

Last chance: How to strengthen the final Polish energy and climate plan.

LIFE PlanUp

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Executive summary

Building on the assessments of the draft National Energy and Climate Plans (NECPs) and the European Commission recommendations, this publication aims to support EU Member States in implementing the Commission recommendations for selected measures in the transport, buildings and agriculture sectors.

The last chance: how to strengthen the final Polish energy and climate plan briefing matches key measures in the Polish draft NECP with the relevant recommendations of the European Commission and suggests additional policies and solutions that will help strengthen the final NECP.

In the transport sector, the Polish government aims to develop energy-efficient low-carbon transport, electromobility and alternative fuel infrastructures. There are several policy options available that will help implement these two measures. Shifting goods and passenger transport from road to rail and expanding rail capacity, will be crucial to reduce emissions from transport, especially long-distance. Moreover, fewer investments in road infrastructure along with higher road charges would help redirect funds towards public transport and contribute to reducing road traffic. A more effective framework and system of incentives will also be essential for the successful roll-out of electric vehicles and boosting of electromobility. This, in turn, would also greatly reduce emissions and improve air quality.

In the buildings sector, promoting renovations with regulatory instruments and support schemes, and the roll-out of energy service companies (ESCO) is paramount for reducing emissions from buildings and improving energy efficiency. A combination of awareness-raising activities for both home-owners and sectoral workers, access to long-term affordable funding for renovation, and more stringent rules on energy audits and project awards would ensure a higher renovation rate and improved energy efficiency in Poland in the next decade. A faster uptake of ESCO in Poland would remove one of the main barriers to the renovation of the building stock. It is therefore important that the final NECP contains a strategy to improve the roll-out of ESCO. The strategy should include financial mechanisms to de-risk ESCO for providers and easier access to capital for ESCO companies.

Agriculture is a significant source of greenhouse gas emissions in Poland but it is poorly addressed in the draft NECP. The only concrete measure mentioned in the plan is the rationalisation of the use of fertilisers. While this measure goes in the right direction, the government must make sure that it complies with the Nitrate Directive. The government should also include other agro-environment-climate measures, such as support for a mix-farming system and organic farming as well as maintaining a constant soil cover.

The government should do more to involve the public in the finalisation of the plan and its future updates. A multi-level dialogue, as required in the Governance Regulation, would ensure the inclusion of a wider set of stakeholders in the policy-making process and guarantee broader public support.

➤ Transport

For the transport sector, the Polish draft national energy and climate plan (NECP) sets a 30% emission reduction target for passenger cars and light duty trucks compared to 2021. This seems a very ambitious goal, but at the same time it is very ambiguous as the emission level for the year of comparison (2021) is still unknown. This level might be higher or lower than today. Considering the fact that emissions from the Polish transport sector have grown 75% since 2005, Poland would have to cut emissions from transport by 50%, to reach a basic 7% overall greenhouse gas (GHG) emission reduction in comparison to 2005. The 2030 Polish National Transport Strategy predicts a 30% growth of the sector in the next decade. However, the strategy is not clear about goals and therefore it is hard to predict what results it may bring.

It is clear that transport is a key sector that will need to be properly and effectively addressed in the final Polish NECP. The draft plan does not tackle all the issues related to the Polish transport sector and is largely missing details on qualitative and quantitative measures that will help achieve the required results.

However, some key measures go in the right direction and, if properly formulated and financed, would contribute to achieving deep emission reductions in the sector.

Measure 1 - Development of energy-efficient low-carbon transport

European Commission recommendation:

“Considering the expected increase in the sector’s energy demand in the future, Poland should provide more information and clarity on planned transport measures to meet the transport target set in the draft integrated national energy and climate plan, in line with Article 25 of Directive (EU) 2018/2001”.

