



ENERGY EFFICIENCY AND CITIZEN-DRIVEN ENERGY IN THE NATIONAL RECOVERY PLAN PROPOSED REFORM PATHS

February 2021



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INTRODUCTION

Out of the ca. EUR 23 billion earmarked for Poland under the National Recovery Plan, at least 37% of the funds should be designated for green transformation objectives, including climate adaptation and protection of biodiversity. Actions included in the NRP have to be based on a coherent strategy and contribute to meeting the EU's climate targets (55% reduction of greenhouse gas emissions by 2030 and net-zero emissions by 2050). The new green growth paradigm, backed with a financial boost from the Recovery and Resilience Facility, should be achieved through the implementation of complementary projects and reforms that – in line with the recommendations communicated to Poland under the European Semester – should lead, above all, to an increased share of RES on the energy market and improved energy efficiency.

The two support programmes already in existence, Clean Air and My Electricity, can be as a useful tool to achieve these goals. Clean Air is a large and comprehensive programme supporting energy retrofits in buildings. As such, it should be one of the basic instruments implementing the EU strategy 'Renovation Wave', thus helping to achieve a radical decrease in energy use in the building sector. In turn, the planned new edition of My Electricity may significantly advance the development pace of dispersed renewable energy sources in Poland, as testified by the amazing success of the programme's first edition.

Therefore, both these programmes should be included in the National Recovery Plan and receive funding from the Recovery and Resilience Facility. However, in order to bring the desired results and enable an optimum use of green recovery funds, a number of changes and reforms ought to be introduced. These concern both the programmes themselves as well as legislative reforms amending the legal environment and conditions in which these programmes are implemented.

This briefing outlines our recommendations concerning legislative reforms in areas related to renewable energy sources and energy efficiency as well as proposed changes to Clean Air and My Electricity. Introducing these changes would maximise the environmental impact of both programmes and their resulting social and economic benefits.

1. LEGISLATIVE REFORMS

At present, Polish regulations on renewable energy sources and energy efficiency make it impossible to avail ourselves fully of the available opportunities to increase the pace of energy transition. The reform programme implemented as part of the NRP should lead to removing legislative barriers that hamper transition and to adopting regulations in areas where transition is hindered by an inadequate legal environment.

Particularly important are changes that would enable the implementation of Renovation Wave in Poland, leading to substantial improvements in energy efficiency in buildings. In order for that to happen, the long-term renovation strategy for Poland, which is currently being drafted, has to contain ambitious goals and more stringent requirements concerning energy efficiency for new and modernised buildings (and provide for their better enforcement).

In terms of renewable energy, most urgent amendments are required to regulations on energy cooperatives, prosumers, and the so-called distance rule. However, legislative changes in these areas should merely serve as a starting point for a broader reform programme aimed at creating a stable and transparent legal framework, which would provide for the long-term development of citizen-driven dispersed energy systems in Poland. For instance, regulations should be adopted to enable prosumers to take actions that increase the flexibility of the energy system and stabilise the grid (intelligent networks, energy storage, aggregated DSR services, heat prosumption, etc.).

1.1. Changes to the strategic and legislative framework concerning the construction and modernisation of buildings

Proposals:

1. Drafting and adopting an ambitious National Building Renovation Strategy, coherent with the EU's 'Renovation Wave' and the EU's climate targets for 2030 and 2050.
2. Amendments to technical regulations increasing minimum requirements concerning the energy efficiency of new and modernised buildings, including:
 - introducing a definition of a near zero-energy building (nZEB) approximating the passive house standard, introducing the minimum level of RES energy for new and modernised buildings,
 - introducing a definition of 'deep energy retrofits' with quantitative rates (target energy performance level or percentage of reducing the initial energy demand) as the basis for granting state subsidies for retrofits and renovation measures,

- ban on installing heat sources powered by fossil fuels or solid fuels in new and modernised buildings,
- increasing the clarity of energy performance certificates of buildings (energy classes of buildings modelled on the ones used for household appliances) and an educational campaign about them aimed at owners, tenants, and agents on the real property market.¹

3. Better enforcement of regulations on the energy efficiency of buildings: increasing the personnel and funding of building inspection in order to better supervise and enforce compliance of construction materials and systems and to monitor the real effects of energy retrofits.

