Forum Energii

Analizy i dialog

Why compensations of power prices can cause more harm than good?

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Introduction

This is the first time such an unexpected turn of events has occurred in the energy sector. The government lost control of the strategic economy sector and seems surprised with the increase in prices and rising import of coal, gas and electricity. This unexpected situation has led to huge astonishment at a time when elections are imminent. Experts in the energy market are astonished with the lack of awareness of decision-makers regarding the situation in the economy sector as the symptoms of the events have been observed for a long time. Despite the changing technological, economic and regulatory conditions, the national energy policy is still in a stagnation phase.

The biggest energy market intervention in history

The mutual astonishment of the government and experts changed into panic, which then led to the implementation of the so-called Electricity Act[1] which will, according to the government, stop the increase of energy prices. Implementation of the Act (if it is successful) will cost PLN 9 billion in 2019, a budget equal to annual expenditures on education in Poland. About 30% of "black-smoke-belching stoves", which are the cause of the poor air quality, could be replaced for this amount of money. The government, however, decided to pay extra for the energy consumption.

The Act consists of the following elements:

1) Reduction of excise from PLN 20 to PLN 5/MWh.

2) Reduction of transitional charge by 95%, i.e. support for producers resulting from so-called long-term contracts.

3) Allocation of the sales proceeds[2] of CO_2 emission allowances for the following purposes:

   - 20% for financing of the investment in modernization and construction of generation sources and networks in order to reduce atmospheric emissions,
   - 80% for establishment of the Price Compensation Fund, which deals with paying compensations to energy trading enterprises with regard to differences between wholesale prices and reduced retail prices in contracts concluded after 30 June 2018. In 2019, the state budget will be the source of funding.

The reduction of excise and transitional charge is not controversial. Excise tax is used to reduce the consumption of goods. Although its abolishment had been postulated for a long time, it was not taken into consideration because the energy price was low and the budget received about PLN 2 billion. The transitional charge should be removed from the bill because the long-term contracts concluded over 10 years ago expire. Incidentally, the transitional charge was to be replaced with a capacity charge, which will enter into force as of 1 January 2021.

Allocation of the sales proceeds of CO_2 emission allowances to investments in reduction of emissions and energy efficiency is important and necessary. Forum Energii wrote about this as early as in 2015[3]. Up till now the sales proceeds of CO_2 emission allowances flowed into the state budget and were allocated for different purposes not connected with energy transition. The price of single allowance was low and there was no interest in these funds. However, after the increase in allowance prices by 250-300% over the last years, proceeds to the state budget have grown rapidly.

As much as 80% of the sales proceeds of CO_2 emission allowances are to be allocated for equalisation of prices to the level from the previous year. Trading enterprises are obliged to reduce the energy prices, and the difference between high wholesale prices and retail prices will be covered by the budget. The Price Compensation Fund will be used for

1 The Act amending the Excise Tax Act and some other Acts of 28 December 2018, Dz.U. Journal of Laws of 2018, item 2538.
2 255 million of allowances x EUR 20 per tonne of emission allowance, the budget will receive PLN 4.62 billion.
3 Forum Analiz Energetycznych (2015): Effcient use of Modernization Fund http://forum-energii.eu/en/analizy/jak-optymalnie-wykorzystac-fundusz-modernizacyjny.

this purpose. This action raises a lot of legal concerns regarding compliance with the EU public aid law. Still, we are primarily interested in the influence of this solution on the functioning of the energy market in Poland now and in the future.

Why do the energy prices increase?

Several factors may have an influence on the increase in energy prices:

1) Rising costs of energy production:

- **Prices of CO_2 emission allowances.**

  In June 2017, CO_2 emission allowances cost about PLN 20/tonne of CO2. At the end of 2018, they increased up to about PLN 82/tonne. Converting it into the price of MWh – production of 1 MWh in a coal fired unit is connected with the emission of about 0.9 tonne of CO_2. It means that the cost of CO_2 in 1 MWh increased from PLN 18 to PLN 73, i.e. by PLN 55.

- **Prices of hard coal.**

  Hard coal delivered from national mines became more expensive, increasing from PLN 10.3/GJ to PLN 12.4/GJ. Converting it into MWh, the costs of coal increased from 106.2/MWh to PLN 131.5/MWh (24%), i.e. by PLN 25.

2) Higher costs of property rights:

- **Green certificates**.

  The price of one certificate increased from PLN 52.7/MWh to 129.3/MWh, and the so-called obligation increased from 17.5% to 18.5%[4]. Converting it into MWh of energy sold to the end user, the cost of green certificates increased from PLN 9.2 to PLN 23.9.

- **Other certificates**.

