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**ACTIVITIES OF LOCAL GOVERNMENTS  
FOR CITIZEN POWER USING THE EXAMPLE  
OF THE CITY OF SŁUPSK**

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**DZIAŁANIA ORGANÓW SAMORZĄDOWYCH  
NA RZECZ ENERGETYKI OBYWATELSKIEJ  
NA PRZYKŁADZIE MIASTA SŁUPSK**

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**Summary:** The aim of the article is to present the initiatives and activities of local governments to support citizen power, using the example of the Municipal Office in Słupsk. Thanks to intersectoral cooperation, the inhabitants had the opportunity to take advantage of the free replacement of LED lighting and thermostats from Danfoss, which resulted in 20% savings and the reduced energy poverty. Greenpeace funded a photovoltaic installation for a school and IKEA for a homeless shelter. As part of the SCORE program, the city implemented a pilot solution of consumer shareholding, so that the benefits of renewable energy can be accessed by the citizens. An important role in this process is also played by the Bioenergetic Cluster initiated by the local government. Słupsk was the first city in Poland to set up a presidential council and plenipotentiary for sustainable development and the green modernization of the city, green points and introduced integrated ecological education.

**Keywords:** community power, local governments, intersectoral cooperation, ecological education.

**Streszczenie:** Celem artykułu jest przedstawienie inicjatyw i działań organów samorządowych na rzecz wsparcia energetyki obywatelskiej. Posłużono się przykładem Urzędu Miejskiego w Słupsku. Dzięki międzysektorowej współpracy z przedsiębiorcami mieszkańcy mieli możliwość skorzystania z bezpłatnej wymiany oświetlenia na ledowe oraz otrzymania termostatów подарowanych przez firmę Danfoss, co przyniosło ponad 20% oszczędności. Greenpeace ufundował instalację fotowoltaiczną dla szkoły, a IKEA dla schroniska dla bezdomnych. Miasto w ramach programu SCORE wdraża pilotażowe rozwiązanie akcjonariatu konsumenckiego, tak aby zyski z energii odnawialnej mogli czerpać obywatele. Ważną rolę w tym procesie odgrywa również zainicjowany przez samorząd Słupski Klaster Bioenergetyczny. Słupsk jako pierwsze miasto w Polsce powołał radę prezydencką oraz pełnomocnika ds. zrównoważonego rozwoju i zielonej modernizacji miasta, zielone punkty oraz wprowadził zintegrowaną edukację ekologiczną.

**Słowa kluczowe:** energetyka obywatelska, organy samorządowe, międzysektorowa współpraca, edukacja ekologiczna.

## 1. Introduction

Climate change is caused by human activities, but can also be stopped by people. A particularly important role in initiatives for environmental protection is played by local government authorities, carrying out activities aimed at ensuring that urban development favors both their inhabitants and the natural environment and, more broadly, the world's climate. An example of such a local government is the city of Słupsk, which intensively implements activities and initiatives related to the development of community power. This consists in supporting actively taking part in initiatives linked to energy efficiency and reduced energy consumption [Bomberg, McEwen 2012, p. 436]. The term can also embrace engagement and empowerment, self-sufficiency and local determination or community awareness around energy issues. [Muller 2011, p. 5801]. The actions taken aim at both environmental protection and economic development based on low-emission technologies. Many projects initiated by local governments authorities in Słupsk are innovative. Both local governments, institutions, entrepreneurs, schools and residents note the development potential of this direction. It has been included in the most important local law acts, planning documents and agreements on intersectoral cooperation.

The aim of the article is to present initiatives and activities of local governments to support citizen power using the example of the Municipal Office in Słupsk. The research material consists of reports on the activities of the Office, resolutions of the City Council and signed cooperation agreements with entrepreneurs, which have a unique character at country level and contribute to the social and economic development of the city.

