

plan
up
.eu

Progress Check: Poland's final energy and climate plan under review

LIFE PlanUp

To cite this study: LIFE PlanUp (2020) Progress Check: Poland's final energy and climate plan under review

Published: September 2020

Analysis by Institute for Sustainable Development Foundation Poland, Polish Green Network and Bankwatch, with input from Carbon Market Watch, Transport and Environment, European Environmental Bureau, Energy Cities

Expert group: Wijnand Stoefs, Agnese Ruggiero, Asger Mindegaard, Elisa Martellucci, Cristina Mestre, David Donnerer, Barbara Mariani, Maciej Wereszczyński, Joanna Furmaga, Izabela Zygmund and Wojciech Szymalski

Deliverable quality review

Quality check	Date	Status	Comments
Project consortium	09/09/2020	ok	

Acknowledgement

The Life PlanUp project has received funding from the LIFE programme of the European Union. The project also acknowledges the generous support of the European Climate Foundation.

Legal notice

This publication, corresponding to deliverable C 8.2 national briefs with the assessment and scoring of national climate policies in the target countries, is financed by the European Commission through the LIFE programme and the European Climate Foundation.

It is the overarching goal of the LIFE programme to act as a catalyst for changes in policy development and implementation by providing and disseminating solutions and best practices to achieve environmental and climate goals, and by promoting innovative environmental and climate change technologies.

The information and views set out in this report are those of the author(s) and do not necessarily reflect the official opinion of the European Commission.

Further information

Elisa Martellucci, Project Manager at Carbon Market Watch elisa.martellucci@carbonmarketwatch.org

Agnese Ruggiero, Policy Officer at Carbon Market Watch agnese.ruggiero@carbonmarketwatch.org

Wijnand Stoefs, Policy Officer at Carbon Market Watch Wijnand.stoefs@carbonmarketwatch.org



Executive summary

As part of the European Union's 2030 climate and energy package, EU member states are required to develop national energy and climate plans (NECPs) to define and to report on their 2030 climate and energy objectives.

After the publication of the European Commission's (EC) recommendations on the draft NECPs, Poland submitted its final¹ plan at the end of 2019.

Divided into two main sections, this briefing first provides an overview of the updated Polish plan and then assesses whether it has taken into consideration the EC recommendations and is generally more ambitious than currently implemented legislation, especially in the transport, buildings and agriculture sectors.

The updated version of the Polish NECP is slightly stronger than the draft. However, it is still incompatible with the EU's 2030 climate targets, let alone the higher ambition as set out in the European Green Deal. The Polish government hasn't succeeded in transforming the plan into an effective policy coordination and planning tool, although it has largely taken on board the EC's recommendations, especially through adding details on the various measures included in the NECP. Additional measures have also been included, and the renewable energy headline target has been upgraded from 21% to 23% by 2030 – which is however conditional upon extra EU funding (note that the EC recommendations asked for 25%). There is still room for improvement, especially when it comes to public participation. Only one public consultation took place for the draft NECP, in January-February 2019. For the final NECP, no public consultation was conducted.

The Polish NECP includes both new and already implemented policies, the ambition of which varies depending on the sector. Agriculture remains the most problematic sector with no measures with the specific goal to cut greenhouse gas emissions from the sector.

¹ Note that the submitted NECP – while considered final – is according to the Polish government still subject to change depending on Poland's upcoming energy strategy and the yet to be decided upon EU climate targets for 2030 and 2050.

With respect to the building and transport sectors, there are some minor improvements and new measures. However, there is still a general lack of details when it comes to the implementation and financing of the mentioned schemes. Furthermore, the measures to reduce emissions from buildings overly rely on (unsustainable) biomass and fossil fuels.

Poland's NECP maintains the government's resistance against phasing out coal (in 2030, the share of coal in the electricity mix would still be 56%). This materialises for example in one of the key programmes (the Clean Air programme) relying on simply replacing old coal boilers with new ones in residential heating to reduce indoor air pollution.

If the plan's more positive elements are to be maintained and implemented, it will be crucial to maintain political commitment, to detail investment plans for each policy and measure and to ensure consistency between them. In order to ensure popular support, the Polish government must do much better in involving all relevant stakeholders into the climate policy decision-making. Finally, the energy and climate plan can and should be a key tool for a green recovery that will help Poland emerge from the Covid-19 pandemic stronger, more resilient and more sustainable.

Overview of the plan

The European Commission considered the first draft of the National Energy and Climate Plan (NECP) lacking both ambition and details on how measures and policies would function and deliver the expected results.

While this second version addresses most of the Commission recommendations, it is still not in line with the EU climate goals. Furthermore, although it includes new measures and limited additional analysis, more details are needed to get a better picture of how the government aims to achieve the set goals.

In terms of ambition, two main concerns remain. The Commission asked Poland to give more details on measures to plug the significant gap between the country's expected greenhouse gas emission reductions in the sectors that are not covered by the EU Emissions Trading System but by the Effort Sharing

Regulation 2018/842 (including transport, buildings, agriculture and waste or “non-ETS” sectors) setting national binding 2030 targets for these sectors. However, the final plan fails to provide these details just as it fails to explain how Poland foresees to raise its ambition when it comes to reducing emissions from the non-ETS sectors under the Effort Sharing Regulation (ESR). Second, the Commission requested that the Polish renewable energy target be upgraded from 21% (stated in the draft NECP) to 25% by 2030. The final NECP includes a 23% renewable energy target, but makes the added ambition dependent on EU support. The final NECP does however not specify what support is necessary and what it would be used on to reach 23% renewable energy instead of the 21% from the draft NECP.