4. Increasing the level of knowledge and ensuring availability of qualified experts: workshops and professional certifications for architects, designers, site supervisors, fitters and employees of the construction and renovation sector as well as energy auditors; professional certification to help real property owners find reliable contractors, and an educational campaign on the importance of energy efficiency for the climate and environment, on current and future regulations as well as new technological solutions and best practices aimed at representatives of the construction and renovation sector and real property owners.

Justification:

Buildings are responsible for a substantial part of Poland's total energy use and greenhouse gas emissions: according to data from the Central Statistical Office (GUS), households account for over 18% of total energy use,² and according to KOBIZE reports, almost 15% of total CO₂ emissions in Poland come from the housing sector.³

At the same time, this sector has a substantial and relatively easily accessible potential of limiting primary energy demand and lowering emissions. A deep decarbonisation of the buildings sector may be achieved through generally available, mature technologies, and its implementation – apart from being beneficial for the climate – would also provide additional benefits, such as solving the issue of air pollution from low-stack emissions, limiting energy poverty, decreasing Poland's dependence on imported fuels, and generating thousands of new jobs.

Therefore, allocating a substantial amount of funds from the Recovery and Resilience Facility to improving the energy efficiency of buildings (in practice, mostly for implementing the Clean Air programme) is more than justified, provided that changes are introduced to the programme itself and its environment to guarantee that its implementation would bring a tangible environmental effect.

Apart from changes required in the programme itself (see item 2.1), this calls for the adoption of an ambitious, long-term renovation strategy that would be compliant with EU targets, increasing the minimum energy performance requirements for new and modernised buildings, better enforcement of applicable regulations, and improving the level of knowledge and qualifications among representatives of the housing sector and property owners. Only then will we be sure that funds spent for energy retrofits of buildings in Poland will genuinely contribute to achieving the EU's climate goals.

1 WWF, 2020, *Zeroemisyjna Polska 2050* [Net-Zero Poland 2050], URL:

<https://www.wwf.pl/sites/default/files/inline-files/1%20budownictwo%20FINAL.pdf>

2 Główny Urząd Statystyczny (Central Statistical Office), *Zużycie energii w gospodarstwach domowych* [Energy Use in Households], URL:

https://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5485/2/4/1/zuzycie_energii_w_gospodarstwach_domowych_w_2018.pdf.

3 IOŚ-PIB, KOBIZE, *Poland's National Inventory Report 2019*, URL: https://www.kobize.pl/uploads/materialy/materialy_do_pobrania/krajowa_inwentaryzacja_emisji/NIR_POL_2019_23.05.2019.pdf

Based on available information on the government's project for the Long-Term Building Renovation Strategy, it seems that the targets provided for in this document concerning limiting the energy demand in buildings are too low and incoherent with EU goals enshrined in the 'Renovation Wave' strategy. While the EU goal is to reduce CO₂ emissions in buildings by 60% by 2030, the Polish draft Renovation Strategy stipulates that this target would be achieved no sooner than in 2050. If – in line with available information – investments in the energy efficiency of buildings are to be the main action financed from the 'green' part of the Recovery and Resilience Facility, more ambitious climate goals have to be adopted in this area.

1.2. Creating a stable legal framework for the long-term development of prosumption and citizen-driven energy

Proposals:

1. Full and timely incorporation of the provisions of RED II on prosumers and energy communities into Polish law.
2. Amending current restrictive regulations on energy cooperatives.
3. Creating a legal framework enabling prosumer-driven and social investments aimed at increasing the flexibility of the energy system.
4. Introducing a general principle of drafting all legislative and financial support instruments in line with evidence-based policy, among others through: market research, implementing pilot instruments, and analysing foreign experience.

