

**MEASURES TO REDUCE THE NEGATIVE  
EFFECTS INDUCED BY INCREASE IN GAS PRICES  
IN THE EUROPEAN UNION**

**MĂSURI DE REDUCERE A EFECTELOR NEGATIVE  
INDUSE DE CREȘTEREA PREȚURILOR LA GAZE ÎN  
UNIUNEA EUROPEANĂ**

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**Summary**

*Exposing the EU to volatile energy market prices is perceived as the highest risk for the future before the transition to renewable energy brings the desired market stability. Until then, governments must produce viable alternatives, like lowering tax rates and surcharges on energy bills, which sometimes may account for half of the final price. Other alternatives may comprise social schemes to secure not-protected households and small companies, to diminish energy poverty, and to hinder the population from being disconnected from the electricity supply. Governments can also offer direct cash injections, as France has done, to provide urgent support to families striving to pay their bills. But this tool may rapidly exceed the allocated amounts as prices keep increasing, as expected. In this sense, the article presents a set of measures adopted both at the EU level and by some member states to reduce dependence on natural gas imports from Russia and to lower gas (and electricity) bills. Finally, the article extensively examines the measures to reduce the negative effects induced by the increase in gas prices in Romania. The further implementation of this strategy must allow Romania to use its high potential, compared to other European countries, to become energy independent.*

**Keywords:** *natural gas, European Union, energy prices, compensations, correction mechanisms*

### **Rezumat**

*Expunerea UE la prețurile volatile pe piața energetică, amplificată de conflictul dintre Rusia și Ucraina, este gata să rămână un risc în următorii ani înainte ca tranziția către energia regenerabilă să aducă stabilitatea anticipată pe piață. Până atunci, guvernele vor trebui să vină cu soluții intermediare, cum ar fi scăderea ratelor de impozitare și a taxelor suplimentare aplicate facturilor la energie, care în unele țări pot reprezenta jumătate din prețul final. Alte măsuri pot include programe sociale pentru a proteja gospodăriile vulnerabile și întreprinderile mici, pentru a atenua sărăcia energetică și pentru a împiedica situația în care multor familii să le fie întreruptă alimentarea cu energie electrică. Guvernele pot oferi, de asemenea, injecții financiare directe în numerar, precum a procedat Franța, pentru a oferi un ajutor imediat celor care se luptă să plătească facturile. Numai că un astfel de instrument ar putea depăși rapid bugetul dacă prețurile vor continua să crească, așa cum se preconizează că se va întâmpla. În acest sens, în articol este prezentat un set de măsuri adoptate atât la nivelul UE, cât și al unor state membre de reducere a dependenței de importuri de gaze naturale din Rusia și de scădere a facturilor la gaze (și electricitate). În final, articolul examinează pe larg măsurile de reducere a efectelor negative induse de creșterea prețurilor la gaze în România. Implementarea ulterioară a acestei strategii trebuie să permită României să își folosească potențialul ridicat, comparativ cu alte țări europene, astfel încât să devină independentă din punct de vedere energetic.*

**Cuvinte cheie:** *gaz natural, Uniunea Europeană, prețurile energiei, compensații, mecanisme de corectare*

The unprovoked and unjustified war Russia started in Ukraine and the never before seen decline of Russian gas supplied to the European Union's Member States menaced the security of supply all over the EU. Also, Russia's weaponization of gas supplies and maneuvering of markets by deliberate interruptions of gas supplies has brought a huge increase in energy prices in the EU.

The change in supply routes that overloaded the European gas infrastructure, the need to find alternative sources of gas supply, as well as the existence of pricing systems that are not in line with supply shocks led to price volatility and their increase. Thus, increased gas prices put

the EU economy at risk due to high and sustained inflation because of higher electricity prices, weakening consumer purchasing power, as well as increasing production costs, especially in energy-intensive industries, and significantly threatening supply security.

Hence, taking into account the condition induced by the electricity and gas price rise worldwide, and the impact caused, it is necessary to institute temporary measures whereby electricity and gas prices end-users had to pay do not worsen the level of energy poverty. For these reasons, the article presents a set of measures adopted both at the EU level and by some member states to reduce dependence on natural gas imports from Russia and to lower gas (and electricity) bills. Finally, the measures to reduce the negative effects induced by the increase in electricity and natural gas prices in Romania are extensively examined.

