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Market for energy storage devices in Poland

Energy storage devices: legal framework and strategic documents

The amendment of the Renewable Energy Act is effective as of 1st July 2016. The amendment reflects the increasing interest of the Polish market in energy storage devices. The amendment provides the Polish statutory law with a broadly presented definition of an energy storage device. According to this definition, an energy storage device is a separate device or an array of devices with an intended use of storing energy therein. Such devices should operate without emissions harmful to the environment. In addition, they must also allow at least a part of the stored energy to be recovered. The term - storage energy device is used several times throughout the text of the Act, i.e. in the definition of a RE installation and that of a RE hybrid installation. This Act introduces the terms of an energy cluster and of an energy cooperation to Polish legislation. The energy storage device is not explicitly mentioned in these terms. However, practical use of these terms requires such storage devices to be used.

The potential for use and applications of storage energy devices in Poland does not result, however, from the RE Act only. Evaluation of a market potential requires that the "Strategy for sustainable development", a plan coined by the super-ministry of economy and development and the continuous feeding programmes for RE should be taken into account. Changes of electricity prices and the status of power grids are yet another factors that should not be forgotten.

The „Strategy for sustainable development“ also known as „Morawiecki-Plan“, named after the former acting Prime Minister and Minister of Economic Growth, Mateusz Morawiecki, is a widely developed plan for economic development and modernisation. Implementation of this plan should cost ca. 1.5 tn zlotys (ca. 357 bn Euros) until 2020 and includes the foundation of a state-owned fund, similar to the German Credit Institution for Re-development (KfW). The 220-page long paper which is already in the consultation stage, indicates the branches and sectors of economy which should be prioritised. Energy storage is mentioned in the paper several times, and it is classified as a priority sector. It should promote energy storage technologies and applications of energy storage devices.

Subsidiaries

The Operational Regional Programme "Infrastructure and Environment" and the 16th Regional Operational Programme for the Funding Period 2014-2020 are important for Polish energy storage device market. 31 billion Euros are available until 2020 within the Regional Operational Programme. Over billion EUR will be used for investments in the field of renewable energy in the current funding period, comprising between 11,9% and 22,9% of the total budget of individual regions. Investment categories "Energy (transfer and storage)", "Renewable energies: Wind", „Renewable energies: Solar“, „Renewable energies: Biomass“ and „Other renewable energies“ exist on the level of every regional programme, however, distribution of funds between individual categories is completely different in various regions.

Purchases of storage devices may be co-financed by the 200 million EUR funding programme „Prosument“ of the National Fund for Environmental Protection and Water Management (Narodowy Fundusz Ochrony Srodowiska i Gospodarki Wodnej, NFOSiGW). Currently, funds are available only in individual voivodeships. The funding programme of the NFOSiGW and thus the „Prosument“ programme are currently being developed. It is expected that the follow-up „Prosument“ programme starts still this autumn.

Power supply quality

The unsatisfactory power supply quality in Poland is a reason behind the growing interest of all customer groups in energy storage devices. Power supply quality is estimated using i.e. parameters such as SAIDI and SAIFI. SAIDI stands for System Average Interruption Duration Index. This value estimates the average interruption duration for every individually connected consumer. SAIFI (System Average Interruption Frequency Index) on the other hand describes the frequency, with which the end user experienced a service disruption during a year. Unplanned power outages and service interruptions totalled up to 192 minutes per each user in Poland in 2014. This value is further increased by approximately 120 minutes of planned disruptions. On average, every end user was affected by service disruptions barely 4 times per year. In comparison, the SAIDI value estimated by the Federal Grid Agency in Germany amounted up to approximately 12 minutes in 2014.

The low quality of power supply increases the amount of inquiries related to storage devices, not only from private customers and from businesses. Interest in such devices is also growing in the case of grid users and operators. Since 2016, the lean

incentive regulations of the Energy Regulatory Office (Urząd Regulacji Energetyki, URE) are effective. According to these regulations, grid users receive quality guidelines related to SAIDI and SAIFI values. Poor power supply quality forces the users to reduce their energy purchases. The target of these regulations is to improve important quality characteristics by 50% until 2020. It has already been effective in the first project, in the MWh area.

Increasing electricity prices for small and medium-sized businesses

Electricity prices in Poland are increasing for industrial users. Within 12 months (mid-2014 – mid-2015) the price increase for industrial users in Poland stood at 4%, the steepest rise in all of Europe. The highest electricity price increases is a burden which has to be purchased by small and medium-sized businesses. It is expected for this trend to continue and even to increase in the following years. More and more small and medium-sized businesses decide to install a PV installation in order to permanently reduce their operational costs. Because grid users receive only the wholesale market price for excessive electricity they store, the ca. 4 cents for every saved kilowatt-hour mentioned by the President of the Energy Regulatory Office for the previous quarter mean that an energy storage device provides a viable solution for some investors. The increasing numbers of inquiries related to RE installations are confirmed by the newest survey performed by Polish Institute for Renewable Energy (Instytut Energetyki Odnawialnej, IEO). The dynamics of new investments in this customer group was the most profound in the last quarter of 2015.

About Energy Storage Technologies during the RENEXPO® Poland 2016

RENEXPO® Poland 2016, international trade fair and conferences for renewable energy and energy efficiency, takes place on **October 19. - 21, 2016** in **Warsaw, Poland**. It is the **biggest industry event** in the country. An international audience meets for the **6th time** in the Polish capital for discussing and presenting the latest trends and subjects of the sector.

RENEXPO® Poland creates in Warsaw the **meeting point for key persons** and **experts for knowledge transfer in the energy sector**. It is not only a meeting place for decision makers presenting the current energy issues, but much more it addresses to the topics, problems and developments of the energy of tomorrow.

REECO, together with the **ADM Poland Company** organizes during the trade fair the **1. International Energy Storage Congress in Poland.**

The conference will discuss the potential of energy storage in Poland, i.a. in the light of the RES Law, Responsible Development Plan and Electromobility Development Plan in Poland. The presented issues will include research directions and solutions in the field of energy storage in Europe and all over the world, both in terms of large-scale energy storage, as well as home use storage devices.

More information and the conference registration find you on the website:
<http://www.renexpo-warsaw.com/455.html?&L=1>

<p>Co-organizer of the congress</p> 	<p>ADM Poland Nowogrodzka Street 50 PL-00-695 Warsaw Tel: +48 730 486176 Fax +48 22 2951372 kontakt@admpoland.eu www.admpoland.eu</p>
<p>RENEXPO® Poland organizer</p> 	<p>REECO Poland Sp. z o.o. ul. Bartycka Street 22B/21A 00-716 Warszawa Tel.: +48 (0) 22 266 02 16 Fax: +48 (0) 22 379 78 60 info@reeco-poland.pl www.renexpo-warsaw.com</p>