Justification:

Dispersed citizen-driven energy may significantly increase the pace of Poland's energy transition, while contributing to a more socially just distribution of the benefits of this process. However, at present its development is hampered by a number of legislative barriers. For this reason, the reform programme stipulated in the NRP should encompass regulations that enable active citizens to fully participate in the energy market, including, in particular, a full incorporation of RED II provisions on promoting and facilitating the development of individual and collective renewable energy prosumption.

If the directive is correctly transposed into Polish law, prosumers – both individual and collective – will have the right to produce, use, store, and sell renewable energy without being subjected to unjustified or discriminatory fees and procedures.

In line with the definition stipulated in RED II, Polish law should introduce a definition of energy communities, and provide for the possibility to establish them. As a result, groups of individuals, e.g. residents of a single building, would be able to jointly exercise said rights (production, use, storage, and sale of renewable energy).

One of the basic forms in which energy communities may operate are energy cooperatives. At present, their development in Poland is fully blocked owing to arbitrary, restrictive provisions of the *Act of 20 February 2015 on renewable energy sources*. Therefore, introducing the definition of energy communities into Polish law, and granting such communities and prosumers the rights stipulated in RED II, have to be backed with amending the *RES Act* in the part concerning cooperatives and abolishing limitations such as the ban on establishing energy cooperatives in cities, the need to cover 70% of energy demand with own production, and limits concerning the number of members and installed capacities.

Legal amendments should be accompanied by extending the existing system of financial support to cover prosumer initiatives and launching a mechanism of free consulting services concerning energy.

Residents should also be able to purchase shares in investments related to the construction of local power plants and thermal power stations. Here one ought to mention the need to also introduce regulations enabling heat prosumption.

Citizen-driven and prosumer energy should also have its share in actions aimed at increasing the flexibility of the energy system and stabilising the grid given the growing share of unsteerable RES. In order to safeguard long-term opportunities for the dynamic growth of RES in energy production, legal regulations have to be in place to enable prosumers to intelligently manage their energy demand (intelligent meters, dynamic tariffs, domestic energy management systems), store energy in their homes (e.g. in heating appliances or batteries of electric vehicles), and participate in the development of local energy storage systems, particularly long-term ones, such as hydrogen energy storage or seasonal thermal energy storage. Consequently, consumers will simultaneously produce and store energy, and will be able to contribute to grid balancing.

The above proposals result from the provisions of the EU's renewable energy sources directive (RED II), which Poland has to incorporate into national law until 30 June 2021. The vast majority of the directive's assumptions are currently not reflected in Polish regulations, and there are no solutions that would enable further development of dispersed energy sources in Poland. To this end, the *RES Act* of 20 February 2015 and related legal acts have to be amended.

When all support instruments are designed in line with evidence-based policy, they will provide the best possible answer to the real needs and possibilities of the market, they will be better calibrated from the outset, easy to justify, communicate, and disseminate. As a result, public funds will be better allocated, decision-making processes more transparent, and a significant amount of time will be saved – because a number of faulty legal or financial solutions will be avoided (e.g. regulations on energy cooperatives or programmes to combat smog or support electromobility, respectively).

1.3. Amending the distance rule

Proposals:

1. Liberalising limitations concerning the location of onshore wind farms (the so-called 10-H regulation).

2. Introducing provisions to safeguard reliable environmental impact assessments of onshore wind projects and social participation in procedures concerning the issuance of investment permits, in line with the EIA directive.

3. Mechanisms enabling the purchase of shares in onshore wind projects by members of local communities should also be considered.

Justification:

Onshore wind farms are currently the cheapest energy source. As such, wind power may form an important element of more complex citizen-driven energy forms, such as energy cooperatives, energy clusters, or virtual prosumption.