  The prices of some certificates increased, others became cheaper, so the influence on MWh cost was neutral.

- **The cost of property rights package.**

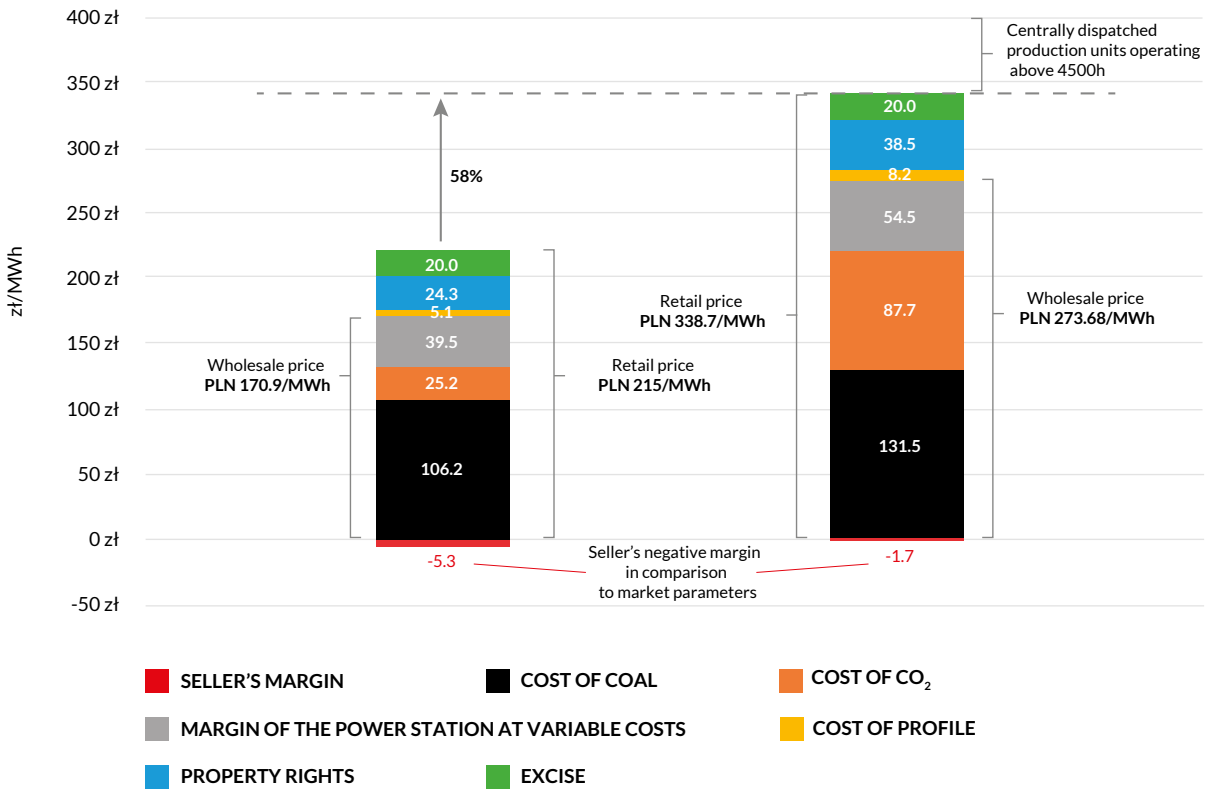
  Full property rights package became more expensive from PLN 24.3/MWh to PLN 38.5/MWh, i.e. by PLN 15.2/MWh.

3) The increase of margin in production and trade sectors.

- The increase of margin is probably the result of ongoing concentration of the market and little competition between the entities. Figure 1 presents the price components in 2018 and 2019.

4 The obligation to redeem the property rights is established by the Minister of Energy by means of the Regulation. It obliges trading enterprises to cover a particular percent of energy sold with green certificates. For instance, the obligation in the amount of 17.5% means that 175 certificates should be redeemed in the Energy Regulatory Office per each 1000 MWh of energy sold to end users.

Figure 1. Decomposition of energy prices and analysis of sources of price increase.



Source: Own calculation on the basis of data from the Polish Power Exchange /TGE/ and other publicly available sources.

The price of electricity as demonstrated in the chart results from the analysis of six public procurements relating to energy deliveries in 2018 and in 2019 for the self-governing purchase groups. Due to the scale and nature of the procurement, it can be assumed that it reflects the price on the competitive market for users from C and B tariff groups, i.e. for institutions, services, small and medium-sized industry.

