PHOTO: ROBERT VAN WAARDEN / WWF-CANON

Two wind technicians do maintenance on a wind turbine in western Poland during the winter.

WWF Climate & Energy

RENEWABLE ENERGY: BACKGROUND ON RES IN POLAND

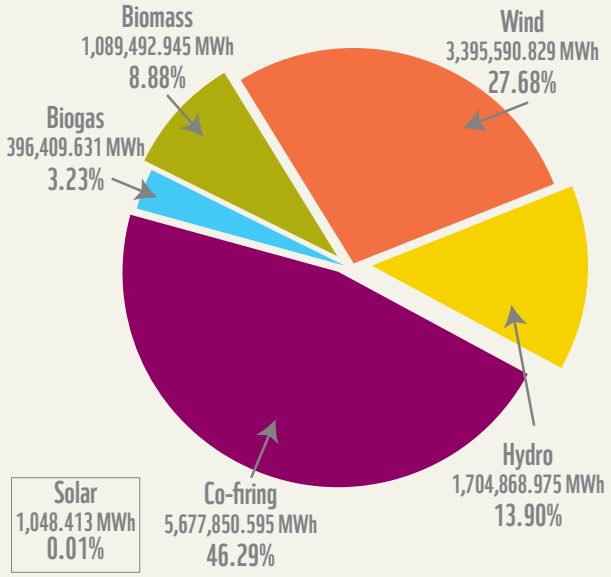
Poland's renewable energy potential hasn't been tapped yet. Poles are waiting for a comprehensive RES law that would help boost investment and diversify the coal-based energy mix. Energy efficiency, coupled with large scale, small scale and micro scale renewable energy could hold the answer to an upcoming energy deficit awaiting Poland in the future. But policy needs to be on par.

Renewable energy information – Poland 2012

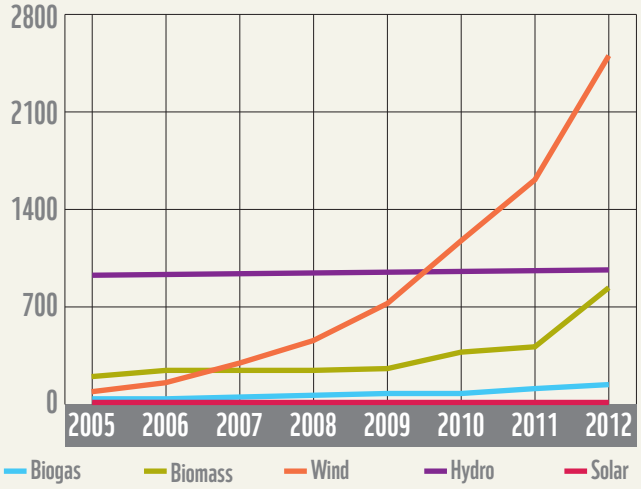
In 2012	Poland
Installed RES (MW)*	4,414
RES production/capita (MWh)*	0.17
RES production (MWh)	12,265,261
Population	38,538,447
GDP (billion EUR)	376.4
GDP/capita (EUR)	9,769

*Excluding co-firing capacity

Production overview by type



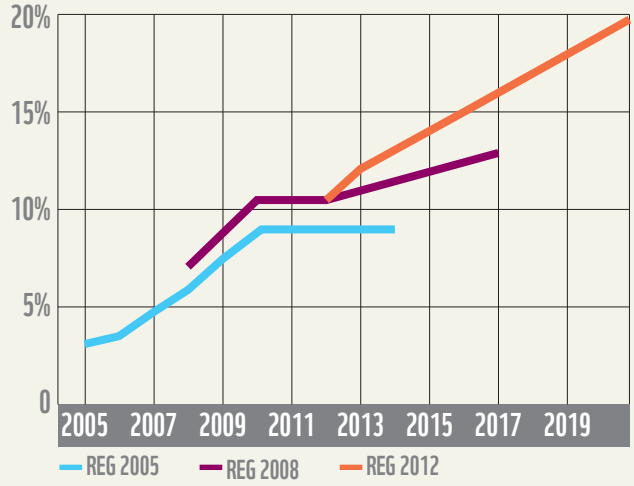
Installed RES nominal power over time (end of year, MW)



The current Polish renewable energy support mechanism is written into the energy law, which uses the quota system to create a market price for certificates of origin issued for each MWh of produced green energy. Regardless of the type of RES used, each MWh equals one certificate of origin, commonly known as the green certificate. The system is in place since 2005 and, based on existing regulations, will be available until 2021.

According to the climate and energy package, Poland's RES target for final energy consumption by 2020 is 15%. This means that 19% of gross national electrical energy production should come from renewables. Looking at 2012, the target seems far away, because although the 10.4% electricity production quota was basically met, approximately 50% of RES power comes from co-firing. When conducting studies on possible legislative amendments, the Polish Ministry of Economy has deemed co-firing as an inefficient technology seen more often than not as an outcome of a perverse incentive created by the RES support system.