The onshore wind power sector experienced a boost until 2016, when its development was blocked by the so-called distance rule, according to which new wind turbines are to be located at least 10 times blade tip height away from residential buildings or protected areas. Unblocking the development potential of onshore wind power is a must, given the need to boost the development of renewable energy. This would enable phased-out coal plants to be substituted with new, clean and cheap energy sources, and make it possible to avoid a further increase in energy imports. It is also extremely important for the future development opportunities of Poland's collective prosumption, citizen-driven energy and energy communities.

The growth of onshore wind power need not be a source of social conflict. On the contrary, if adequate regulations are in place, it may benefit local communities through generating additional income for the given commune or municipality, access to cheap energy or possibility to secure additional income for residents through the acquisition of shares in wind projects.

Consequently, amending the distance law should be aimed at not just liberalising the 10-H rule, but also at introducing regulations to safeguard an adequate level of protecting the environment and the interests of local communities. The process of granting permits for wind projects has to be fully compliant with the EIA Directive, Bird Directive, and Habitats Directive so as to give local communities a genuine possibility to influence the location of such projects, while protecting local nature (particularly bird refuges and flight routes) and the comfort of residents. New regulations should also enable residents to acquire shares in wind power plants and wind farms established within their localities. On the one hand, this would increase the social acceptance levels for such projects, and on the other, create an additional source of financing investments in wind energy.

Amending the distance rule should take account of the conclusions and recommendations formulated by the Polish Supreme Audit Office (NIK) in *Communication on the results of the "Location and construction of onshore wind farms" audit*⁴ with regard to the planning process and safeguarding the interest of local communities.

⁴ Najwyższa Izba Kontroli (Supreme Audit Office), *Informacja o wynikach kontroli „Lokalizacja i budowa lądowych farm wiatrowych”* (Communication on the results of the "Location and construction of onshore wind farms" audit), URL: <https://www.nik.gov.pl/aktualnosci/nik-o-lokalizacji-i-budowie-ladowych-farm-wiatrowych.html>.

2. REFORMING SUPPORT PROGRAMMES

Apart from legislative reforms, the National Recovery Plan should earmark adequate funds from the Recovery and Resilience Facility for public support programmes in the area of improving energy efficiency, development of citizen-driven renewable energy, and improving air quality.

The Clean Air and My Electricity Plus programmes will be the crucial instruments here. These programmes are already up and running, but – apart from funds for their continuation – they require reforms streamlining their operations. More importantly, however, both programmes have to become more ambitious and their assumptions have to be made compliant with the EU's climate goals.

2.1. Required reforms of the Clean Air programme

Proposals:

1. Enhance consistency between the programme's objectives and the EU's climate goals, e.g. in terms of improving the energy efficiency of buildings (this should be backed by the adoption of a building renovation strategy compliant with EU targets).
2. Modifying the principles of Clean Air in order to increase the pace of its implementation, remove financial barriers that hinder support for persons with lower incomes, and making the level of support dependent on the achieved environmental effect (eliminating air pollution and limiting energy demand). The programme is an important instrument for the implementation of climate policy in the buildings sector. Therefore, support for new coal-fired boilers should be terminated immediately, and – within a narrow timeframe – also support for gas boilers and pellet stoves,⁵ with funding only available for zero-emission heat sources.
3. Ensuring the programme is coherent with public policies in other related areas (system heating, RES development, development of energy storage).

