



**The development of SMART GRIDS**  
**- the perspective of the POMORSKIE region**

Brussels, 14th October 2016

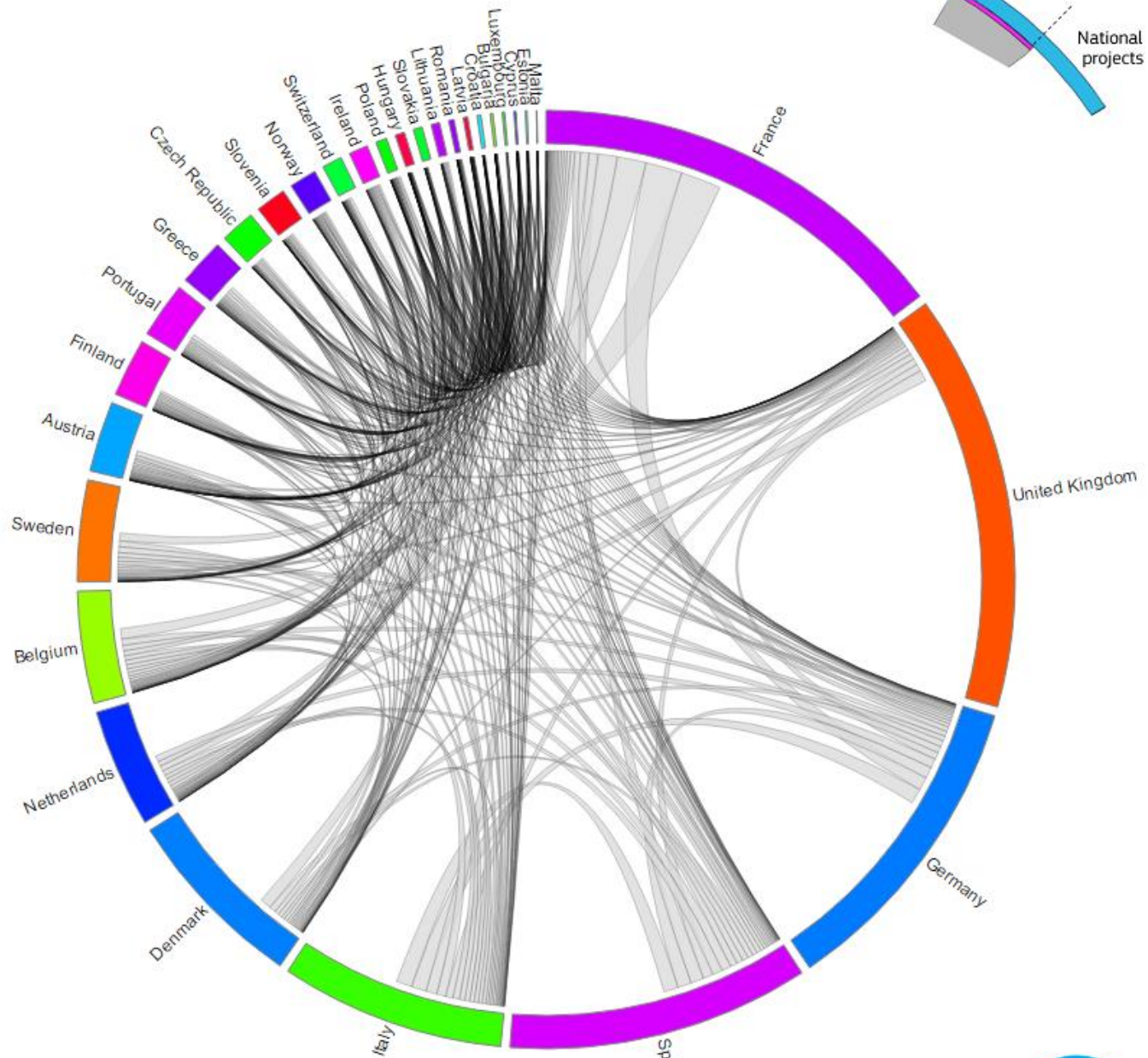
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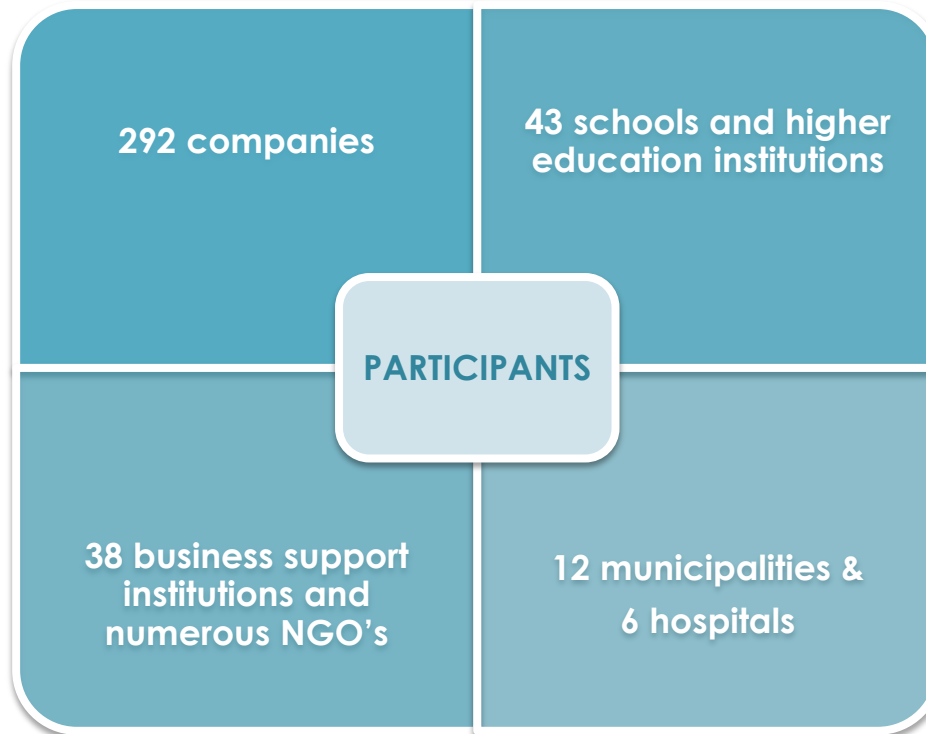
The chart shows the collaboration links in European multinational projects (weighted by project budget). The catalogue includes around 170 projects carried out by multinational consortia. <http://ses.jrc.ec.europa.eu/european-smart-grid-projects-relationship-chord-chart>



