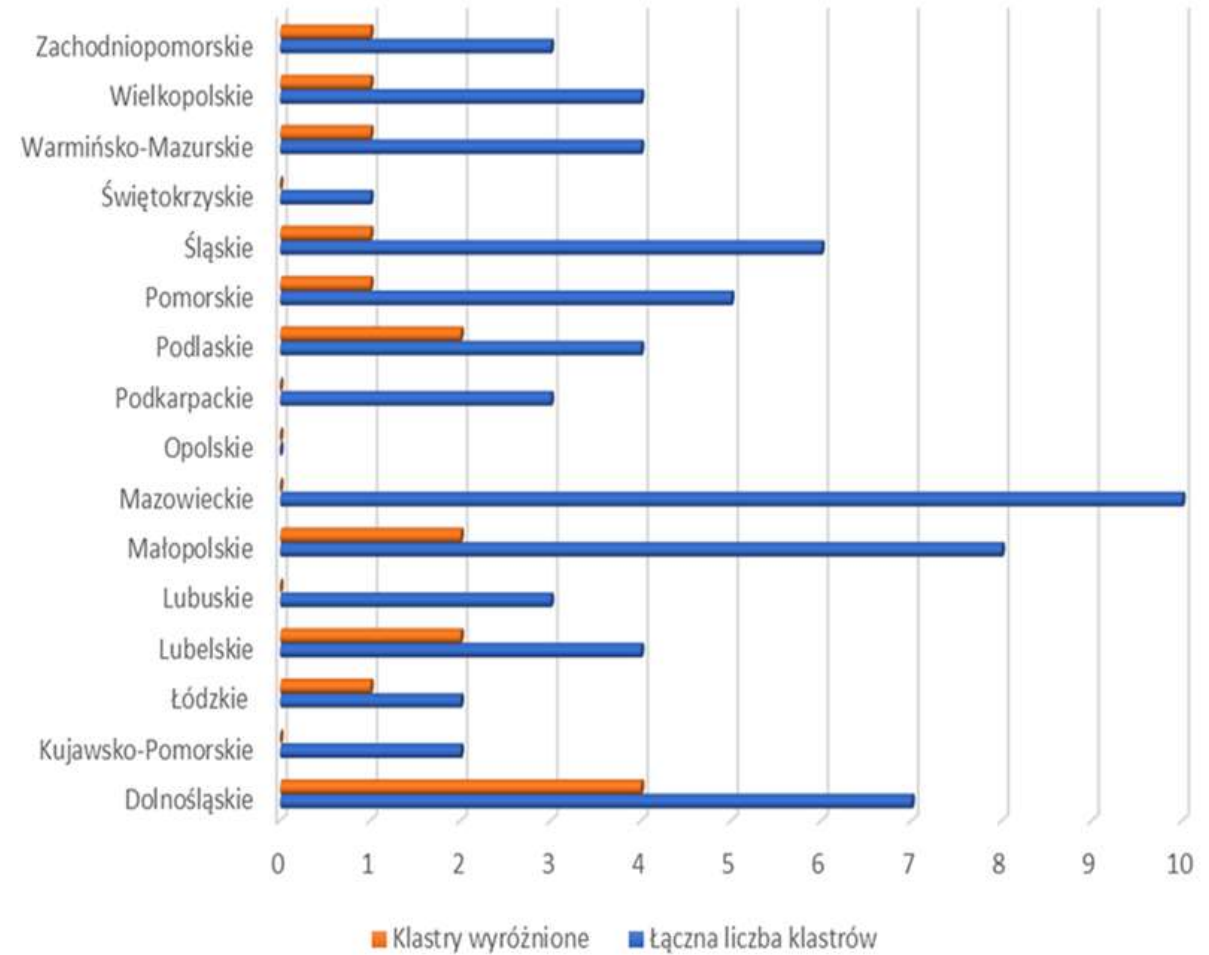


# CERTIFIED ENERGY CLUSTERS IN POLAND

ADM Poland



CERTYFIKATY OTRZYMANE W DWÓCH KONKURSACH MINISTERSTWA ENERGII W LATACH 2017-2018





# Local Goals of Establishing Energy Clusters

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- Ensuring the reliability of supplies and low energy prices in a given area
- Providing better operating conditions for local entrepreneurs and attracting new investors
- Reducing energy costs for local government
- Creating new workplaces
- Supporting the implementation of low-emission policy
- Raising the awareness of the production and consumption of electricity in local communities



# Benefits of clusters



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- Added value for each participant
- Improving the economics of RES energy producers
- Protection against rising electricity and heat prices
- Development of competences in the field of operation on the distributed energy market
- Preferential access to finance services for renewable energy investments
- Implementation of individual investments as a part of the cluster investment programme
- The perception of a company as environmentally-friendly
- Corporate social responsibility