## 2. The City's Development Strategy for Słupsk

The main directions of the city's development have been defined in the City Strategy for the Development of the City of Słupsk, adopted by the City Council for the period 2017-2022 [Uchwała Rady Miasta Słupsk... 2017]. In total, over 200 people participated in the creation of the document [Słupsk – Green City... 2017] – they were representatives of the Municipal Office, municipal companies, business, universities, schools, residents and invited experts. In connection with the creation of the Strategy, over 40 meetings, consulting workshops and debates took place. As part of the public consultations, over 150 comments and suggestions were received. The adopted document is modern in character and consistent with similar documents in this area with a much wider range. The document refers to the Agenda for Sustainable Development 2030 [Agenda for Sustainable...]. The adopted Strategy is based on the sustainable development goals set out in the Agenda. The adopted legal act is also consistent with the most important development document of the European Union – Europe 2020 [Europe 2020 Strategy 2011]. This is a strategy for smart and sustainable development conducive to social inclusion. The areas that it covers, namely innovation, employment,

education, social inclusion and climate change and energy have been faithfully reflected in the Strategy in Słupsk. The planning document is also consistent with the provisions of the National Urban Policy up to 2023 [National Municipal Policy from 2015, item 1235]. The desirable directions of urban development set out in this first national normative act of innovative nature revitalization, social participation and raising the eco-efficiency of resource use have been highlighted in the Słupsk Strategy, which puts it among the most innovative documents of this type. An important norm is also the Long-Term National Development Strategy – Poland 2030. The Third Wave of Modernity [Long-Term National... item 121], which as the main objective indicates the improvement of the quality of life of Poles. In Słupsk, the most important planning document on improving the quality of life is one of the main aspects. The Słupsk Strategy also has points concurrent with the Strategy of the Pomeranian Voivodeship 2020 [Strategy of the Pomeranian Voivodeship 2020... 2012]. Common to both strategies is the emphasis on the modern economy, the activity of residents and attractive city space.

According to the vision adopted in the strategy, Słupsk is a new generation green city. Civic, modern, developing in a sustainable and balanced way, following the example of the best cities in Europe. It combines the development of the economy with social justice and the protection of the environment and climate. Słupsk's local government's mission is to create conditions for the highest quality of life for its residents, expanding their development opportunities. In the field of environmental protection, one of the key activities of the local government was the adoption of the Low-Emission Economy Plan [Plan of Low... 2015], which adjusts the reduction of CO<sub>2</sub> emissions to EU requirements. The aim of the plan is to provide economic, social and environmental benefits in accordance with the principle of sustainable development. These benefits result from measures reducing emissions, achieved among others through the increase of innovativeness and the implementation of new technologies, reduction of energy intensity, creation of new jobs, and consequently favorable to the growth of competitiveness of the economy.

In connection with the vision of the development of Słupsk as a new generation of green city, the council for sustainable development and green modernization of the city was established. The Council is a consultative and advisory body to the Mayor of Słupsk. The Council includes experts from all over Poland. The tasks of the Council include: joint development of solutions in specific areas of the functioning of local government; preparation of opinions and experts' opinions; working out own studies in terms of the specificity of the city of Słupsk in particular areas of the functioning of local government, giving opinions on the most important acts of local law and recommending their changes. Słupsk's local authorities – the first city in Poland to do so – appointed the presidential plenipotentiary for sustainable development and the green modernization of the city, which on a daily basis implements the tasks of the green modernization and cooperates with the presidential council.