## **1. Europeans' commitment to stop being vulnerable. Solutions**

Exposing the EU to volatile energy market prices is perceived as the highest risk for the future before the transition to renewable energy brings the desired market stability. Until then, governments must produce viable alternatives, like lowering tax rates and surcharges on energy bills, which sometimes may account for half of the final price [Hood, 2022].

Other alternatives may comprise social schemes to secure not-protected households and small companies, to diminish energy poverty, and to hinder the population from being disconnected from the electricity supply.

Governments can also offer direct cash injections, as France has done, to provide urgent support to families striving to pay their bills. But this tool may rapidly exceed the allocated amounts as prices keep increasing, as expected.

For these reasons, we present below a set of measures adopted both at the EU level and by some member states to reduce dependence on imports and lower gas (and electricity) bills [Sgaravatti *et al.*, 2022].

### ***1.1. Measures at the EU level***

Starting with the 2nd semester of 2021, there was an abrupt jump in energy prices in the EU and around the world. Although to some extent this was expected given the post-COVID-19 recovery of econo-

mies worldwide and the easing of travel restrictions, energy prices rose beyond anticipation.

The price increase that had begun in 2021, and had been ongoing in 2022, has got worsened by *the war Russia started in Ukraine*.

Several factors have concurred to increased prices since 2021, namely:

- the unusual rise in natural gas prices on world markets (an increase of over 170% in the whole year 2021) and in the EU (an increase of over 150% between July 2021 and July 2022) [ICE, 2022];
- the extreme weather conditions, including summer heatwaves across Europe, which boost demand for cooling energy and increase pressure on electricity generation;
- the increase in demand for liquefied natural gas (LNG) and, consequently, the increase in its price;
- the increase in natural gas consumption in Asia as a result of the economic recovery;
- the shortage of nuclear and hydroelectric power, partly related to climate conditions.

Hence, EU officials were forced to take immediate measures to cope with all these issues. In the following paragraphs, some of them will be thoroughly examined.

### ***1.1.1. The EU wants to force member states to fill up their gas storage before winter***

The European Commission wants to impose on EU member states the obligation to fill their gas storages before the arrival of each winter [Riekeles & Lausberg, 2022], with the idea of increasing stocks and coping with supply disruptions.

The European Commission proposed, on March 2, 2022, a set of measures to make the European energy system more resilient in the context of supply shocks or explosive price increases. Thus, the European Commission should impose on member states a mandatory demand for the achievement of a minimum storage level on September 30.

According to the Community Executive, it is unlikely that companies will store sufficient quantities of gas, based only on the incentives

offered by the free market, because the price of gas was expected to remain at a high level, at least until the end of 2022 [Sánchez Nicolás, 2022].

The Commission’s proposal also urges member states to set a minimum level for companies holding storage facilities on their territory and states that governments can provide financial incentives to achieve this goal.

Companies that own gas storage facilities tend to fill them at a different time than the winter heating season, given that both wholesale gas prices and demand usually decrease in the summer season. But this did not happen in 2021 either, so in the summer of 2022, the degree of filling of gas storage facilities in Europe was at 32%, compared to approximately 40% a year ago.

In the fall of 2022, however, as a result of the recommendations of the European Commission, the situation has visibly improved. Thus, on October 26, according to the Association of EU storage operators, Gas Infrastructure Europe, Romania had stored 31.18 TWh, representing 95.09% of the total capacity of 32.7 TWh available (table 1). Anyway, the degree of filling of storage facilities in Romania is higher than the European average, which is 93.93 %.

**Table 1. The degree of filling of gas storage facilities in Europe, in October 2022**

No.	Country	Amount of gas stored (TWh)	Percentage of total capacity (%)
1	Belgium	8.79	100
2	Portugal	3.90	100
3	UK	10.51	100
4	France	132.19	99.69
5	Denmark	9.19	99.62
6	Poland	35.65	97.91
7	Germany	239.9	97.82
8	Croatia	4.62	96.87
<b>9</b>	<b>Romania</b>	<b>31.18</b>	<b>95.09</b>

10	Italy	183.87	95.09
11	Spain	33.11	93.44
<b>12</b>	<b>Total EU</b>	<b>1,047.20</b>	<b>93.93</b>
13	Sweden	0.09	92.94
14	Czech Republic	40,51	92.55
15	Slovakia	34.83	92.04
16	Netherlands	127.47	91.71
17	Austria	86.70	90.75
18	Bulgaria	5.11	88.22
19	Hungary	56,48	83.42
20	Latvia	13.61	56.55
21	Ukraine	103.43	31.81

Source: Rusu, 2022.