RES quota targets over time



From a macro perspective, the RES support system in Poland has been working. The annual quotas are being met. The wind and biomass sub-sectors have been developing dynamically over the past four years with the current system in place. The year on year increase of RES installed in Poland seems to be dynamic. Wind and biomass are gaining the most momentum. As of June 2013, approximately 2.8 GW of wind power have been installed. Despite many problems the sector faces, planned investments have gone forward and contributed to this outcome. The Eurobserver reported that in the year 2010, Poland had 28,450 people employed across all renewable markets through direct and indirect employment, the most significant of which are wind (7,000), biomass (7,500) and biofuels (9,600).

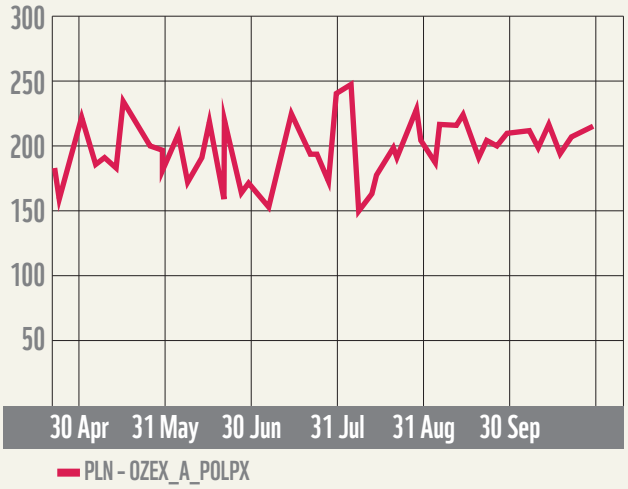
The support system, which was introduced eight years ago helped to create supply chains for many RES types. Poland has a well developed solar-thermal sector, which can serve as an example of how a properly adjusted support system can have a positive effect on the development of a specific technology. Generally, however, the RES sector is waiting for legislative reform, which would reinvigorate the market.

The current RES support system is flawed in many ways. The market based price of the green certificate system has fallen in the past year.

Due to oversupply, the market prices of green certificates started falling by the end of 2012, reaching an all time low of PLN 100.48 per MWh (EUR 25.12 per MWh) on February 14, 2013. However, it is important to note that the volume of certificates being sold on the commodities exchange also dropped significantly as the price dipped. The price of green certificates traded over the counter still remained above the PLN 200 per MWh mark (EUR 50 per MWh). The oversupply is due to a few factors. First of all, co-firing produced a significant amount of renewable energy throughout the past years, which kept the RES quota target basically in line with production. Moreover, instead of remitting the certificates to the regulator, power distributors preferred to pay a substitute fee. Also, the ministry of economy held the RES target stagnant for three years (10.4% in 2010-2012), while more and more RES installations came online. The massive oversupply, despite

the quota increase in 2013, will remain in the system for a number of years, unless support is cut for co-firing and old hydro plants. This would create space for new RES, including wind, solar and biogas.

Price of green certificate, May to November 2013



With the introduction of an improved support system, perverse incentives could be removed and the RES sector as a whole could potentially help contribute to economic growth through innovation, environmental and health benefits as well as strengthened energy security and job creation.

Dedicated RES legislation was drafted many times throughout the past years, with introduction of feed-in tariffs for small installations and diversified coefficients for larger types (draft RES law from October 2012). However, there is a lack of political will to push through such changes, which are deemed to be costly and inefficient by some. These proposals, which were already publicly consulted and drafted into law were replaced with yet another proposal from September 2013.

This new system would support renewable energy investments through a tender, where the company willing to take the smallest feed-in-tariff would win the bid. The aim of the new proposal is to make the system as cost-effective as possible, but at the same time it does not differentiate between technologies and sizes beyond 1 MW. Thus, rather than being a tool for implementing best available technologies, it will spur investment in the cheapest means of reaching the RES goal. Some other major elements include: a phase-out for support for co-firing, no support for small and micro-installations (and prosumers) and two support areas: for installations above 1 MW and 40kW-1MW. Since the proposed solutions are just in their primary legislative phase, the process to its implementation is foreseen to be no shorter than 1.5 years.

Until there is legislative stability, many projects will be put on hold, thus hindering the progress which needs to be made by 2020. Out of all RES technologies, solar PV has not developed due to low support. Although the RES support system was established in 2005, it has not changed the energy mix significantly. RES power (excluding co-firing) accounts for only about 5% of produced power in Poland.

Sources:

Energy Regulatory Office
Ministry of Economy
World Bank
Polish Statistical Office
Eurobserver
Polish Transmission Grid Operator (PSE S.A.)
Central Statistical Office
Polish Power Exchange

Contacts

Tasneem Essop
Head, Low Carbon Frameworks
WWF Global Climate and Energy Initiative
Tel: +27 83 998 6290
Email: tessop@wwf.org.za
Twitter: @TasneemEssop

Paweł Średziński
Communications Manager
WWF Polska
Tel: +60 463 1633
Email: psredzinski@wwf.pl
Twitter: @WWF_Polska

Jaco du Toit
Programme Coordinator,
Low Carbon Frameworks
WWF Global Climate and Energy Initiative
Tel: +27 82 765 9461
Email: jdutoit@wwf.org.za
Twitter: @JacoDuToitCT

WWF

Why we are here
To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

panda.org/energyreports

© WWF International, Global Climate & Energy Initiative, 2013. All rights reserved.