### 3. Cooperation for sustainable development

Ślupsk has a strong commitment to developing intersectoral cooperation. In 2016, a cooperation agreement was signed between IKEA Poland and the Municipal Office of Ślupsk [Declaration... 2016]. The agreement covers cooperation in the areas of: 1) conducting educational activities in the field of environmental protection, responsible production, the consumption and promotion of sustainable development in everyday life; 2) eliminating energy poverty through measures to reduce energy costs borne by the inhabitants and to support energy-saving solutions and behaviors that promote responsible use of natural resources; 3) undertaking joint initiatives to provide affordable and clean renewable energy for as many inhabitants of Ślupsk as possible; 4) conducting educational activities addressed to various groups in the area of methods of solving global social and environmental challenges. The first step taken as part of our joint efforts was the delivery of 5,000 LED bulbs supplied by IKEA. Residents of communal flats and those receiving an energy allowance received light bulbs for free in exchange for checking what kind of savings they would achieve. In the summary of the first stage of cooperation in accordance with the report of Housing Company in Ślupsk [Komorowska... 2017] after testing LEDs for 6 months, it turned out that just the replacement of bulbs reduced energy consumption by 20% in each flat. Replacing the bulbs in stairwells has resulted in energy savings of 27%. As part of the signed agreement, the company continues gradual free replacement of light bulbs. In 2017, local authorities signed an agreement with Danfoss to build the potential for a smart city [Agreement... 2017]. The declaration of cooperation provides for the will to cooperate in building the vision of Ślupsk as an intelligent, highly energy-efficient city. Bearing in mind the accepted international and European climate policy commitments, as well as the goals of sustainable development, Ślupsk and Danfoss Poland will strive to significantly reduce energy consumption in the city, improve the thermal comfort of residents and reduce the problem of energy poverty. The first action inaugurating the signing of the agreement was the free exchange of approximately 100 hand-operated Danfoss valves and thermostatic heads in selected buildings managed by the city, including schools, communal premises, the Municipal Office and institutions performing important social functions. The agreement also provides for conducting educational activities in the field of energy saving. The administrators of buildings from the Housing Company were the first to be trained. The city has also been recognized for its pro-ecological attitude by the Greenpeace Foundation. Greenpeace has provided 10 schools in Poland with photovoltaic micro installations. One of them with a capacity of 10 kWp went to the high school in Ślupsk. Thanks to it, the school will save on electricity bills, and students will learn about new technologies. The local authorities cooperate closely to implement a low-carbon economy with other cities and with entities which have practice and experience in combating climate change.

The city of Słupsk is an active member of national and international agreements and networks. From 2013, it has been a member of the European Covenant of Mayors on climate and energy, which brings together 7755 signatories, including 34 from Poland [www.covenantofmayors.eu]. The organization works to increase energy efficiency and use renewable energy. The scope of the Agreement is not only a declaration of will. The signatories, in order to achieve their own set objectives, undertake a number of actions and agree to submit appropriate reports every two years and be subject to monitoring. Słupsk is also a member of Energy Cities, an association of city authorities that are in the period of energy transformation - moving towards dispersed renewable energy and strengthening democracy. Established in 1990, it currently brings together 100 cities in 30 countries [www.energycities.eu]. The network has prepared a report "30 Energy Cities `proposals for the energy transition of cities and towns"[2014]. These proposals provide practical answers to problems in the area of energy transformation, common for all cities, and are based on innovative concepts and practical experience. In 2015, Słupsk joined the "Coalition for the creation of a national system of sustainable energy management" which brings together nearly 70 cities, municipalities and organizations from all over Poland. The coalition develops good practice in the field of energy management in municipalities and cities, and cooperates for legal changes in the field of energy planning, so that they fully take into account the issues of energy efficiency and climate policy.

#### **4. Integrated ecological education**

The focus research [Report... 2015] shows that respondents, especially young people, are keen to point to ecology as an opportunity for the city, but do not give specific projects whose implementation would positively affect its development. In some areas of ecology there has been progress, such as waste segregation and awareness related to climatic phenomena, but there is still a lot of work in the field of environmental education and the process of making residents aware of them and including them in broadly understood pro-ecological processes. Therefore the Municipal Office together with its companies and subordinate units decided to implement an integrated system of ecological education. According to the content of the internal act [Circular Letter no. 1/2017], the institutions jointly implement an educational program to interact with residents on multiple routes - from various sources. As a result of this action, over 100 events in the field of environmental education were organized in the city. The most important one is the production of educational films promoting, for example: renewable energy sources, proper waste segregation, public transport and care for clean air; tree planting shares; distribution of seedlings to residents (about 1,000 pieces), organization of numerous competitions; lectures, ecological workshops and city games. Ecological information leaflets have been displayed in all offices, buses and buildings in the