The other headline targets in the final NECP are the same as in the draft NECP: -7% greenhouse gas emission reductions by 2030 compared to 2005 in the ESR sectors and 23% energy efficiency improvement compared to the reference scenario (PRIMES2007).

While these targets have remained the same, the Polish government’s impact assessment indicates that deeper emission and energy use cuts are now expected. Emissions are expected to fall to 315 Mt of CO2e by 2030 (compared with 396 Mt CO2e in the draft NECP). Primary energy consumption in 2030 is estimated in the draft NECP at 111 Mtoe, and in the final NECP that has dropped to 97Mtoe. However, it is difficult to say if and to what extent this drop is due to specific climate policies and measures, as the Polish government hasn’t carried out an analysis on it.

	2030
Reduction in greenhouse gas (GHG) emissions in the ESR sectors (Effort Sharing Regulation) compared to 2005	7%
Share of renewables in energy end-use	21-23%

Improvement in energy efficiency	23%
Share of renewable energy in electricity generation	32%
Yearly growth in renewable energy in heating and cooling	1,1% (each year up to 2030)
Share of renewable energy in transport	14%

Source : Own elaboration based on PL NECP, 2020

In terms of investments, the final NECP has improved substantially compared to the draft plan – with details added on the estimated costs of some policies and measures. However, the analysis of investment needs is still not detailed enough for the NECP to act as a coordination and investment tool.

Poland does not plan on phasing out coal-fired power plants by 2030, even though a recent study (Greenpeace Poland, 2020) indicates that most of Poland's conventional coal-fired power plants (CHPs excluded) are scheduled to close by 2035 at the latest, while coal will be uneconomical post-2030 without subsidies from the Polish state.

While the final NECP does indicate that the share of coal in electricity production will fall to 56-60% by 2030 (from 77% in 2018) this is mainly due to an expected increase in the demand of electricity by 2030 (from 170 TWh to 201 TWh), and not due to a fall in the absolute consumption of coal. With regard to energy dependence, the document underlines that coal generation will be important to guarantee stable and reliable energy supply, implying that energy security is the main reason behind the government's reluctance to phase out coal and the plan to build nuclear power capacity.

The Commission in its recommendations asked Poland to better indicate just and fair transition aspects in the NECP. This includes the impact of the

transition on populations living in coal regions and issues related to energy poverty. While energy poverty issues were included in the final NECP, a comprehensive analysis of the impact of the transition on mining areas is missing. The government deems such analysis impossible within the timeframe of the NECP process and plans to instead carry out one in 2020 as part of the national restructuring plan for hard coal and lignite mining regions.

There is an inherent contradiction here - while just transition is now included in the plan, coal is slated to stay as important (in absolute numbers) as it is now. The NECP references the government's Programme for Silesia, which envisages the opening of two new coal mines in the region. It also says that "dirty' jobs should not be eliminated but adapted to the requirements of an environmentally friendly economy", and envisages that the controversial new lignite mines in Ościsłowo and Złoczew will go ahead. In addition, the main decarbonization efforts in the power sector (instead of renewable energy deployment) refer to retrofitting existing coal plants and constructing new, more efficient ones.

Overview of the sectors

Transport

The Polish final NECP draws strongly on the Sustainable Transport Strategy to 2030 – stating that that document determines what is in the NECP. At the same time, the final NECP does contain some improvements with regards to the draft NECP, including an increased focus on modal shift and emphasis on public transportation. In addition, the development of low-emissions transport and more energy-efficient urban planning are included.

The main critique remains that the NECP lacks details on how these plans will be financed and implemented.

Buildings

The final NECP includes slightly better energy performance standards and stronger requirements for the use of renewable energy in new and modernised

buildings. While solar as an energy source for the residential sector could grow significantly in the coming decade, the impact assessment relies predominantly on biomass boilers for district heating and wood pellets for residential homes to deliver “renewable energy” for heat. By 2030, biomass boilers are expected to provide more than three times as much heat as heat pumps. This raises significant environmental concerns with regards to the sustainable supply of biomass.

The NECP also refers to the National Renovation Strategy and the Clean Air programme – the latter being the largest and most advanced Polish measure to promote energy efficiency in buildings. However, it is not clear how the Clean Air programme would be financed.

Agriculture

The agriculture section of the final NECP, just as the draft one, is built upon the Polish Sustainable Agriculture and Fisheries Strategy to 2030. The main message on agriculture is that the government sees limited potential for GHG emission reductions from this sector, and fears that strict policies and measures could lead to carbon leakage. However, the NECP also refers to the large potential for GHG absorption from rural areas.

The final NECP proposes stepping up efforts to reduce low-stack emissions, promote afforestation and improve forest management. The details on most agricultural policies and measures are left to the new Common Agricultural Policy (CAP), with the exception of a fertiliser programme which is already in place and covered in detail in the NECP.

Transparency and public participation

The Polish government did not organise public consultation for nor share information on its work on the final energy and climate plan. Therefore, the only opportunity for the public to influence the process was during the consultation that was organised in the context of the draft plan. In order to ensure public ownership and support for climate policies, the Polish

government needs to do much better in terms of involving all relevant stakeholders in the decision-making process.

Implementation of policy measures in the transport, buildings and agricultural sectors

This section examines both selected existing measures in the target sectors and measures foreseen in the national energy and climate plan.