# The Role of a Local Government Unit in an Energy Cluster

- Local government unit as an entity creating the legal, spatial and investment basics of the local energy market (The Energy Law Article 18 and 19)
- The local government unit imposes the plan and the organisation of heat, electricity and gaseous fuels supply on the local area. The document provides local obligatory regulations.
- The trust of the local residents



Wsparcie własności konsumenckiej w energetyce odnawialnej  
PROJEKT SCORE - HORYZONT 2020



MIASTO SŁUPSK  
JST

6 GWh

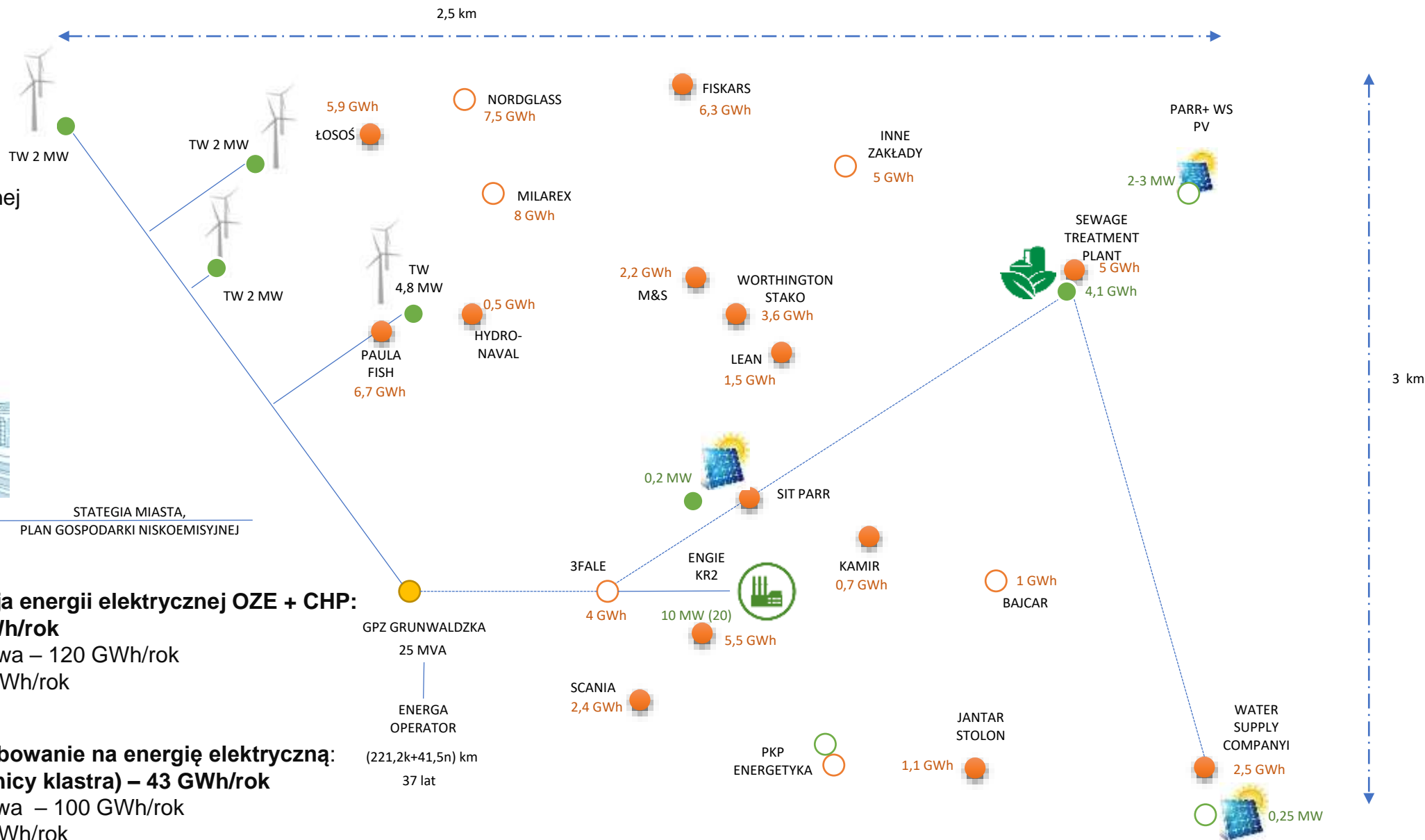
STRATEGIA MIASTA,  
PLAN GOSPODARKI NISKOEMISYJNEJ

**Szacowana produkcja energii elektrycznej OZE + CHP:**

- Obecnie – 44 GWh/rok
- Realna perspektywa – 120 GWh/rok
- Potencjał – 160 GWh/rok