How to implement the recommendation given the national context:

Poland has a lot of potential to switch between modes of transport. At the beginning of the 1990s, railways and public transport represented a considerably higher share of transport in Poland for both goods and passengers than today. Railways were carrying three times more passengers and 40% more goods. At the same time, railways were already then considerably less emission-intensive than road transport. To achieve the goals set in the Polish draft NECP, a major shift from road to rail is needed (and possible). This notion is especially important in view of the fact that the largest increase of transport volumes occurred since 2005 in international transport (probably mostly on distances longer than 300 km), which can be shifted to rail in an economical and effective way. From 1990 to 2015, the Polish railway network capacity was cut by almost 50% and its maintenance was widely neglected. EU funds have helped to reverse this trend including the decreasing volumes of railway transport. Restoring and improving the quality of the Polish rail network is essential to address greenhouse gas emissions from transport. The second measure that should be implemented along the first one, is the development of the railway market so that it would stimulate an increase in the number of passengers and goods. This would allow to cut road traffic to the 2010 levels and enable further emission reductions.

The government should also reconsider its investments in road infrastructure. The highways and expressways have brought about a huge rise in volumes of road traffic. The government's plan to expand road infrastructure as part of future cohesion fund expenditure is excessive compared to the actual transport needs and will result in a considerable increase in road traffic volumes and a disincentive to use low-carbon transport modes. Currently, Poland is experiencing a total collapse of local bus transport and a standstill (or a very slow rise) in the number of rail passengers. In addition to the disinvestment in road infrastructure, it is necessary to make road users pay more for the externalities they cause. Road charges would contribute to cutting the most unnecessary travels and hence reduce transport volumes while supporting the shift to other means of transport. So far only heavy-duty vehicles transporting goods are subject to road charges on national roads. However, the fees are much too low to

reduce traffic or even decrease its growth rate. Passenger cars are charged only on selected and limited road sections. This practice should, therefore, be extended as well. The Polish law does not allow for peak road charging by local authorities, except for the charges imposed on traditionally fuelled vehicles. However, this type of road pricing does not contribute to a decrease in traffic volumes.

Measure 2 - Low-Carbon Transport Fund

Development of alternative fuel infrastructure, enhancement of operation security, development of electromobility and improvement of air quality and comfort of living.

The task of the Low-Carbon Transport Fund is to support the expansion of alternative fuels infrastructure and to build up a market for those fuels. Over the next 10 years, the Fund will have financial means of ca. PLN 6.7 billion.

European Commission recommendation:

“The plan should be more precise on policies and measures as well as required charging infrastructure planned to meet the goal of 1 million electric vehicles by 2025, as well as their expected GHG emission reductions. It should also reflect on the implications of this target in different dimensions of the Energy Union.”

How to implement the recommendation given the national context:

To implement the recommendation in the final NECP and to correctly calculate the expected GHG emission reductions, the goal of 1 million

electric cars should take into consideration the goal to lower emissions from electricity and the level of forecasted car traffic in 2030.

A shift to alternative fuels would result in very limited emission reductions by 2030 in Poland, but there is a need to follow that path to avoid the need for a mass cut in traffic volumes. Nevertheless, the Polish government should be more ambitious regarding its measures. The newly adopted strategy on sustainable transport states that at least 600 thousand electric and hybrid cars should be in circulation by 2030. However, this number is rather insignificant compared to 20 million private cars and 28 million vehicles circulating in Poland overall. This would not make a significant difference in emissions, especially considering that the number of cars may rise by 1 million in absolute numbers from 2020 to 2025 and thus may be emission neutral (if even that). Therefore, actions to bring more electric cars to Poland need to be more ambitious.

The following actions should be considered:

- Impose higher and smarter taxes for traditionally fuelled cars both at registration and yearly.
- Introduce traffic-reducing schemes such as low-emission zones, car-free zones, road fees for old cars. Legislation has already been prepared by the government and the implementation now depends on local authorities.
- Use the money from taxes paid by old and dirty cars to lower the price of alternative fuel cars, but with an effective system of lowering the bait according to changing market conditions (similar to a feed-in-tariff control system in Germany that was active from 2001 to 2015).
- Facilitate/support the development of electric vehicle charging points that would use low-emission sources of electricity, instead of using highly carbonised electricity from the national grid.
- Adopt measures to stop the inflow of second-hand Internal Combustion Engine (ICE) cars from Western Europe. From January to August 2019 alone, Poland imported 682 300 used cars. The average age of an imported car was 11 years and 8 months. While 58% of imported second-hand cars came from Germany, other major suppliers were France, Belgium and the Netherlands. The share of

diesel in imported cars grew from 43,8% in 2018 to 44,4% this year, whereas the share of petrol cars fell from 53% to 52%, respectively. The share of cars older than 10 years also grew from 54,7% to 55,5%. In order to stop this phenomenon, both national and EU law require changes. At the national level, used ICE cars could be phased out by reforming vehicle taxation, so that older, more polluting cars are taxed more.