Transport

The Polish government's measures to reduce pollution from the transport sector include the Zero emission public transport or "eBus" project, the requirement for zero-emission cars in municipal fleets as well as Euro standard tolls for heavy trucks.

Zero emission public transport (eBus project)

The Zero emission public transport measure is a repackaging of the 2017 eBus project: a government policy to create a production chain for electric buses in Poland, and to deliver the electric buses to Polish municipalities. The rationale behind the measure is that municipalities need support in order to transition their public transport to electric buses and that the market rates for electric buses were too high for Polish municipalities.

The first eBus aimed to reduce transport emissions by replacing all existing buses with electric buses by 2030 in Poland. This implied putting about 1,000 buses in service annually (in 2018 the total number of buses in use by municipalities was approx. 12,000). The government never set a specific greenhouse gas emission reduction target for the eBus project. However, it could reduce public transport emissions significantly, by between 16 and 25% by 2030 – depending on the carbon intensity of the electricity powering those buses.

However, the repackaged ‘Zero emission public transport’ measure is less ambitious than the original eBus project – only 3,000 electric buses are expected to be delivered to Polish municipalities by 2030 – a quarter of what the eBus project originally envisaged.

The original eBus programme uses a governmentally guided tender process for the establishment of the industrial capacity to build the buses, and the delivery of specified numbers of buses to the municipalities which are members of the programme. The tender is in the form of a big purchase group formed by the government and the interested municipalities.

Initially in 2017, 41 municipalities signed the intention letter to create the project, but as of 2020, 62 municipalities have joined the scheme – representing approx. 50% of the Polish public transport bus market. 800 buses have been ordered by 2020, and 1,500 buses by 2023. However, these numbers only cover the first tender, so could still rise. There is no regular plan for more tenders and the level of constant financing depends on the negotiations between the parties of the project (national and local authorities).

The first buses were delivered to Toruń city at the end of 2019 for testing. The price of a single bus according to the tender results was only 1 mln PLN (approx. 220,000 EUR), which is about 50% cheaper than prices for electric buses on the European market.

The programme is financed through multiple ways. Some resources are mobilized by the municipalities and the national government which created an Electromobility Development fund, under the special Polish Development Fund. In addition, the European Union is contributing a considerable sum from the European Regional Development Fund (ERDF) 2014-2020 aimed at purchasing low-emission public vehicles. The Ministry of Environment has also earmarked some funds from the Polish EU carbon market auctions.

Together with the second transport policy described below, the original eBus project is part of the “Polish Electromobility Plan” – which aims to fully electrify the Polish vehicle fleet.

Recommendations to improve the measure

- A detailed and integrated financial plan earmarking funds up until 2030 is necessary to ensure this policy can reach its full potential.
- A clear target path with milestones should be added.
- The environmental benefits (GHG emission reductions but also improved local air quality) of this measure should be quantified to promote buy-in from stakeholders.

Polish Electromobility Plan's requirement for zero-emission cars in municipal fleets

The “Polish Electromobility Plan” underscores the role the public sector can play in promoting electromobility. It includes requirements for public institutions to purchase electric vehicles. The “Electromobility and Alternative Fuels Law” from 2018 (transposing EU Directive 2014/94/EU) mandates national institutions (exceptions exist, for example the police and military), local authorities and public transport companies to reach prescribed levels of electric or alternative fuels vehicles. The targets are in general set for 2025, but for some authorities there are also mid-term targets.

The following targets for 2025 have been set:

- 50% of personal transport vehicles owned by national institutions should be electric (first target is 10% for January 2022)
- 30% of service vehicles of local authorities should be electric or natural gas in municipalities with more than 50,000 inhabitants (first target is 10% for January 2022)

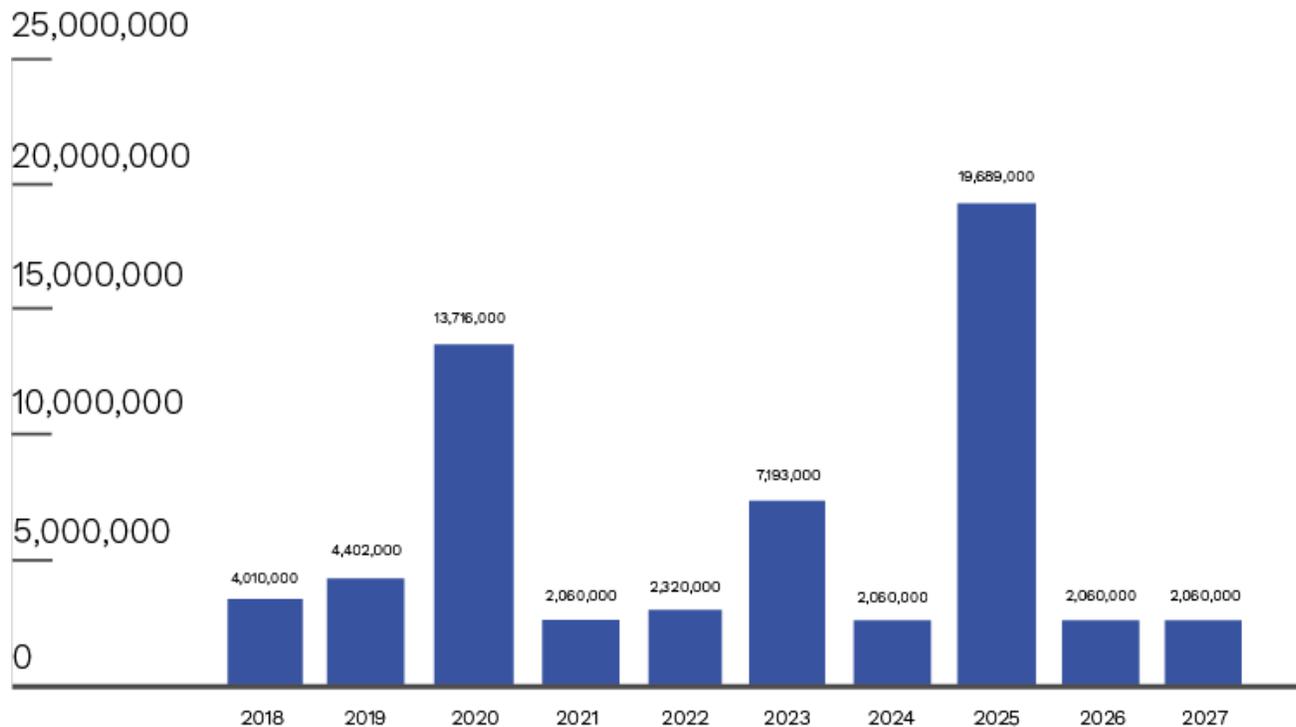
- 20% of public transport vehicles should be zero emission in municipalities with more than 50,000 inhabitants (5% by January 2021 and 30% by 2028).