# POMORSKIE SMART SPECIALIZATIONS - PARTICIPANTS



Gdańska Organizacja Turystyczna



Słupsk



WOJEWÓDZKI SZPITAL SPECJALISTYCZNY  
im. JANUSZA KORCZAKA w SŁUPSKU Sp. z o.o.



**Energy sector and especially smart grids are crucial to make the economic development of the European regions happen.**



# Smart grid technologies in energy distribution

1. solution increasing reliability of deliveries, flexibility and safety of work of a distribution network making it possible to use production potential of renewable energy sources effectively;
2. technologies for automation and adjustment of voltage in MV and LV grids;
3. comprehensive solutions and systems for measurement and assessment of quality parameters of electric energy;
4. systems, products and solutions in the area of so-called virtual power stations;
5. development of technologies, products and services aimed at increasing speed of reliability and safety of transmission and processing of measurement data;
6. technologies and systems for management of clients' demand (interventional power reduction);
7. systems for cooperation of renewable sources with electric transport.

## Why cooperation is important to better implement your RIS3 energy-related priorities?

EYE@RIS3

Energy production  
& distribution



The main objective of the Smart Specialisation of Pomorskie in the area of Eco-effective technologies (...) is to **build and strengthen the competitiveness of business entities** focusing on the development of **new products and services based on the results of R&D** and implementation works, including **improvement in efficiency of distribution, generation, processing and consumption of energy, extraction of raw materials and processing of fuels** as well as decrease in impact on the natural environment.

