

PRESS RELEASE

The missing link in the energy transition—new design of network tariffs

It is non-elastic, inefficient, unsuited to the changing realities of the energy market and the accelerating energy transition. The Polish model of network tariffs, i.e. the system of payments for delivering electricity to consumers, must be changed. In its latest report, Forum Energii, together with the Regulatory Assistance Project, analyses the principles that need to be considered when designing a new approach to tariffs.



Why is a new tariff model needed?

1. Energy prices in Poland are high

Poland has the highest wholesale electricity prices in Europe. This is a consequence of the large share of coal in the Polish energy mix, high prices of CO2 emission allowances and low competition on the Polish market. Energy prices for individual consumers are regulated, but businesses and industry are incurring ever higher costs and will look for any way to reduce their bills. This will apply not only to the cost of purchasing electricity, but also to its supply. In extreme cases, if sources turn out to be cheaper, the number of consumers using the grid will fall. Its costs, however, will still have to be covered, especially with large expected investments in distribution networks.

2. Consumers behaviour changes

Most of the new renewable generation capacity will be connected to the distribution grid, and only the largest and limited sources directly to the transmission system. This will change the way the grid is used, forcing expansion and management of energy supply and demand.

- The network will also be influenced by another trend—the development of technologies powered by electricity. In Poland, heat pumps are becoming increasingly popular as a means of heating, and electric cars are on the increase. In order to avoid overloading the energy system, the demand for energy should be properly controlled. An indispensable tool for this are dynamic tariffs, which will encourage users to use electricity to charge their cars or heat their homes when it is cheapest—points out Aleksandra Gawlikowska-Fyk, head of the Power Project at Forum Energii and co-author of the analysis.

3. Investments are needed in the modernisation and expansion of distribution networks

The energy transformation in Poland is accelerating. Today's distribution system is outdated and ill-suited to cope with the effects of rapid change. But making the grid fit for the 21st century means much more than replacing old cables and wires. It is about improved flexibility, increasingly distributed sources, active consumers, automation and smart metering. An increase in network rates is therefore inevitable in the coming years. However, it must and can be optimised, and for this it is necessary to take dynamic rates into account.

- A system where these time-of-use rates incentivise the consumers to utilize today's and future networks better, the costs per kilowatt-hour would be less. In many cases, mainly for new investments, it is cheaper to shift the power demand than expanding the network to increasing peak demand. Modern networks require smart rates to empower consumer for participation in the new energy system where investments are optimized and to all consumers benefits—says Andreas Jahn, Senior Associate at the Regulatory Assistance Project and co-author of the report.

New tariffs—or what tariffs?

- Consumers should pay for network services in proportion to how much and when they use the network.

Energy consumers use energy based on habits. The new tariff model should encourage them to change their old habits and control when it is most profitable to use electricity (e.g. charging an electric car or switching on a heat pump). Such a solution, however, is only possible if there are active consumers and prosumers in the system, and the way energy is priced reflects its cost over time.

- Generation customers should adequately contribute to the costs of the grid.

The behaviour of prosumers has an impact on the distribution network. It is important to design tariffs in such a way as to treat their activity in the grid fairly and to account for the energy they feed into and take from the grid. For example, in summer peaks, the development of photovoltaic installations improves the power balance in the system. Therefore, the self-consumption of generated energy should allow the prosumer to save on charges, and the energy returned to the grid should be rewarded. The opposite is true, however, during winter peaks when demand for energy from the grid increases. The introduction of dynamic tariffs will mean that all active energy consumers, including prosumers, will pay higher costs during winter peaks in demand.

- Differentiation of network tariffs for different consumer groups is necessary

The change in the tariff model should first affect active consumers. Many households without electric vehicles or heat pumps have relatively low electricity consumption. For them, a network tariff based on energy consumed is sufficient. However, when these consumers start to adjust their energy

consumption more in line with price signals, they should have access to more differentiated tariffs. It is also important to take care of the lowest income consumers—they should benefit from tariff variations.

A reform of the tariff model is necessary

Tariff design is an integral part of public policy that should support, not hinder, the energy transition. Smart tariffs give consumers incentives to do the right thing: to save energy or use it when it is most profitable for them. Well-designed dynamic tariffs can help optimise the use of already existing networks and minimise future investments.

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Dynamic and just. Network tariff design for the future.

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