Buildings

Residential buildings account for more than 30% of Poland's total energy consumption, more than any other sector. The share is higher than the EU average of slightly over 25%, in large part because a great majority of the housing stock in Poland is highly energy inefficient (7 out of 10 dwellings in Poland are inadequately insulated or not insulated at all).

The Polish draft NECP is fairly vague on energy efficiency measures for buildings. Quoting the National Housing Plan, it sets a target expressed as the percentage of buildings that will be 'insulated', without providing specifics on the minimum energy efficiency standards to be achieved. The measures to achieve that target are not described in enough detail for their impact to be quantified.

Mandatory standards for building renovations as well as mechanisms to enforce them are also missing, while financial support mechanisms are not backed by any mandatory energy savings targets.

Consequently, without major changes to the current set up of existing and proposed measures, it will be very difficult to propose new measures with quantifiable impact.

Measure 1 - Promoting renovations with regulatory instruments and support schemes:

- Improvement of housing conditions, the technical condition of housing stock and enhancement of energy efficiency
- Promoting low-energy buildings, including at the design, construction and redevelopment stages, in a manner that ensures their energy efficiency, and better availability of renewable energy in new and existing buildings

European Commission recommendation:

“Overall, information on planned policies and measures is too general and does not specify the expected outcomes. It remains unclear, for many policies and measures, whether the information relates to existing programmes, or new programmes, and how these would differ from current policies and measures if these were continued. These limiting factors prevent a comprehensive assessment of whether policies and measures are sufficient for attaining the national energy efficiency contribution for 2030. It is not possible to conclude if the level of effort is really higher than in the current decade. Recent increases in energy consumption in Poland point to the need for policies and measures producing an effect early in the ten year period covered by the draft NECP.” (SWD p. 9)

“... more details on additional measures, notably in the building sector...” ... heating and cooling (including technology efficiency improvement and technology shift) is not sufficiently addressed from the energy efficiency point of view. (SWD p. 9) ... Although building refurbishment plays an important role, elements related to the long-term renovation strategy remain vague. It is not clear to what extent related impacts have been taken into account in the scenario with additional measures underpinning the national energy efficiency contribution (SWD p. 9)”

How to implement the recommendation given the national context:

The volume of energy savings from building renovations depends on the standard to which you renovate.

To implement the Commission's recommendation, Poland should:

- **Make deep renovations accessible and affordable: fix the shortcomings of the Clean Air programme for single-family houses and establish an equivalent long-term scheme for apartment buildings to provide all home-owners with access to funding via a simple, comprehensive, predictable, long-term support scheme.**

As an existing, large-scale renovations support scheme, the Clean Air programme should be included in the NECP. However, the government needs to urgently address its shortcomings: the programme's rollout has been extremely slow due to an inadequately designed distribution system which needs to be modified. Currently, the institution in charge of handling applications cannot cope with the massive interest, so in addition to simplifying and streamlining the application procedure, other channels for distributing support need to be created.

Moreover, since the Clean Air programme targets single-family homes only, a similar programme for multi-apartment dwellings should be established. Currently, public support for this category of buildings is provided via periodic calls for projects, but a more stable, predictable long-term scheme for which building owners could apply at any time for grants and low-cost loans is needed.