Justification:

Although Clean Air was originally designed as an instrument whose main goal was improving air quality, at present – as the only that large and comprehensive renovation programme in place, about to cover most

⁵ Given the lack of quality standards for wood pellets and the general availability of pellets manufactured from wood with harmful additives, MDF pellets, etc., providing financial support for pellet stoves is counterproductive from the standpoint of air quality. Pellet is a problematic fuel also from the climate perspective. There is a growing number of studies indicating that burning wood used for energy purposes generates greenhouse gas emissions that may in some cases be comparable to burning coal, while at the same time contributing to the degradation of forest ecosystems and loss of their retentive function. Therefore, stimulating demand for pellet with public grants is unjustified. See Nauka w Polsce (Science in Poland), *Naukowcy apelują o zrównoważone wykorzystanie biomasy leśnej w produkcji energii* (Scientists call for a sustainable use of forest biomass in energy production). URL: <https://naukawpolsce.pap.pl/aktualnosci/news%2C80014%2Cnaukowcy-apeluja-o-zrownowazone-wykorzystanie-biomasy-lesnej-w-produkcji>

single-family buildings in Poland – it has to become the main vehicle for the implementation of the EU’s Renovation Wave in Poland. It should also aim to achieve its other objectives, above all improving energy efficiency, reducing greenhouse gas emissions in buildings, and combating energy poverty. Consequently, the programme has to be modified.

The starting point for this reform should be ensuring that its goals and ambition levels correspond to the EU’s objectives stipulated in the “Renovation Wave” strategy.⁶ The strategy aims to reduce greenhouse gas emissions in the buildings sector by 60% by 2030, while the Clean Air programme is to decrease CO₂ emissions in single-family buildings by 14 million tonnes of CO₂ a year. This corresponds to a mere 1/3 of the current emissions in the entire residential buildings sector. According to the draft Long-Term Renovation Strategy, the entire buildings sector in Poland is to achieve CO₂ emissions reduction of around 60% not earlier than in 2050. Clearly, neither the assumptions of the Clean Air programme nor those of the Renovation Strategy are in line with the EU’s ambitions – and compliance has to be enhanced in this respect. At the same time, the pace of implementing the programme has to increase. At present, implementation is more than twice slower than initially assumed. Without significant changes, even the original targets seem impossible to achieve.

In order to speed up the programme’s implementation, removal of financial barriers that hinder access to the programme should be of utmost importance – i.e. prefinancing should be provided for investments in energy retrofits and heat replacements. One possible solution are preferential loans granted by banks, which should also be responsible for examining applications and distributing support, thus broadening access to the programme. In addition, broader access to energy consulting as well as information about the programme itself, available technological solutions and best practices, backed with easier access to reliable and qualified professionals would all contribute to boosting the programme’s implementation rate. Consequently, funds from the Recovery and Resilience Facility should be used not just to finance grants under the Clean Air programme, but also to support energy consulting for beneficiaries, an information campaign, as well as workshops and a system of certifying qualifications for employees of the renovation and construction sector and energy auditors.

In line with the energy efficiency first rule adopted by the European Union, the programme should strive to make the maximum possible use of the potential to limit energy demand in buildings. Therefore, support should boost projects with a high energy efficiency rate, i.e. deep and comprehensive energy retrofits that substantially limit the given building’s energy use. This is connected with the need to accurately verify the achieved reductions in energy demand, i.e. conducting energy audits before and after energy retrofits.

In order to tap into the maximum potential of improving energy efficiency through Clean Air, not just the programme itself, but also its environment requires reforms. This concerns, among others, improving the regulations on minimum energy parameters for new and modernised buildings and their effective enforcement, changing the definition of a near zero-energy building (see item 1.1), using energy performance certificates as a mechanism shaping the real estate market, and improving the qualifications of designers and contractors in the renovation and construction sector.⁷

⁶ European Commission, *A Renovation Wave for Europe – greening our buildings, creating jobs, improving lives*, URL: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020SC0550&from=EN>

⁷ Actions that would make it possible to increase the level of energy savings achieved through the programme are described in the report of the Polish Green Network *Energy efficiency of buildings in the future EU budget* (Chapter 4: Effective instruments for

As one of the most important instruments implementing green transformation objectives under the National Recovery Plan, the Clean Air programme must be fully coherent with the EU's climate goals and the 'do no significant harm' principle. This means that only environmentally safe, renewable energy sources should receive support (PV, heat pumps, biogas installations). Financing has to be ceased for heat sources that rely on fossil fuels, including natural gas, and solid fuels.