The measure has been included in the Polish final NECP, but the greenhouse gas emission reductions related to this measure have not been calculated in the impact assessment.

As of 2020, the various institutions covered by these targets have not been very active in implementing the measure. Only relatively small tenders have been published for cars or service vehicles by some national institutions or local authorities. For example, the city of Szczecin has purchased in total eight electric vans in 2018 and 2019 (though more are due to be purchased).

The poor uptake of this measure is partly due to financial constraints, as annual financial limits have been set over the coverage period of the measure (see figure XX below). The limit is at its highest in 2020 (over 13 mln PLN - approx. 2.9 mln EUR) and 2025 (over 19 mln PLN - approx. 4.2 mln EUR) and much lower for other years, eg. 4.5 mln PLN (approx. 1 mln EUR) for 2018 and 2 mln PLN (approx. 0.45 mln EUR) for 2024.

Figure XX: Annual budgets for purchasing electric and alternative fuel cars by Polish national institutions 2018-2027 (PLN)



Source: Institute for Sustainable Development Foundation (2020)

The public transportation sector, on the other hand, has been more active, as the public transport fleet in some cities is relatively large (e.g. more than 1,000 buses each in Warsaw and Kraków).

However, considerable resources are needed, if these cities are to reach the first target (5% by 2021). In 2020 the biggest electric buses fleets were in Zielona Góra (42), Warsaw (31), Kraków (26) and Jaworzno (24). However, the most number of electric vehicles (not just buses) are active in Lublin and Gdynia as their base fleet consists of trolleybuses.

Warsaw realized the biggest tender for electric buses in Poland in 2019 - 130 articulated (mega) electric buses were purchased from Polish producer Solaris. The average price of a single bus was over 2.5 mln PLN (approx. 0.56 mln EUR). This is considerably higher than the eBus project price (1 mln PLN per single bus - approx. 0.22 mln EUR). This discrepancy is due to the eBus project producing smaller buses (midi size). At the end of 2020 Warsaw will have a fleet of 160 electric buses - over 10% of all buses in its public transport fleet of about 1500 buses. In addition, Warsaw also utilizes a considerable fleet of Compressed Natural Gas (CNG) and Liquid Natural Gas (LNG) buses.

This, however, is problematic as using gas as a fuel is not a solution and can only hinder the development and deployment of sustainable transportation solutions.

Local authorities must prepare a cost and benefit analysis every 36 months on the possible use of zero emission buses in their public transportation fleets. This analysis could provide local authorities with an exemption from reaching the zero-emission vehicles thresholds - giving municipalities a tool to exempt themselves from their targets. While important, these analyses can, therefore, also be problematic if they are allowed to slow down the development of electromobility in Poland at the local level.

Local authorities have already conducted such analyses, which has caused some controversy. There is currently no national guidance with regards to the methodology to be used. The National Highest Chamber of Control was preparing a review of these analyses in 2019, but their conclusions are not yet known. Warsaw's 2019 analysis (held after the realization of a tender for 130 buses) concluded that purchasing electric buses is economically not justified, even over the lifetime of the buses. This result may have related to expectations of significant increases of electricity prices in 2020 and afterwards.

Recommendations to improve the measure

- A detailed and integrated financial plan earmarking funds up until 2030 is necessary to ensure this policy can reach its full potential.
- A detailed and integrated financial plan earmarking funds up until 2030 is necessary to ensure this policy can reach its full potential.
- National institutions should cooperate and coordinate their purchasing strategies.

- Local authorities need a robust, clear and uniform methodology to assess the cost/benefit of zero-emission buses in public transportation with an independent review of their impact assessments.
- The environmental benefits (GHG emission reductions but also improved local air quality) of this measure should be quantified to promote buy-in from stakeholders
- Fossil fuel transportation (including vehicles using CNG and LNG) should be explicitly excluded from this scheme.

Euro standard tolls for heavy trucks

The Ministry of Transport introduced road charging for heavyweight delivery vehicles on national roads in 2001. The government promotes those lorries that reach higher environmental classes (EURO) – lorries that are more environmentally friendly are charged lower fees than more polluting ones.