- **Adopt a general rule that support from public funds (EU and national) may only be awarded to verifiable renovation projects that achieve a minimum level of energy savings to promote comprehensive, deep retrofits.**

The Clean Air programme aims to provide support to four out of the five million single-family homes in Poland over the coming decade. As such, it should be the main instrument for achieving energy savings in this type of buildings. However, to make the most of its massive potential, it should require beneficiaries to demonstrate a certain minimum level of energy savings. Renovations undertaken with public support should be required to bring homes to net-zero buildings (nZEB) standards. Where only partial renovations are undertaken, they should be consistent with a pathway to achieving nZEB standard later on. Where achieving nZEB standards is not practical for economical or technical reasons, renovations should be required to achieve at least 70% of the energy savings potential identified in the energy audit. The same should apply to support provided through the proposed scheme for multi-apartment buildings.

The government should also consider reviewing the nZEB definition itself. It's very lax compared to other countries: in Poland, nZEB means buildings that use up to 70kWh/m² annually. Bearing in mind the upwards trends in energy prices, investing in less energy-consuming buildings would pay off in the long term.

These measures will also make it possible to quantify expected energy savings from renovations that receive public support.

- **Make home-owners aware of the benefits of deep renovations with awareness-raising campaigns and widely accessible energy advisory services**

Low awareness of the benefits of deep renovations has been identified as one of the barriers holding down housing stock upgrades in Poland.¹ Awareness-raising campaigns are needed to encourage owners to consider deep renovations. In parallel, credible, independent and commonly accessible energy advisory services should be made available to help home-owners calculate the costs and benefits, choose solutions that will work best for them and prepare their renovations projects.

- **Make deep renovations feasible by addressing the know-how gap among building owners, architects, designers, builders and energy auditors with dedicated training and an improved certification system.**

¹ <http://www.renowacja2050.pl/files/raport.pdf>

Progress on energy savings in buildings has also been slow in Poland because investors (building owners) tend to prefer the cheapest solutions, builders are accustomed to building and renovating buildings following obsolete standards, and architects, designers and construction managers lack knowledge about state-of-the-art solutions and their benefits.² This should be addressed with large scale, in-depth education campaigns addressed to construction professionals at all levels.

- **Fix energy audits and certification**

Poor quality of energy audits and certification is also part of the problem. Renovated buildings do not always achieve expected energy savings, undermining owners' confidence that investing in deep renovations will pay off. Moreover, building owners and buyers should also be educated about their rights regarding the certification of buildings' energy performance. The existing rules grant some rights to people renting and buying apartments, but they are poorly enforced and few people know about them, as a result of which the certificates fail to influence the market. Awareness-raising campaigns are needed to increase the pressure on different actors from developers and landlords to home buyers and tenants.

- **Update the national buildings renovation strategy accordingly.**

Measure 2 - Promoting the rollout of Energy Service Companies (ESCO)

Support companies that operate in the energy efficiency and renewable energy (RES) fields, with priority given to the suppliers of energy services (under the ESCO scheme).

Directive 2012/27/EU on energy efficiency stipulates that a Member State is to support the energy services market and the access of small and medium-sized companies to this market, and to support the public sector in the acceptance of offers of energy services, in particular with regard to the modernisation of buildings. Despite the fact that the

provisions of Directive 2012/27/EU have been incorporated into the Polish legislation, the energy services market still has not reached the mature stage and hence companies operating under the ESCO scheme find it difficult to operate in it. Therefore, measures will be undertaken in the period 2021-2030 to support also small and medium-sized companies, including start-up companies, especially those operating for the benefit of the public administration sector, be it government or local government administration authorities.

European Commission recommendation:

“Cost-optimal levels of minimum energy performance requirements of buildings and expected savings under Article 5 of the Energy Efficiency Directive are not available in the draft plan.

More work is also required to fully reflect the contribution of policy measures to address the energy savings obligation under the revised Energy Efficiency Directive. A more consistent coverage of how policies and measures (also where these relate to electro-mobility) contribute to renovation objectives and to the long-term renovation strategy would make the final plan more robust. (SWD p. 15)

The energy savings target under Article 7 of the revised Energy Efficiency Directive are estimated at around 31 ktoe in 2021-2030, but this number appears low and incorrectly calculated. The draft plan also indicates that this value would be diminished by savings prior to 2020, raising concerns whether an exemption clause under the revised Energy Efficiency Directive was correctly applied.” (SWD p.18)

How to implement the recommendation given the national context:

To fully cover the buildings sector, the NECP, in addition to support schemes for residential buildings, should include solutions for office and other service buildings. In particular, it should promote the ESCO formula, which is best suited for this category of buildings, removing one of the main barriers to faster renovation of the building stock, i.e. the need for the owner to pay the full cost upfront.