**THIS CAN BE ONLY ACHIEVED IN CLOSE COOPERATION WITH INTERESTED REGIONS FROM THE EU AND BEYOND.**



### The main objective can be achieved through the following operational objectives:

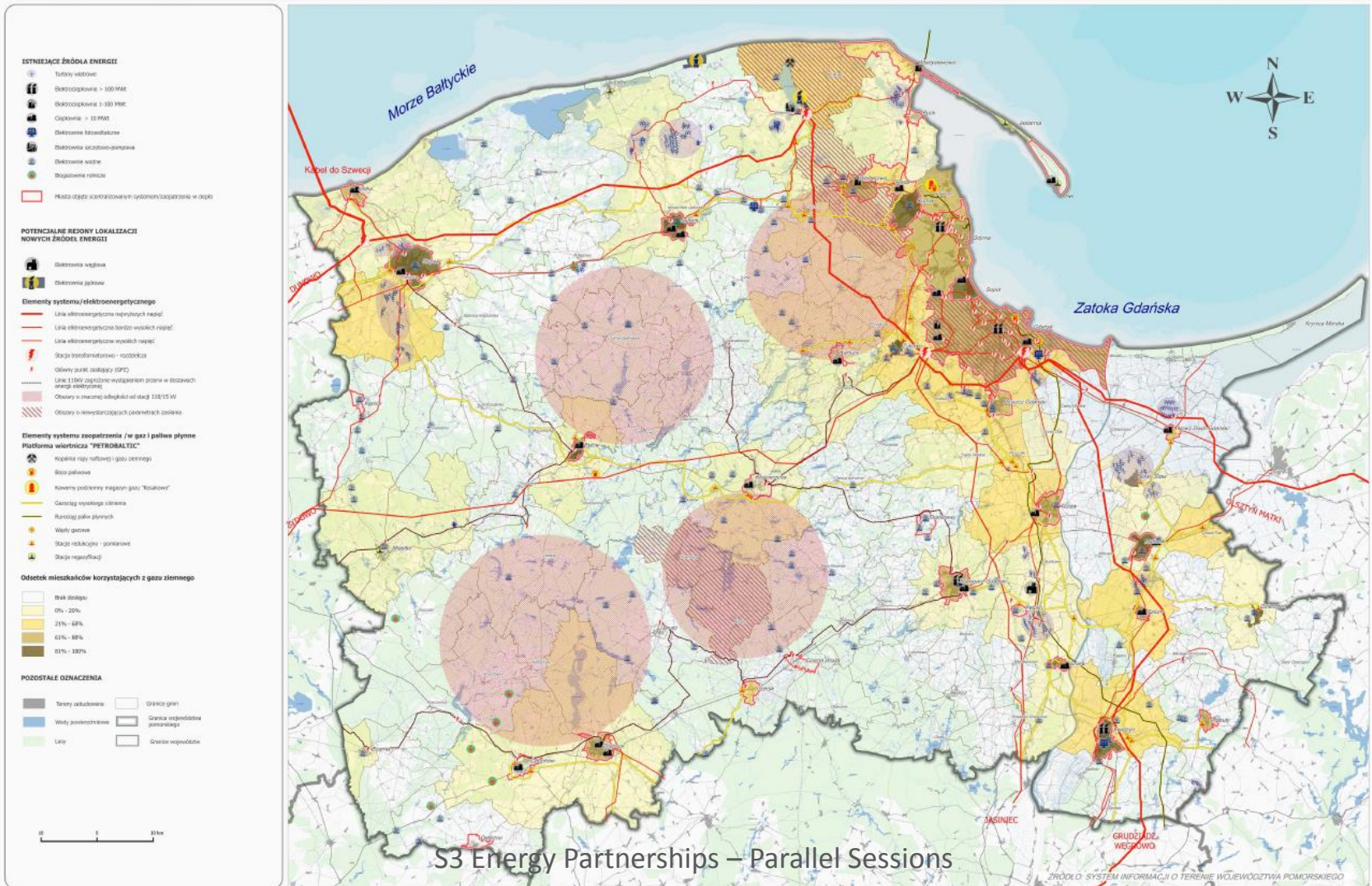
- preparation and implementation of innovative technical, technological and organisational solutions;
- promotion of application of eco-effective technologies through demonstrators and educational campaigns;
- development of education adapted to needs of the smart specialisation;
- improvement of accessibility and development of specialised research and development infrastructure;
- development of specialist support services in the range of acceleration and financing of new innovative undertakings, networking and animation of cooperation between companies, R&D centres and administration and promotion of internationalisation and foreign expansion.

	Pomeranian Region	ranking in Poland
GDP	97 883 mln PLN (2014)	7th
GDP per capita	42 580 PLN (2014)	5th
GDP growth rate	3% (2014)	13th
Investments	6936,2 mln PLN (2015)	7th
Investments per capita	6 574 PLN (2014)	3rd
Gross Added Value	84 365 mln PLN (2013)	7th
Gross Added Value per working person	112 219 PLN (2013)	4th
R&D Expenditures	933,7 mln PLN (2013)	6th
R&D Human Resources	2 300 (2016)	