The measure is not included in the NECP, as it is a long standing transport policy measure and is not counted towards greenhouse gas emission reduction efforts as its primary goal is to improve air quality - not reduce GHG emissions. The impact of this measure on GHG emissions has therefore not been quantified. At the time of its introduction, climate change was not a major issue in Polish politics and even after climate change was put on the political agenda this measure was still not considered a climate mitigation tool.

Initially the measure had limited impact, but since it was amended in 2005, the quality of the heavyweight car fleet in Poland has improved considerably. The Polish entry into the EU in 2004 also helped this modernization. Polish transport service providers expanded their activities into the rest of the EU, and were faced with higher fees for road utilization in other EU member states.

The measure helped Polish transport companies to invest in more environmentally friendly lorries and stimulated the use of new environmental technologies in heavyweight cars, while at the same time allowing Polish transport companies to expand into the EU market. It is therefore widely accepted among the transport service providers. It is cost effective for road maintenance companies and agencies, because it raises money for the maintenance of tolled roads.

The toll structure may have resulted in a significant reduction of fuel consumption from the heavy goods transport in Poland as more modern and more fuel efficient vehicles are promoted by the use of the EURO air quality standards as the basis of the toll. However, the impact on fuel consumption has not been monitored by public administrations. Furthermore, the increase in traffic has probably cancelled out any fuel savings – traffic on Polish national roads grew by 8% annually between 2005 and 2015.

The true impact of the tolls is evident in the composition of the vehicle fleet by age, especially when lorries are compared with passenger cars for which there were no comparable measures until 2018. In 2004 lorries and private cars had more or less the same age trends (about 20% of vehicles were five years old or less). But since the introduction of the national road charging with benefits cleaner lorries, the quality of the lorry fleet has improved considerably - in 2016 approximately 30% of lorries were five years old or less, while the passenger fleet grew steadily older with only 10% of passenger fleets five years old or younger in 2016.

Recommendations to improve the measure

- The measure should be extended to passenger cars to increase its impact on GHG emissions by promoting a rejuvenation of the private car fleet. Fees could also be increased to try to influence road traffic growth, which is the main cause of rising GHG emissions in Poland since 2005. While the Polish NECP contains a compatible measure (zero-emission traffic zones for big cities) – no such zones have been effectively established.

- The environmental benefits (GHG emission reductions but also improved local air quality) of this measure should be quantified to promote buy-in from stakeholders..
- This measure could be made compatible with a net-zero scenario if the road charges could further incentivise low and zero emission vehicles (when they start to operate). Additional charges for dirty lorries could also be used for electrifying roads in the future.
- The measure should be integrated in the Polish climate and energy strategies, especially as a tool for raising revenues that can be used to fund the necessary transition.

Buildings

In its NECP, the Polish government includes two programmes which aim to reduce CO2 emissions and air pollution and drive the uptake of cleaner energy. These are the ‘My electricity’ programme and the Clean Air programme.

“My Electricity” Programme

The “My Electricity” programme is a governmental grants programme which supports the development of prosumer rooftop PV installations, financed by the National Fund for Environmental Protection and Water Management (NFOŚiGW). The main objective of the programme is to increase the production of energy from photovoltaic micro-sources in Poland. The programme was announced in July 2019 and started in September 2019.

The programme’s main projected outcomes are:

- to cut CO2 emissions by at least 800,000 tonnes per year
- to add 1 GW of renewable energy generation capacity

The total budget of the programme is 1 billion PLN (ca. 235 million EUR) financed by the auctioning of CO2 permits under the EU emissions trading

scheme. Up to 2020, the Polish government has received approx. 20 billion PLN (ca. 4.5 billion EUR) from these auctions, and another 100 billion PLN is expected by 2030 (ca. 22 billion EUR).

The subsidy scheme covers up to 50% of the costs of installing a photovoltaic array (ranging from 2kW to 10kW capacity) and is capped at 5,000 PLN (about 1,200 EUR) per installation. This cap is close to the average price of 1kW of PV installation in Poland.

The programme is planned to last until 2025 or until the total budget is used up. It is expected to support an estimated number of 200,000 individual micro installations. After the first seven months of the programme, it is clear that this measure is getting more and more popular among beneficiaries. Since the beginning of the programme, over 70,000 applications have been submitted and another 70,000 are expected by the end of the year. This implies that half the programme's budget will be used this year and the entire 1 billion PLN (approx. 220 mln EUR) budget will be used by the end of 2021. Therefore, the primary assumption that the programme would run till 2025 is not realistic anymore and if it is to continue it will need a significantly increased budget.

As the programme was announced only in June 2019, it was not included in the draft Polish NECP. The Polish draft plan was criticised, among other reasons, for its very modest renewable energy sources (RES) goal (only 21% by 2030). "My electricity" could be seen as a measure added by the Polish government to comply with the European Commission recommendations as it was included in the final Polish NECP. Financing from the Modernisation and Innovation Funds under the EU ETS should be used for achieving this goal.

The programme is the only measure addressing individual prosumers that is mentioned in the NECP. In addition, its budget and duration are extremely limited and its ambition in terms of increasing RES generation does not meet the needs and level of interest among Polish citizens. The potential for installing micro-installations is much bigger than the proposed 200,000 installations and the envisaged 1 GW capacity.

The growing number of applications submitted has led to long waiting times for approval and payment. Further impacted by the COVID-19 pandemic, currently, the waiting time is at least three months. An additional problem related to the lockdown concerns the delays in installing two-way meters, which are necessary to put the array into operation and complete the

application for subsidy. This will hopefully prove a temporary problem, but currently there is no official information about how it will be resolved.