**Szacowane zapotrzebowanie na energię elektryczną:**

- Obecnie (uczestnicy klastra) – 43 GWh/rok
- Realna perspektywa – 100 GWh/rok
- Potencjał – 180 GWh/rok

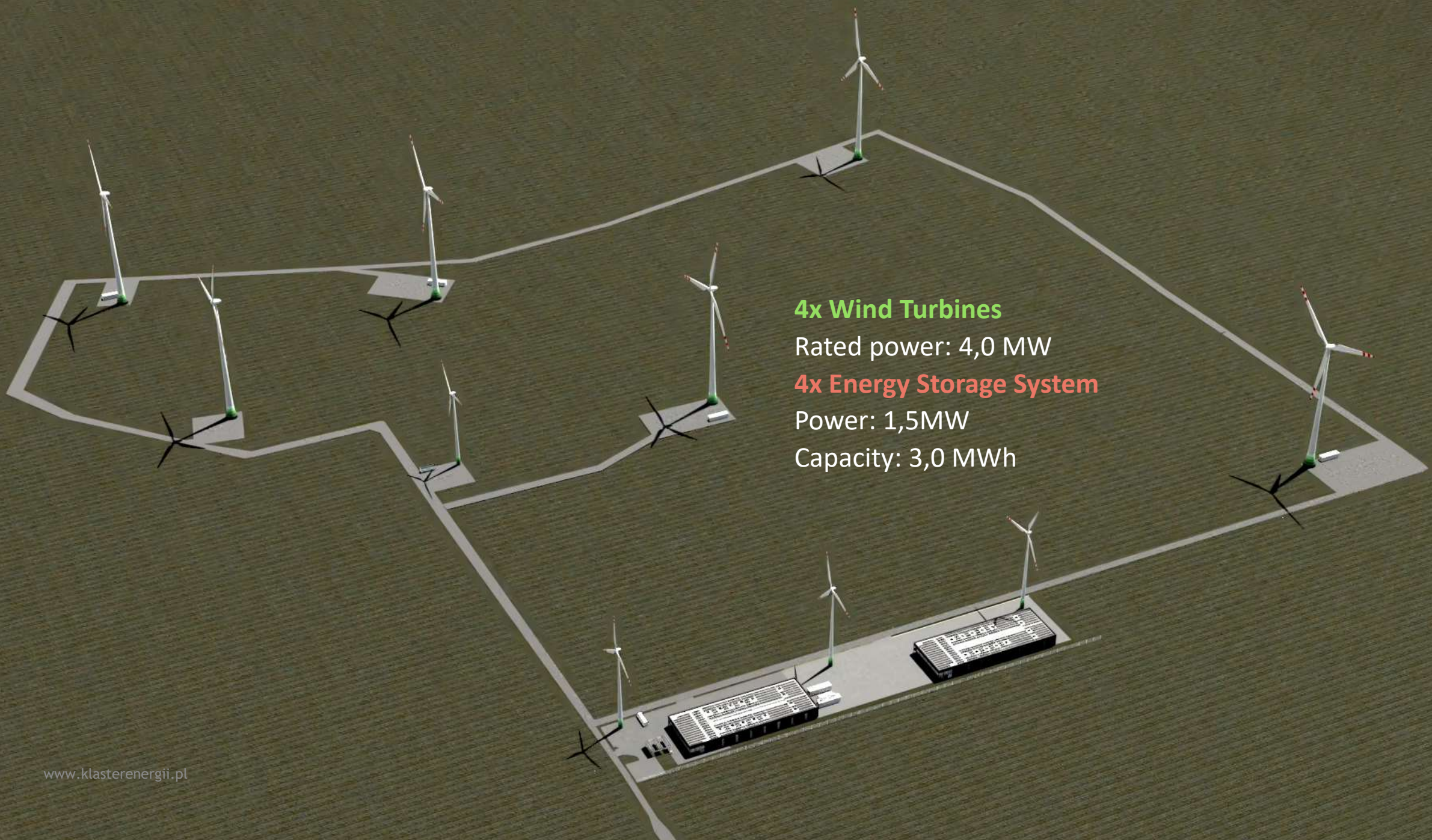


# THE EKO OŁAWA ENERGY CLUSTER

THE BIGGEST COMMERCIAL ENERGY STORAGE SYSTEM IN POLAND







**4x Wind Turbines**

Rated power: 4,0 MW

**4x Energy Storage System**

Power: 1,5MW

Capacity: 3,0 MWh





**ADM POLAND**  
**Nowogrodzka 50**  
**Warszawa**

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