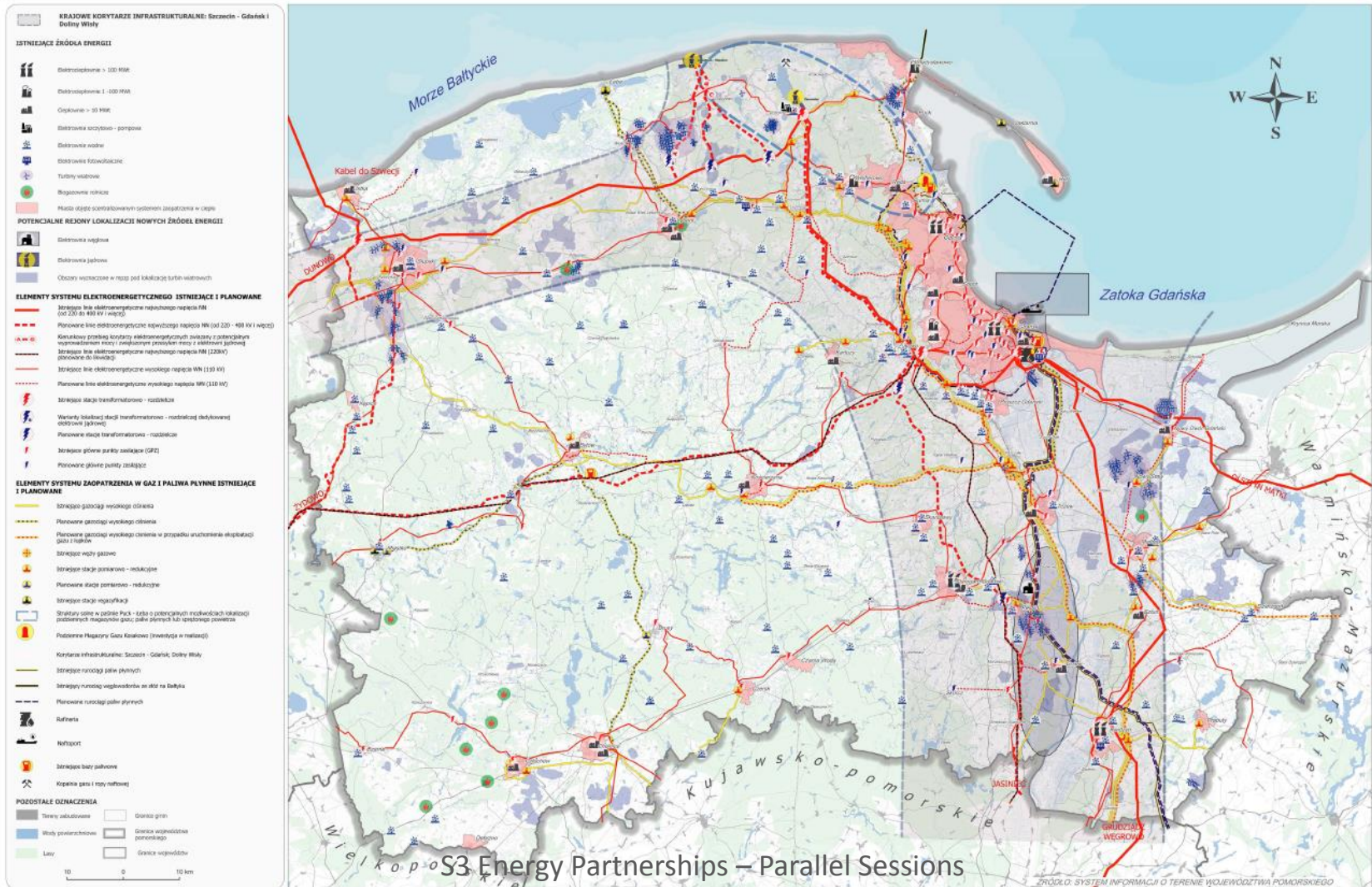
- **The Pomorskie Region is one of the above-average developed regions in Poland.** At the end of 2014, the gross domestic product (GDP) was more than 97 mld PLN, i.e. 5,7 % (2014) of the total GDP in Poland.
- The economy of the Pomeranian Region is based on services and industrial operations (64% (2013) and 26% (2013) of the generated gross added value respectively). However, the agricultural sector – even though the food industry is traditionally one of the key branches of the region’s economy – is of marginal importance and generates only 2% of the gross added value.
- The group of the largest enterprises of the Pomeranian Region is characterised by the predominance of industrial companies, including in particular: Grupa Lotos SA (fuel sector), Grupa Energia SA (energy sector), International Paper Kwidzyn sp. z o.o. (paper industry and related operations), Drutex S.A. (production of doors and PVC windows), Flextronics International Poland sp. z o.o. (electronics), Remontowa Holding SA (shipyard industry), Polpharma SA (pharmaceutical industry). The largest service providers include the following companies: STU Ergo Hestia SA, MTU SA (insurance industry), Glencore Polska sp. z o.o., Jysk sp. z o.o., Cefetra Polska sp. z o.o. (commerce), Jantar Sp. z o.o. GK (security services, cleaning services)



