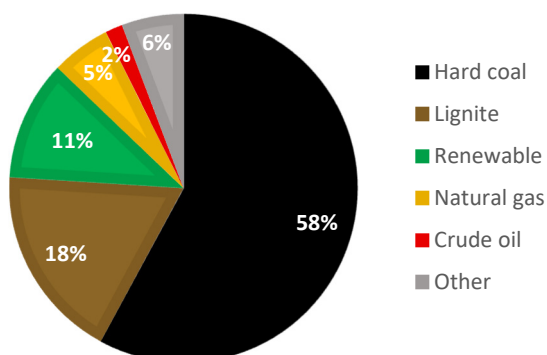


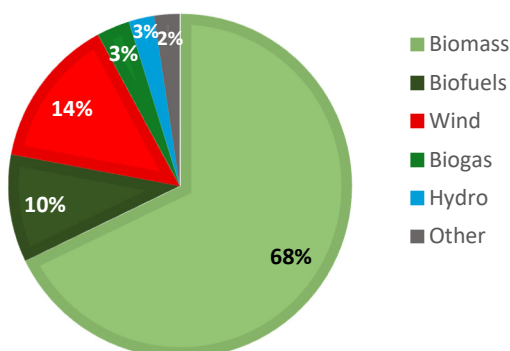
# Bioenergy Poland

*What are the obstacles and opportunities for Dutch companies in the bioenergy sector in rural Poland?*

**POLAND ENERGY MIX 2018**



**POLAND RENEWABLE ENERGY MIX 2017**



## Legislation

- Poland had to make amendments to its Energy Law act, as it was obliged to increase its share of renewable energy according to the EU climate goals, which resulted in the act of renewable energy sources (RES-Act).
- Recent changes in the RES-Act has caused the act to be seen as unstable. These changes included the replacement of the green certificate for the auction system, changes in the basic support systems and legislation regarding prosumers.
- The European Union has released guidelines regarding financial support for renewables, technical specifications and sustainability criteria, however these criteria are non-binding.
- Poland has a blending quota of 8% as a minimum percentage of biofuels as a part of total liquid fuels.

## Quick facts

- Poland is very dependent on fossil fuels as it produces more than 80% of the country's energy.
- Renewable energy accounted for 11.16% of total energy consumption in 2018. This is still below Poland's goal of 15% in 2020.
- With a biomass potential of 895 PJ, Poland has one of the highest biomass potentials in the EU. Biomass could generate more than 20% of Poland's total energy consumption.
- Poland has the fifth most biomass incentives in the EU.
- Poland is the EU's fourth-largest employer in the renewable energy sector with 72,200 jobs, of which 59,600 were in the bioenergy sector.

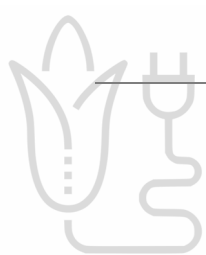
## Support system

- Poland applies a combination of a feed-in tariff (FIT), a sliding feed-in premium (FIP) and a tendering system.
- The feed-in premiums are used to equalize a negative balance that is caused by a price for the unused electricity that is lower than the one mentioned in the approved declaration.
- The feed-in tariff amounts to 90% of the reference price set in the RES-Act.
- In 2016, Poland switched from a green certificate/quota system to a tender/RES auction system. In these auctions, the Polish government will announce how much energy it will need from each renewable energy group (basket) and a maximum auction budget. The winners of the tenders have a guaranteed price for 15 years. There are two types of auctions, for new installations and for those that existed before 2016 and will need to transition between systems.
- The Polish government is supporting prosumers, which are consumers who are producing their own electricity (installation <50kW) by allowing them to store on or sell energy to the grid and by offering them low-interest loans.

## Obstacles

- The EU does not recommend the FIT, sliding FIP or a fixed price auction system as they do not expose producers to market conditions.
- The auction system uses too many and an illogical categorization of baskets.
- The unstable energy market seems to be a major obstacle as recent changes in the RES-act have halted growth in the renewable energy sector and supported the coal industry.
- Difficult administrative and legal procedures, as well as financial barriers, large number of formal requirements in realization of biogas projects, too extensive paperwork and a lack of trust of banks for biogas projects.
- Legislation regarding biomethane is non-existing or not clear.
- There is a long wait to get connection to the grid or the necessary permits.

Poland has almost 14 million hectares of arable land, giving the country a very high biomass supply. The table below shows Poland's annual biomass resources.



Biomass resource	Millions of tonnes available
Biowaste	6
Cereals straw	8
(waste) wood	9
Slurry	20
Manure	80

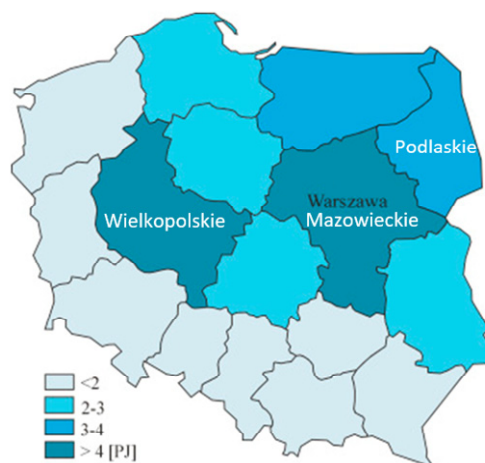
## Recommendations

- For Poland to switch to a feed-in premium support scheme.
- For Poland to change the categorization of the auction baskets.
- To launch educational campaigns, organize training courses and prepare clear guidelines.
- For bioenergy plants to locate themselves in Mazowieckie or surrounding voivodeships.
- For bioenergy plants to use straw and energy crops as biomass input.
- For bioenergy plants to consider all prices before entering the auctions (fixed price for 15 years).
- For bioenergy operators to look into which funds might be available for them.

## Costs

Initial investments for bioenergy plants are lower but operating costs might be higher than in conventional plants. Other costs can relate to a grid connection agreement, bank guarantee, a penalty or other administrative steps necessary to participate in RES auctions.

For biogas, most potential is in the Wielkopolskie (6.54 PJ), Mazowieckie (5.51 PJ) and Podlaskie (3.55 PJ) voivodeships. The distribution of this biogas potential in Poland can be seen in the figure below.



## Opportunities

- Poland has high biomass and biogas potential. Poland is only using one-third of its potential.
- Poland's electricity prices are on the rise. Many bioenergy producers choose not to participate in the RES auctions as wholesale electricity prices are rising and certificate prices have increased. Auction prices in 2018 were approximately 35% higher than in 2017.
- Poland has the 5<sup>th</sup> most biomass incentives in the EU.
- The details of the Green Deal and the Just Transition Fund will be further elaborated in 2020 and could provide possible opportunities in the Polish bioenergy sector.
- This lack of trust from banks seems to be fading as many banks have started to supply lines of credit for biogas projects.
- There are many EU and international funds available to help Poland in its energy transition.
- High governmental support for small installations (prosumers).