The “My electricity” opens up possibilities for prosumers to become active actors on the energy market, which is underlined and supported in the EU renewable energy directive RED II.

The most important incentive is the possibility to combine a subsidy of 5,000 PLN (approx. 1,100 EUR) from the scheme with an attractive tax credit for thermal modernisation, introduced in Poland at the beginning of 2019. In the framework of the tax credit scheme, a wide range of investments which improve energy efficiency of individual houses can be supported by decreasing a yearly personal income tax. The list of investments also includes PV installations, ensuring that the combined total support for a single PV micro-installation can cover about 40% of the price.

With regards to the operation of the programme, it is managed by the National Fund of Environmental Protection and Water Management and was designed to be beneficiary-friendly with a simple and easy application form and on-line application channel.

Additionally, the National Fund made several agreements with companies installing PV systems to let them handle the application process on behalf of their clients. These are very positive mechanisms, and result in growing interest in the scheme.

Recently the “My electricity” programme was integrated with a larger programme on energy efficiency for individual homeowners called “Clean Air”. Owners who make energy efficiency improvements in their homes, such as insulating walls, replacing windows or renovating heating systems may apply for a subsidy from the Clean Air programme with additional support of 5,000 PLN (approx. 1,100 EUR) for PV installation from the My Electricity programme. In practice, that means a potential beneficiary can go through one application process instead of two.

To conclude, the “My Electricity” scheme is one of the very few positive examples of climate measures in Poland. However, there is still room for improvement.

Recommendations to improve the measure

- The programme's timeline and budget need to be extended. It should be prolonged and continue after funds are expected to run out before the end of 2021. Especially since the EU emissions trading scheme auction revenues that could be earmarked for this type of programme are estimated at 100 billion PLN (circa 22 billion EUR) in the next ten years.
- It should be extended to supporting house energy storage facilities - this could support home energy systems and help balance the grid. The latter will become increasingly relevant as the number of micro-installations grows and advanced grid management systems become necessary – with linked high investments in smart grids and system scale energy storage systems.
- The types of beneficiaries should also be expanded. Currently only single houses are allowed to use this support scheme, while multi-family houses are deprived of support. This is directly connected to current regulations on prosumers, which exclude multi-family houses and energy co-operatives from the prosumer status.
- It should be adapted to be in line with the EU renewable energy directive RED II.

The Clean Air programme

The Clean Air programme was already mentioned under the previous measure, as the “My Electricity” programme was recently integrated in it. The programme is a nation-wide public grant scheme to support building renovations and replacements of heat sources. This helps people upgrade their properties, install more user friendly, cleaner heating systems while also

cutting energy bills. Therefore, the Clean Air programme is quite attractive to homeowners.

The programme was launched in 2018, but was not included in the draft NECP even though that was submitted afterwards. It has, however, been included in the final NECP.

The programme's projected budget is PLN 103 billion (ca. EUR 25 billion).

Its principal objective is to improve Poland's dramatic air pollution problem by funding the replacement of especially polluting heat sources in more than three million single-family homes in the country over ten years. That is more than 75% of all single family homes in Poland, which are mostly poorly insulated and energy-inefficient. In addition to tackling air pollution, its ambition is to reduce Poland's annual CO₂ emissions by 30.2 million tonnes which is a significant amount - Poland's 2018 emissions were 322.5 million tonnes of CO₂. It also aims to cut annual final energy consumption by 21.8 TWh (Poland's total electricity consumption currently stands at 175 Twh).

However, there are some concerns with regards to the design of the scheme.

While the programme's ten-year duration is ambitious but reasonable, it needs to be implemented much faster than it has been to date to deliver its objectives. In the first 18 months, the rollout of the Clean Air programme was very slow, with delays and backlogs.

The slow uptake was not caused by lack of interest from potential beneficiaries, but rather the inefficient, badly designed distribution channels and overblown formal requirements, as well as the fact that applicants had to pay the renovation bills upfront and could only claim reimbursement afterwards.

During the first 18 months of the programme only 91,035 contracts were signed for a total of PLN 1.699 billion (approx. 380 mln EUR), which corresponds to a mere 1.64% of the programme's total ten-year budget of PLN 103 billion (ca. EUR 25 billion).

The programme has recently been reformed to address e.g. distributional bottlenecks. The application process has been simplified, the maximum handling time has been reduced from 90 days to 30 days and online

submissions have been enabled. Moreover, beneficiaries have been offered more flexibility with regards to the scope of works and completion deadlines.

Critically, banks and municipalities can now also act as intermediaries in the handling of applications, and banks can also offer beneficiaries bridging loans, which are important as the grants are not paid out to beneficiaries up front but only after the submission of invoices. Support under the scheme may now be combined with rooftop PV grants under the “My Electricity” scheme and the energy efficiency tax credits scheme.

These procedural changes were enacted on the 15th of May 2020, and have the potential to improve the functioning of the programme. However, it is too early to say to what extent these changes will speed up the implementation and roll-out of renovations.

Data on energy and CO2 savings achieved so far is not available and it may never be possible to accurately assess those savings. Beneficiaries are not required to document energy performance, for example through a regular energy audit, and the generic system of energy efficiency audits and certification is ineffective.

As this programme is principally an air pollution measure, and not a climate measure, it is not effective in stimulating deep energy efficiency improvements. Moreover, it still supports the replacement of old coal boilers with new coal boilers(!) or gas boilers – with the latter so far being the most frequently selected option for heat source replacement. Therefore, it uses taxpayer money to support fossil fuels. Note that the recent changes to its rules introduced an extra bonus for those who opt for a heat pump.