city's resources. The Baltic Energy Congress was organized (5/12/2017) as well as a conference on renewable energy sources for energy teams from Słupsk's educational institutions that participate in the project "Every WATT for the weight of gold", that is Pomeranian children and youth learn how to effectively save energy at school. Selected schools in the city joined the international energy saving program Euronet 50/50 max. In addition, every year, the city of Słupsk actively participates in the organization of the "EU Sustainable Energy Week" in cooperation with the Regional Representation of the European Commission in Poland. In 2018 for the first time, Słupsk and a group of other progressive cities (Dąbrowa Górnicza, Gorlice, Mielno, Ostrów Wielkopolski, Starachowice and Wadowice) jointly organized the program "Clean energy for all Europeans". According to the report [Komorowska 2018], a number of informational and educational activities took place at that time, for example the debate entitled "Słupsk - a city of clean energy" with the participation of the local authorities and youth from the "energy" classes and an ecological picnic for the residents. In addition to the implementation of integrated environmental education, two Green Points for education and ecological promotion were created in the city. This is a proprietary idea of the local authorities. Various institutions supported it: the Labor Office, the Henrich Böll Foundation and the Center for Citizens' Initiatives in Słupsk. Green Points operate at the branches of the Municipal Public Library and employ six people. During two years, Green Points organized over 50 events. The objective is, above all, to provide consultation on the transition to a greener lifestyle. The ecoadvisers meet with inhabitants, housing communities and enterprises. Green Point of Słupsk is the first such initiative in Poland.

## **5. Participation in projects and competitions**

Słupsk as one of the three European cities became a participant in the SCORE project. The Score project is financed from the European Commission funds under the Horizon 2020 program in the scope of coordination activities and supporting the support of consumer joint ownership in renewable energy [Agreement no. 784960]. The project involves a total of 14 partners from five countries. Three cities from three countries were selected to carry out pilot projects supporting the development of prosumer energy: Susa Valley from Italy focused on heating systems using biomass and two cities focused on photovoltaics - Litomerice in the Czech Republic and Słupsk. SCORE introduced an economic model of financing in the form of a consumer shareholding – the Consumer Stock Ownership Plan (CSOP). This model enables consumers who do not have savings or the ability to access investment credits for the proactive and profitable acquisition of production assets in power stations powered by RES. SCORE is targeted at groups affected or at risk of energy poverty. The key to facilitating this reallocation of property rights

is designing new financial contracts. We use the example of the CSOP as a necessary contract that provides a financing mechanism [Lowitzsch, Ozgur 2018]. Trust funds established under this concept, for example by the local community, managed by independent trustees, are entitled to borrow funds for the acquisition of shares in the renewable energy plant on behalf of energy consumers. The shares acquired by the trust are distributed among the beneficiary consumers in proportion to their energy purchases. Revenues from the sale of generated energy are used to repay the loan, accepted by the CSOP trust. In particular, low-income citizens have the opportunity to repay their share of loans from future investment income. After the repayment of the debt, the income is transferred to the beneficiary consumers. As a result of close cooperation between the local government and IKEA, the company decided on this principle to fund a photovoltaic installation for a homeless shelter, which thanks to the signed contract, became a co-owner of a 10 kWp solar installation. According to the plans, the installation will cover between 25 and 30% of the electricity outlet's demand. Citizen investment in renewable technologies is an important element in building a knowledge society and increasing energy and environmental awareness in communities. As part of climate protection, Słupsk also takes part in the project of the Ministry of the Environment "Let's get into the climate", as a result of which the Urban Plan of Climate Change Adaptation (MPA) will be developed. The project includes 44 cities in Poland. Its aim is to create adaptation plans containing a diagnosis and proposals for solutions that increase resilience to climate change. It will also provide support for the local authorities in obtaining funds for investment activities. In addition, work is under way to develop for the city and implement the assumptions of the Strategic Adaptation Plan for sectors and areas sensitive to climate change by 2020, with a view to 2030. Słupsk's achievements in the field of ecology were awarded in the prestigious Eco-City competition organized by the French Embassy. In 2016, in the category of management of local energy systems, the city was praised for the coherence of its activities, in particular for the Green Point information project and a pilot system for publishing real-time information on the energy consumption of a primary school building. The jury also awarded Słupsk for its comprehensive implementation of tasks in the field of water and sewage management and planning activities aimed at increasing water safety and controlling the disposal of waste from septic tanks. In 2017, Słupsk was awarded in the energy systems category for perceiving the problem of energy poverty and the measures to reduce it, as well as the project of Słupsk Bioenergetic Cluster and the continuation of comprehensive measures to reduce energy consumption in the city and the fruitful cooperation with external companies. In the "green and air" category, the city won the award for the introduction of green areas as an element supporting the revitalization of the city.