## PLAN ZAGOSPODAROWANIA PRZESTRZENNEGO WOJEWÓDZTWA POMORSKIEGO UWARUNKOWANIA ENERGETYKA



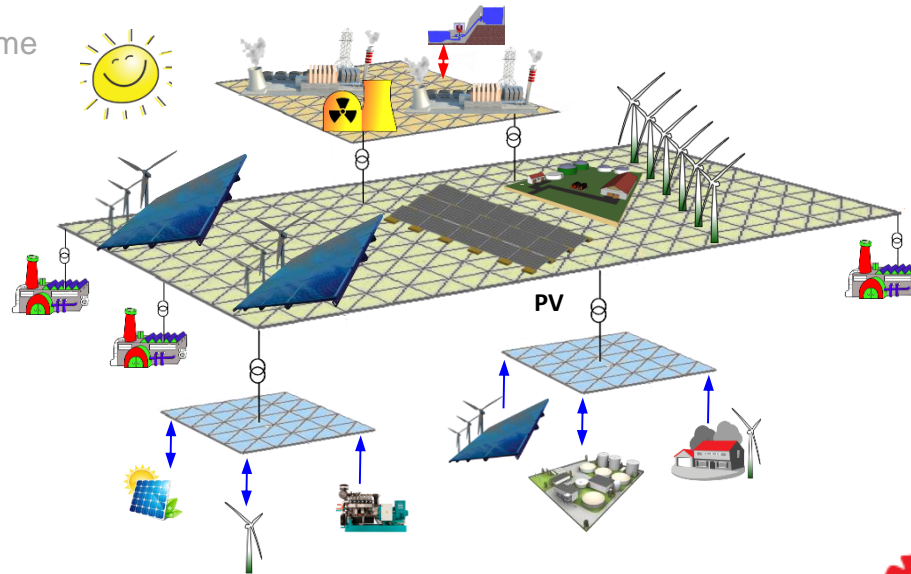




Energy production from RES in 2014 achieved the level of 1550 GWh, which is around 40% share of the total energy production in Pomorskie

- Onshore wind energy = 683 MW<sub>e</sub>.
- Planned onshore wind energy = 1625 MW<sub>e</sub>.
- Planned offshore wind energy = 2245 MW<sub>e</sub>.
- 98 small hydroelectric power plants = 34 MW<sub>e</sub>
- Biogas from sewage = 4,49 MW<sub>e</sub>
- Biogas from waste = 5,36 MW<sub>e</sub>
- 9 Biogas powerplants = (without heat power from cogeneration) = 12,16 MW<sub>e</sub> & 12,77MW<sub>t</sub>
- PV = 2,035 MW<sub>e</sub>

Definition: Regional Strategic Programme  
EcoEffective Pomorskie



## Energy Islands/clusters:

Independent local energy system, grouping producers, consumers and prosumers, with the possibility of real time adjustment of energy produced and consumed within the system, with the possibility of cooperation with other independent systems and the local energy distributor.

- **THE POMORSKIE VOIVODESHIP DEVELOPMENT STRATEGY 2020** (POMORSKIE 2020) is our “regional constitution” – a document which sets the main trends for Pomorskie’s development until 2020.
- The Strategy is a set of “ground rules” – it describes the fundamental principles for development, indicates the main directions for change and defines the region’s key development objectives.

THE STRATEGY’S DETAILS ARE PROVIDED BY SIX REGIONAL STRATEGIC PROGRAMMES:

- Pomeranian Port of Creativity · A Pomorskie Journey · Pomorskie’s Active People · Health for the People of Pomorskie · Pomorskie – A Mobile Region · **Eco-Efficient Pomorskie**, which indicate, among others, the specific measures and projects to be implemented. The programmes will make use of various sources of funding, including the EU-supported 2014-2020 Regional Operational Programme.



***Thank you for your attention!***

Brussels, 14th of October 2016  
**Małgorzata Maria Klawiter-Piwowska**