The programme has been criticised by the European Commission and is ineligible for EU funding, because of its support for fossil fuels (including coal). Otherwise it would be a good candidate to benefit from EU funding.

Recommendations to improve the measure

- Fossil fuels should be excluded from the programme’s scope and, as a matter of urgency, coal should not be eligible for support.

- The programme needs to be embedded in a stable financing mechanism and its funding structure should be clarified.
- The programme should have interim targets.
- In addition to the goal of improving air quality, the scheme should have goals to improve energy efficiency and cut energy consumption in the residential sector
- The programme's scope should be extended or a similar scheme should be introduced to also cover multi-apartment buildings.
- The programme should be reinforced with a number of other measures including:
 - a strong and ambitious national renovation strategy
 - better implementation and enforcement of energy efficiency standards for new and renovated buildings, including nZEB rules
 - training and certification schemes for companies that carry out the works
 - education campaigns for homeowners

Agriculture

The Polish final energy and climate plan doesn't include measures with the specific goal to cut greenhouse gas emissions from the agricultural sector. However, it includes an energy policy related target (the Agroenergia scheme) and a policy focused on adaptation (the Drought Prevention Plan). These two policies are looked at more closely below.

Agroenergia

Agroenergia is a scheme to support investments in renewable energy sources in rural areas through grants and loans. The scheme is meant to improve air quality and energy efficiency of farms as well as to increase their energy independence.

The Agroenergia scheme was not included in the draft NECP, but is referred to in the final plan as one of the measures contributing to the 2030 headline target. The scheme is to run over the 2019 – 2025 period, and aims to:

- reduce annual primary energy consumption by at least 80,000 GJ
- reduce annual CO2 emissions by at least 30,000 tonnes.

Only individual farmers are eligible, and can apply for co-financing in the form of subsidies covering up to 40% of eligible costs, but not more than PLN 800,000 for one project (approx. 180,000 EUR). Loans are also available (between PLN 100,000 - ca EUR 22,000 and PLN 2,000,000 - ca EUR 450,000) through the scheme and can cover up to 100% of investment costs. Submitted project budgets must be consistent with a table of indicative technology costs per 1MW, which adequately match current market prices. The rules of the scheme have been recently adapted to address the impact of the COVID pandemic.

Agreements with beneficiaries are to be concluded by 2023 and the subsidies will be paid by 2025. The co-financing can only cover new energy sources, and the National Fund for Environmental Protection and Water Management is mandated to verify to what extent the new energy source satisfies the applicant's own energy needs.

The first call for applications took place between July and December 2019, but as not all available funds have been distributed, it is still possible to apply. During this first call a total of 646 applications were submitted, with notified investment costing a total of PLN 212.81 mln (approx. 47 mln EUR), with PLN 78.71 mln (approx. 79 mln EUR) requested in support. The vast majority of applications were grant applications, with only 131 loan applications. Over 80% of all applications were for PV installations.

Agroenergia is financed from the budget of the National Fund for Environmental Protection and Water Management. Unlike “My Electricity”, it also supports larger PV installations. Agroenergia complements the possibilities offered by the “My Electricity” scheme and the “Clean Air”

programme, which are also available to individual farmers. Therefore, like those programmes, it has the potential of synergy with all government activities supporting the development of the prosumer energy and energy cooperatives. In addition, changes to the laws on wind energy, streamlining the legislative process and facilitating the construction of windmills, can contribute to an increase in the number of applications submitted under the Agroenergia programme for this purpose.

Recommendations to improve the measure

- The programme should emphasize the “energy efficiency first” principle, and more investments in that area should be supported.
- The programme should be extended as it lacks a 2030 perspective.
- There is a need to either improve the application process, or better communicate on the programme (the latter was addressed to some extent by the latest updates on the programme website). This need was highlighted by the available budget not being fully allocated during the first call for applications.
- Information on other technologies (beyond PV) that are covered by this programme need to be communicated. This includes especially heat pumps and biogas plants.
- Funding for waste incineration should be further restricted or even eliminated from the programme

Drought Prevention Plan (PPSS)

The Drought Prevention Plan (PPSS) is yet to be finalised, but will be Poland's blueprint for dealing with drought. Droughts are set to be the single most important climate change impact for Poland, particularly for the agriculture sector.

While the draft PPSS has been widely consulted over a period of one year, scientists and drought experts still express serious reservations about its approach and content. Even though the PPSS verbally emphasizes the importance of natural retention, rewilding and wetland protection and restoration, the attached list of specific water retention projects features several dozen grey infrastructure projects such as reservoirs, impoundments and weirs as well as river regulation. As such, the programme does not tap into the mitigation and carbon sequestration potential of nature-based solutions such as wetland restoration or river valley rewilding. It needs to be thoroughly redesigned to realise its mitigation potential.

The programme's underlying assumption is that it is possible to combine water retention efforts with the development of hydro energy. Experts argue these two pursuits are mutually exclusive and the damming of rivers for hydro power plants is not an effective way to retain water and combat drought. This also has implications for the programme's GHG footprint: according to the projections in the NECP, hydro power is not expected to make a significant contribution to the achievement of Poland's renewables target, while the development of more grey infrastructure on rivers will impair the carbon sink potential of river valleys by destroying more wetlands. New reservoirs will also add additional sources of methane emissions.