Limiting energy poverty is one of the objectives of the Renovation Wave campaign and should be added to the Clean Air programme as one of its objectives too. To meet this goal, Poland should start by introducing a definition of energy poverty as well as diagnose the scale and nature of this problem. Clean Air itself should be enhanced by additional financial and organisational facilities for people at risk from energy poverty that would make support available to all potential beneficiaries irrespective of their income level. The current solution, i.e. larger grants for persons with the lowest income, is clearly insufficient. It is highly unlikely for persons that meet the income threshold enabling them to receive greater funding to simultaneously have savings or a surplus of disposable income to cover their own contribution, even in the case of prefinancing in the form of a bank loan. What is more, such persons face a substantial risk of increased heating bills as a result of heat source replacement if the corresponding energy retrofits are too superficial or incomplete because of budget constraints. Consequently, persons threatened with energy poverty should be granted access to reliable energy consulting, and the level of financial support for such persons should be supplemented or extended.

2.2. Reforms of the My Electricity programme

Proposals:

1. Increasing the budget and prolonging the programme in line with the original timeframe, i.e. until 2025, and updating target achievement rates to match the new, increased EU climate target.
2. Extending financing to energy storage facilities, RES installations other than PV (e.g. micro-wind generation) as well as appliances and systems enabling intelligent energy management and provision of grid stability services by prosumers.
4. Introducing regressive support and designing the programme so that it contributes to eliminating energy poverty and is available to people with low income (prefinancing possibilities, preferential loans to finance own contribution).
5. Extending the programme to include users that meet the definition of a virtual and collective prosumer (e.g. through vouchers to acquire shares in a virtual prosumer installation or energy cooperative).
6. Providing beneficiaries with access to consulting, e.g. in the scope of designing and using micro-RES installations in a way that is optimum for the grid and the potential role of prosumers in making the energy system more flexible.

Justification:

The My Electricity programme proved to be a highly effective instrument supporting the development of renewable energy sources and citizen-driven energy in Poland. It significantly contributed to Poland surpassing the threshold of 3 GW PV capacity installed and to the creation of thousands of micro PV installations capable of covering 5% of the summer peak electricity demand. Given that increasing the development pace of RES represents a major challenge for Poland's energy transition, this programme – as one of the instruments serving this goal – should be continued with a larger budget and updated target values of new capacity and CO₂ emissions reduction. The fact that the entire budget was used long before the programme's original deadline indicates that this is an efficient instrument that meets the needs of its beneficiaries.

However, the programme requires certain reforms and improvements.

First of all, support should be extended to cover other RES technologies, such as micro-wind generation, domestic energy storage facilities and appliances, and systems for the intelligent management of energy use. This would alleviate the excessive load on distribution networks through energy produced in PV prosumer micro-installations, and contribute to improving the flexibility of the energy system.

Secondly, support under the programme should be available to everyone, not just to owners of single-family houses and relatively well-off persons, as is the case now. The programme should contribute to reducing energy poverty, and as such, it should include further facilities for persons with lower income, such as greater level of financing, the possibility to use prefinancing or take out a preferential loan. Persons who do not own their homes should be able to obtain support for acquiring shares in virtual prosumer installations or energy cooperatives, as soon as the relevant legal provisions concerning such forms of prosumption are adopted. RED II makes it clear that all citizens should be able to participate in the energy market. Therefore, there is no reason to exclude residents of multi-family buildings or other persons who for various reasons cannot have a micro-installation on their roof from receiving support.

The EU envisaged an active role for prosumers on the energy market, e.g. through selling their energy surplus or providing grid stabilisation services (such as energy storage in heating appliances or batteries of electric vehicles, aggregated DSR services). Therefore, My Electricity should be extended to include another important objective: providing consulting services and educating beneficiaries on the possibilities of actively participating in the energy market and the role they can play in making the system more flexible and stabilising the grid.