## 6. Słupsk Bioenergetic Cluster

Słupsk Bioenergetic Cluster is a cluster with a compact structure. It was created on the initiative of the following local partners: the City of Słupsk, Waterworks Słupsk Ltd., Engie SC Słupsk Ltd., and the Pomeranian Regional Development Agency. The signatories also include local entrepreneurs operating in and near the Słupsk Special Economic Zone. Cluster participants are producers of electricity and heat in renewable and conventional sources, as well as large energy consumers, such as the aqua park or the fish industry. The current generation capacity of the cluster is over 15 MW of installed electricity in RES, which consists of 1.2 MW in a biogas source, 14 MW in wind sources and 195 kW in photovoltaic sources. The cluster's production potential in the scope of thermal power is 1.5 MW in the biogas source and 190 MW in conventional sources [Lipiecka 2017]. In the competition announced in 2018 by the Ministry of Energy, the Słupsk Bioenergetic Cluster was named a pilot cluster and was awarded in the best top ten of the 33 selected clusters. At the initiative of the local government, a Green Energy Institute was also established for the benefit of the local government, companies and entrepreneurs in the Słupsk Municipal Functional Area. It is a research and development center that works for local government - developing expertise, conducting research, implementing ecological education and international cooperation in the field of research and development. The Institute is also a development laboratory for the innovative activity of enterprises and individuals. Thanks to this decision, the potential of prosumer energy will bring benefits to the region and individual inhabitants, as well as the development of eco-innovation initiatives.

## 7. Conclusion

The Municipal Office of Słupsk is very active in the development of citizen power. This is evidenced by innovation and innovative undertakings implemented by the local authorities. As the first in Poland, they set up Green Points in the city, appointed a presidential council and plenipotentiary for sustainable development and green modernization of the city, established effective cooperation with enterprises and introduced integrated ecological education. In the city there is located a model bioenergetic cluster and a research and development center at the Institute of Green Energy. The city has an innovative Development Strategy consistent with the most important international planning documents in the field of development and the Low-Emission Economy Plan, and is an active member of environmentally-friendly organizations. Słupsk, the only city in Poland participating in the SCORE project, the result of which was the signing a contract allowing the residents to become co-owners of the photovoltaic installation. The cooperation with entrepreneurs – IKEA and Danfoss and the Greenpeace foundation – brought tangible results for the city. As a result of these numerous activities, the community was activated and its ecological awareness increased,



which contributed to the social and economic development of the city. Słupsk's achievements have been recognized twice in the Eco-City competition. The model of a sustainable and green city is the only one that guarantees – in the short and long term – a certain competitive advantage over other developing cities in Poland. Innovation is also evidenced by the fact that Słupsk has accepted and implemented the "Charter of Diversity", the first city in Poland to do so.

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