The draft NECP notes that the rollout of ESCO in Poland has been slower than expected, but does not identify the reasons for this.

The final NECP should include an analysis of the reasons for the slow uptake of the ESCO formula in Poland. Based on expert opinions, credibility of energy audits and the ability of companies and customers to correctly calculate future energy savings and financial gains seem to be the main problems that make the formula too risky.

To attract more customers and allow the ESCO market to expand, renovations in the ESCO formula need to be de-risked. To this end, the NECP should:

- **Propose measures to improve the quality of energy audits**

Detailed solutions in this regard should be based on a more comprehensive analysis of why energy audits fail to credibly identify energy savings. The problem may concern the quality of audits as such, which may be inaccurate and fail to take into account some factors such as user behaviour. The quality of renovation works and materials may also play a role here - if that's identified as a problem, measures should be taken to raise awareness and educate construction professionals on how to avoid errors in renovation works.

- **Create regulations to make ESCO a safe bet for consumers**

Rules on obligations of ESCO companies, safeguards for customers and modes of settlement to ensure that customers can contract such services risk-free should be adopted.

- **Create financial mechanisms to de-risk ESCO for the providers**

At the providers' end, banking guarantees or other financial instruments should be available to ESCO companies to shield them from excessive risks.

- **Give ESCO companies easier access to capital, e.g. in the form of EU-funded financial instruments**

➤ Agriculture

Agriculture is a significant source of greenhouse gas emissions. In 2017, 31.8 million tonnes of CO₂eq were emitted from the Polish agricultural sector, accounting for about 8% of total Polish emissions. The main GHGs from agriculture are nitrous oxide (N₂O), mainly from nitrogen fertilization of the soil, and methane (CH₄), mainly from animal production. Agriculture falls under the Effort Sharing Regulation (ESR) under which Poland should reduce emissions by 7% in 2030 compared to 2005. According to the draft NECP, agriculture will not contribute towards this target, as GHG emissions are expected to increase during the period 2020-2040 by 3.6%, including an increase of CO₂ by 5.3%, of CH₄ by 4.2% and of N₂O by 3.0%.

Regarding the land use, land use change and forestry (LULUCF), GHG sequestration is expected to decrease due to agricultural and forestry land conversion caused by urban development. This means a reduction in the amount of CO₂ absorbed in the period 2020-2040 of as much as 56%. Apart from the activities related to the *“Programme of measures aimed at reducing water pollution caused by nitrates from agricultural sources and preventing further pollution”*, other activities are poorly represented.

Compared to sectors such as energy and transport, GHG emissions stemming from agricultural activities are inadequately addressed in the draft NPEC. The actions proposed are mostly vague or non-existent. It is necessary to prepare a comprehensive program for *“Rural areas and climate change”*. It should address the reduction of GHG emissions from agriculture, its role together with the agri-food industry in the development of renewable energy, strengthening the capacity of agricultural and forest areas to absorb CO₂ and adaptation needs in agricultural and forest areas.

Measure 1 - Rationalisation of the use of fertilisers:

Standards for storage and use of fertilisers containing nitrogen, including livestock manure, are regulated in the Act of 20 July 2017 – Water Law and the Cabinet Regulation of 5 June 2018. The regulation prescribes the

adoption of the “Programme of measures aimed at reducing water pollution caused by nitrates from agricultural sources and preventing further pollution” (The Nitrate Programme). Specifically, the Water Law stipulates that the livestock manure dose used in a year for agricultural purposes may not contain more than 170 kg of nitrogen in a pure component per hectare of agricultural land. It also requires that a plan for nitrogen fertilisation be developed by specified entities, such as large farms. The Nitrate Programme will require entities engaged in agricultural production to undertake necessary long-term investments in this area. To adapt to the new requirements farmers must ensure appropriate funds in their farm budgets while funds must also be ensured in the state budget to support investments.