The drafting of the plan has been co-financed from European funds, but the NECP does not identify a funding source for the project implementation. As an adaptation programme relying on nature-based solutions that contribute to carbon sink expansion, it could potentially be eligible for EU funding. However, in the current form the PPSS relies almost exclusively on the development of grey infrastructure with significant negative climate and environmental impacts, which may be incompatible with the Birds and Habitats Directives and the Water Framework Directive – making it ineligible for EU funding.

Recommendations to improve the measure

- It should be included in the NECPs investment needs assessment and clarity has to be created on how it is going to be funded.
- It needs to be based on sound diagnosis of the causes of drought and aligned with other documents relevant for this policy area.
- Its starting point needs to be an analysis of the systemic causes of drought. According to experts from the Save the Rivers Coalition, these include a number of human activities such as soil sealing, faulty drainage systems in agricultural areas, deforestation, draining of wetlands to turn them into arable land, river regulation and unnecessary ‘maintenance works’ on rivers and streams which accelerate runoff, dredging, development of grey infrastructure that causes river bed erosion, and development in river valleys which should remain floodplains.
- Its new objectives should be:
 - To massively restore the natural retention potential in agricultural landscapes
 - To assess current practices with regards to drainage systems that, while mainly used to drain agricultural lands, should focus on storing water
 - To change forest management to ensure the preservation and restoration of forest wetlands, reconstruction of stands in order to increase their retention capacity and restrictions on logging in areas important from the point of view of retention
 - To change spatial planning to limit the expansion of paved surfaces and ‘unseal’ already existing airtight surfaces (e.g. large parking lots)
 - To abandon plans to expand existing brown coal opencast mines and construction of new ones, as this type of mine

is one of the main factors aggravating the water deficit in the regions where they operate (Łódź Voivodeship, Eastern Wielkopolska, Turoszowskie, and Lublin Coal Basin)

- To set up mechanisms to promote more efficient water consumption (for example a two-stage tariff for tap water to promote water-saving and encourage the use of 'grey water' or rainwater for watering).

Conclusions and way forward

The updated version of the Polish NECP addresses most of the EC recommendations and shows minor improvement from the draft. However, it still lacks details with regards to the policies, their implementation and especially their longer-term funding. The final NECP is also still far from being compatible with the EU's current climate objectives, let alone the expected higher targets. For example, coal is still expected to deliver between 56 and 60% of Polish electricity by 2030. The plan still includes plans to build nuclear energy as well as unsustainable renewable energy ideas on use of biomass and wood pellets for heating. Crucially, the assessment of the sustainability of the biomass supply potential that was requested through the European Commission recommendations is still missing. The NECP does acknowledge the constraints on sustainable biomass supply, but does not attempt to quantify the sustainable potential.

With regards to coal, the final document does now cover just transition, but with a number of inherent contradictions. What role is there for 'just transition' even if coal is slated to stay as important (in absolute numbers) as it is now? The NECP references the opening of two new coal mines, while saying that "'dirty' jobs should not be eliminated but adapted to the requirements of an environmentally friendly economy". In addition, the main decarbonization efforts in the power sector refer to retrofitting existing coal plants and constructing new, more efficient ones.

On the positive side, the language on renewables is now more concrete, and the NECP specifies support schemes (the most important are auctions and priority access to grid) and several financial support programmes for

increasing RES throughout the country. The most important envisaged RES are PV and offshore wind, while onshore wind is still expected to “grow less dynamically than in previous years”. We can, however, foresee a decrease in onshore wind capacity as post 2030 none is to be added and a significant portion of the old turbines are expected to be decommissioned.

The transport section includes some improvements compared to the draft NECP, namely language on modal shift and promoting public transport, as well as developing low-emissions transport and more energy-efficient urban planning. However, details of how these developments would be funded are absent.

The agricultural section remains problematic and the few measures that are introduced focus on energy savings and climate adaptation, less on mitigation. The government argues that the sector’s potential to reduce emissions is limited and that excessively restrictive policies and targets will lead to carbon leakage. It is clear, however, that the agricultural sector has significant emission abatement potential and that any carbon leakage concerns can be dealt with and should not be an excuse for inaction. Organic farming would be supported by the Polish government – but the how is left to the new EU Common Agricultural Policy.

For buildings, the NECP shows gradual improvement of energy performance standards and stronger requirements for the use of RES in new and modernised buildings. While residential PV could grow fast, a look into the impact assessment shows that for heat, this means predominantly biomass boilers for district heating and increased use of pellets for residential homes. The Clean Air programme (as the largest and most advanced energy efficiency measure for buildings) is now included, though - again - there are concerns related to the financing of the Clean Air programme and the fact that fossil fuels could be supported through this programme.

If the Polish NECP is to become a robust and effective climate tool, four elements will be crucial for its future implementation:

- **Political commitment** - maintain the positive elements and revisit others that need to become stronger. Use the NECP to plan for a green recovery from the COVID-19 pandemic.

- **Outline investment plans** - detail investments and financing plans for each policy and measure – especially funding needs that Poland expects EU support for.
- **Policy coherence** – ensure consistency between policy objectives, proposed measures and the sectoral strategic plans and legislation to achieve the 2030 and 2050 goals.
- **Stakeholder involvement** - to ensure public support and ownership of climate action, improve public participation processes by systematically involving in the decision-making all those affected by or interested in the included schemes. Poland has significant human capacity that could be used to further improve the Polish climate and energy frameworks.

The Polish government has an opportunity to build on the positive elements of its updated energy and climate plan. This is not the time to backtrack on this progress but to seize the opportunity and steer the country towards a more climate-friendly future.



Join the conversation ➤

www.planup.eu