Our analysis focuses on current market prices. In practice, large enterprises operate other internal cost and price parameters that are unknown to analysts. For example, trading enterprises could purchase large amounts of property rights when they were cheap. As a result, they could achieve a high margin on this cost position, performing a high profit on energy sales (i.e. expensive energy is accompanied by cheap property rights). So, the seller's margins[5] are the analytical indices, which indicated a significant improvement of profitability of trading enterprises (increase of margin by PLN 3.6/MWh).

The influence of compensations on the energy market

In recent years, the energy prices were exceptionally low due to the low prices of CO_2, coal and large growth of RES. A major increase in the energy prices in 2018 is a challenge for users. Remedial measures should not, however, cause additional chaos and risk for energy companies or users. Unconsidered actions will weaken the competitiveness of the market and will make it more difficult to remedy the situation.

5 Red – negative. It is PLN -5.3/MWh for 2018 and PLN -11.7/MWh for 2019.

The Electricity Act is a temporary solution, which (if it is successfully implemented) will hide the problem in 2019 at a huge cost. However, the problem will not be solved and it will return in the near future. Increase of the energy prices is inevitable due, among others, to the following reasons:

1) As of 2021 the capacity charge will be collected via distribution system operators. It will cost PLN 5.4 billion (about PLN 40/MWh, i.e. PLN 80/year per household).

2) In January 2019, the Market Stability Reserve was implemented as part of the ETC reform, the purpose of which is to initially freeze and then remove the excess of CO_2 allowances from the market. Elimination of over supply will lead to an increase in allowance prices.

Why do we think that compensations are not a good idea if energy prices are and will remain high? Explanation below:

1) Surcharges distort price incentives

FRC distorts economic incentives shaping the price. Artificial reduction of prices for end users leads to inefficient allocation of resources in economy. Energy consumption is supported instead of investments in emission reduction (energy efficiency and low-carbon resources).

2) It is not a socially fair solution

The implemented solution causes the transfer of values from the poor to the rich. If we treat the revenue package of CO_2 emission allowances as a national good, each citizen should have the same share.

The value of sold CO_2 emission allowances per 1 citizen per year

55 million tonnes of CO_2 x EUR 20/tonne of CO_2 x PLN 4.2/EUR: 36 million citizens = PLN 128

- An average household contains 2.5 people, i.e. the value of proceeds from allowances per household is PLN 320.
- Retail prices were to increase by 30%, so by PLN 78/MWh (i.e. from PLN 260/MWh to PLN 338/MWh).
- A small, well-to-do household (2.5 people) consuming 1.5 MWh per year will be a beneficiary of a surcharge amounting to PLN 117/MWh. Although the average value of CO_2 allowances is PLN 320, the household will de facto receive PLN 117 and thus lose PLN 203.
- A rich household (2.5 people) with many electrical appliances in a single-family house (e.g. heated floor, air-conditioning) and consuming about 8 MWh per year, will be a beneficiary of state compensation amounting to PLN 612. These will be funds from potential income from CO_2 emission allowances, which should be the same for all citizens. It is a transfer of funds from the less affluent people to the rich.

3) A huge risk for electricity sellers

The implemented compensation mechanism is a threat to operations for independent trading enterprises. For them, the cost of adapting to the new regulation is high and introduces a high operational risk, including:

- High additional transaction costs – necessity to amend all the contracts.
- Liquidity risk caused by delayed receipt of compensation from the Fund in relation to the date of energy sale.
- Loss of potential customers due to the belief that when the state intervenes in the market, it is better to stick to large state companies. The chance that the state will try to protect their interests is bigger.

The effect of regulation might be a change in the number of players and weakening of competitiveness on the energy market.

4) Compensations reduce motivation for energy saving

On one hand, a sudden and surprising increase in energy prices is controversial. On the other hand, it mobilizes people to save energy. The proposed solution works the other way round – it artificially reduces prices for end users, which leads to the increase or maintenance of energy demand.

5) Compensations burden the state budget

It is not clear what will happen with compensations next year. It is difficult to expect that the Minister of Finance will accept the implementation of surcharges to the Fund as a fixed expenditure. Furthermore, it is obvious that we reduce expenditures on other important purposes by allocating funds for energy consumption.

6) A strong state intervention means a decrease in predictability and trust in market solutions

The stability of market rules and entrepreneurs' trust in the state is a value in itself. Market behaviour can be predicted, while state intervention cannot. Let us consider the position of these users (especially entrepreneurs) who rationally managed the risk. Forecasting that the prices of CO2 emission allowances may increase at any time, they decided to conclude a 2-3 year contract with a fixed price in 2016 or 2017. Obviously, they had to pay a higher price immediately (already in 2017 and 2018) than those who bought in one-year contracts, exposing themselves to the price risk that was eventually covered by the state6. Today, the preventive entrepreneurs lose to competitors that minimized the price by shortening the contract.