European Commission recommendation:

“While the draft NPEC mentions the rational use of fertilisation as an area of action in agriculture, it does not define objectives or additional measures for GHG emission reductions. The draft plan refers to the Common Agricultural Policy as a tool for reducing greenhouse gas emissions from agriculture without further details.”

How to implement the recommendation given the national context:

The European Commission’s recommendation remains vague on how the Polish government should strengthen the only agricultural measure in the Polish NECP. Currently, measure 1 is not sufficiently specific. EU payments ought to be explicitly linked to environmental care or protection against an excessive use of nitrogen. The compliance with the Nitrate directive is a legal requirement.

Furthermore, agri-environment-climate measures (AECM) could be widely used to support integrated fertilizer management. For instance, possible AECM could be:

a) supporting mix-farming system, where the land cultivation and livestock are integrated, helping to promote a circular farming systems and close the nutrient cycle.

b) maintaining a constant soil cover, growing plants with a deep root system or using manure and compost. Unfortunately, cultivation techniques that contribute to this (e.g. the introduction of catch crops, the use of nitrogen fixing plants for green manure or no-tillage cultivation) are currently not supported in Poland and are thus rarely used by farmers. This is supported by the Good Agricultural and Environmental Conditions (GAEC) 7 in the proposed enhanced conditionality of the future Common Agriculture Policy.

c) supporting organic farming, including conversion to organic farming and maintenance support shall be made conditional to a certain maximum livestock density at farm level and maximum loading value of nitrogen in the soil.

➤ Transparency and public participation

The EC does not provide a specific recommendation to Poland on how to improve transparency and public participation in the preparation of its final energy and climate plan. It only notes that *“the public and other stakeholders are to be engaged in the preparation of the final integrated national energy and climate plan”*. After submitting its draft NECP to the European Commission, Poland organized a short online public consultation that took place from the 15th of January to the 18th of February 2019.

In Poland, the Common Commission of the Government and Self-Government is the basic institution dealing with relations between the national government and local and regional authorities (LRAs). The Commission's tasks include notably the development of a common position in determining economic and social priorities in matters related to regional development. It is also tasked with devising documents and governmental programs regarding local government issues, and establishing relations between territorial self-governments (a form of LRA in Poland) and other public administration bodies.

While this Commission could in principle serve as a framework for a multi-level energy and climate dialogue, in practice it does not provide for a sufficiently strong participation or role for local governments in developing and implementing key national policies such as the NECP. There is also no space for local communities and civil society organizations (CSOs). In the NECP process, the government is holding targeted consultations with the different regions (“voivodeships”), but not with local governments, local communities or CSOs. However, engaging the local level on top of the regional level is key, as often regional priorities differ from those of local authorities and citizens.

In the finalization and implementation of the NECP, this Commission should be transformed into a real multi-level dialogue instrument that would enable a permanent involvement of and key role for local governments, local communities and CSOs.

How to implement the recommendation given the national context:

In order to transform the existing Commission into a multi-level dialogue framework, representatives from local governments (i.e. the various associations of Polish local governments), umbrella associations of CSOs and local communities - in particular from those areas that need to undergo a just transition - should be included in the membership and overall governance of the Commission.

Conclusions

Some of the key measures in the Polish draft NECP, especially in the transport and buildings sectors, have the potential to set the country on the right pathway to lower its emissions and improve energy efficiency. However, these measures should be strengthened before the submission of the final plan. In the transport sector, for example, shifting investments from road infrastructure to public transport and rail would incentivise the transition to a more sustainable transport.

The existing “Clean Air” programme could be used to drive deep renovations of the building stock by providing all home-owners with access to funding via a simple, comprehensive, predictable, long-term support scheme.

Agriculture should be given a more prominent role in the final NECP, as cutting emissions from the agriculture sector is key to ensure that the overarching economy-wide emission reduction target is achieved. A plethora of solutions are already available and could be easily implemented.

Equally important for the overall success and robustness of the plan is a more inclusive development process. In the next phase, the Polish government should do much more to involve stakeholders into the decision-making. This can be done in particular through a better cooperation with the Common Commission of the Government and Self-Government which deals with the relations between the national and local and regional governments.