Moreover, there is a risk of claims against the state in the event of a business failure in the future.

6 In terms of economy and politics, this situation is similar to the flood of 1997 when many houses were destroyed, and Prime Minister Włodzimierz Cimoszewicz said that the inhabitants should have been insured from such an event and they should not count on state aid. As is known, this view was wrong on political grounds (it contributed to the defeat of the left wing in the parliamentary elections), but correct on the basis of economy. Does the full compensation of increase of energy prices for all the users mean that the government perceives the current situation as a disaster?

How to deal with the increase in energy prices?

1) Low-emission diversification of production

A high share of coal in the Polish energy mix causes significant exposure to the risk of fluctuations in coal prices and the costs of CO_2 emission allowances. We have presented the proposal for a low-emission diversification of the mix in our comments to the Polish Energy Policy until 2040.[7]

2) Distribution – operation for the benefit of all network users

Development of renewable energy sources on a micro- and prosumer scale is strongly conditioned by the ease of network connection. Distribution network operators can play a key role in reducing costs for users through easier access to the network. The government, in cooperation with the President of the Energy Regulatory Office, has an influence on relations between the users and operators. This can be used by reformulating the objectives of quality regulation.

3) Improvement of transparency of the wholesale market

It is necessary to develop the analytical tools of the President of ERO to monitor prices, costs and competition on the market. This should be associated with the increase in the budget of this office, which has been underfunded for years despite the widening scope of competences.

4) Remedy on power exchange liquidity

The Polish Power Exchange should provide robust competition on the energy market. This can be achieved through a reform aimed at achieving high liquidity on the power exchange – in particular on the Day-Ahead Market and the Intra-Day Market.
Until recently, the retail energy trading market was competitive. Margins on retail trade were low, and often even negative. However, the margins increased significantly between 2018 and 2019 (as illustrated in Figure 1 and in the explanation).

5) Protection of consumer rights

According to the Supreme Audit Office (2018), consumer rights in Poland are not fully respected[8]. In our view, there is a need for an Energy Consumer Rights Advocate able to support consumer interests in the legislative process. That person should be responsible for informing the consumers in regards to costs, energy saving opportunities and support them when concluding energy purchase contracts.

6) Households

The average household uses 2 MWh of electricity annually, paying PLN 1,460 for it. The increase of energy prices by 30%, which was announced by the largest trading enterprises, is in fact the increase by 15%, because only half of the bill is energy, the other is distribution. The household would pay PLN 225 more annually.

The government could, for example, provide households with financial resources to replace traditional lighting with energy-efficient lighting instead of ordinary surcharges. As a result, it would be possible to reduce the energy consumption by about 10-20%. What is the difference? The decrease in energy consumption by 10-20% translates into a reduction of the bill by 8.5-17%, as the electricity charge and consumption-dependent variable distribution charges are reduced (in a typical household bill, variable charges account for 85% of the total expenditure). The most important

7 Forum Energii (2018), PEP2040 http://www.forum-energii.eu/en/analizy/pep-2040-uwagi
8 Supreme Audit Office 2018, https://www.nik.gov.pl/aktualnosci/ochrona-praw-konsumenta-energii.html

thing is to find a permanent solution to the problem (for at least 8 years which is the life-span of the best sources of energy-efficient lighting) for PLN 225 per household. Spending PLN 3 billion solves the problem in the household sector for a long period of time and not only temporarily. It should be noted that the old type of lighting (ordinary light bulbs) is mainly used by less affluent households and that therefore, such intervention is consistent with the principles of social justice – we help, to a greater extent, those who are poorer. The program could be implemented through municipalities in the form of reimbursement of bills for the purchase of energy-efficient lighting.

The regulation of prices by the Energy Regulatory Office is considered to be a form of consumer protection in Poland. On the other hand, there are no selective or effective mechanisms to support the poorest energy consumers. Electricity allowances are associated with housing allowances (the allocation of which depends on the size of the flat). However, most of the people blighted by energy poverty live in quite large houses in the countryside. Housing allowances are out of their reach. The allowance program is not fully used, which is confirmed by the report of the Supreme Audit Office (2018)[9]. Protection of sensitive users should start with a remedy of this instrument.

Summary

An increase in energy prices, especially if it occurs suddenly, raises concerns, and rightly so. However, the introduction of compensations has a negative influence on the competition of the energy market. It will reduce trust in its functioning and can result in increases in energy prices due to a reduction of market mechanisms. In the worst case scenario, it can lead to a serious energy crisis.

9 https://www.nik.gov.pl/aktualnosci/ochrona-praw-konsumenta-energii.html

Notes

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