Thus, at the end of October 2022, only 7 EU states had fuller deposits than Romania: Belgium, Portugal, France, Denmark, Poland, Germany, and Croatia. Of these, Belgium, Portugal, Denmark, and Croatia have low storage capacity. More worrying is the fact that the last places were countries from the region, Austria, Bulgaria, Hungary, and even Ukraine. And this even though, according to the publication ICIS [2022], some EU companies have resumed gas injections into Ukrainian storage facilities, following the drop in spot prices, the high degree of storage in the EU, and the gas surplus from the European market, a result of the voluntary reduction in consumption and the warmer weather.

That is why, in the European Commission document, it is stated that the long-term solution, which would limit the exposure of countries to the costs of fossil fuel imports, would be investments in renewable energy and the reduction of energy consumption, by renovating buildings and using more efficient industrial processes from an energy point of view, as, moreover, the climate objectives of the EU provide.

### ***1.1.2. EU allows the reopening of coal mines to lessen the dependency on gas supplied by Russia***

The EU is adapting to the energy crisis exacerbated by Russia's invasion of Ukraine and *allowing a return to coal-fired electricity gen-*

eration [Mathiesen *et al.*, 2022]. Therefore, European officials advised those member states intending to use coal instead of Russian gas could do so according to the EU's climate change and decarbonization targets.

The European Union and most of the member countries have repeatedly argued that natural gas is a cornerstone of the continent's drive to decarbonize, in a bid to reduce the use of coal and shift towards renewable energy sources.

In February 2022, to the chagrin of climate activists, the European Commission approved the inclusion of natural gas and nuclear energy on the list of investments in the transition to decarbonization [Szymczak, 2022].

However, Poland and other countries intended to phase out coal, then use natural gas temporarily, and in the end switch to renewables. If these countries exploit coal reserves for longer, but then immediately move to renewable sources, they could still be within the parameters set at the EU level for community climate policy.

Since more than a third of European gas comes from Russia, European officials believe that the EU must try to wean itself off dependence on Russian gas much faster than anticipated [IEA, 2022a]. To this end, at the beginning of March 2022, the EU launched an aid pack aiming to alleviate the short-term impact of the interruption of gas supplied from Russia and accelerate the phasing out of fossil fuels.

On March 3, 2022, the International Energy Agency – IEA [IEA, 2022b] published a survey showing that Europe could cut gas supplied from Russia by over 30% in one year. A “*short-term solution*” may be switching from gas-based power stations to coal-based or oil-based power stations. But IEA may not advise upon this solution because this would come with “*significant trade-offs*”.

Meanwhile, several member states, including Italy and Poland, have already announced the possible reopening of coal-fired power plants to fill possible short-term shortfalls as a result of the war in Ukraine.

European officials argue that because certain countries may try to use coal now, this should not slow Europe's transition to renewable energy sources in avoiding another “deadly danger”, namely the climate

crisis. In this respect, Germany is an example as is developing plans to suddenly increase its renewable energy targets.

European analysts already mentioned note that the approach of the European Commission represents a historic change for the EU, given that Brussels and the member states have moved in recent years to an aggressive policy of de-carbonization of the energy system. Abandoning highly polluting coal has driven up energy prices. Now, however, as Russia uses natural gas as a political weapon, given that it is responsible for a third of the gas used in Europe, the EU is allowing a return to coal.

***1.1.3. The EU member states have reached an agreement on overtaxing energy companies. The negotiations on gas price cap have ended***

The EU member states agreed on 30 September 2022 to set taxes on windfall profits of energy companies and initiated discussions on the following steps needed to ease Europe's energy crisis, including capping gas prices [CEU, 2022]. Thus, the measures proposed at the beginning of September to limit the rise in energy prices, which are fueling record inflation and threatening the economic prospects of the community block, were approved.

This package comprises a tax on fossil fuel companies' windfall profits made in 2022 or 2023, another tax on excess revenue for power-producing companies with low production costs generated from rising electricity costs, and the obligation to reduce electricity consumption by 5% on peak periods.

Once these aspects were agreed upon, European officials also began negotiations on a potential gas price ceiling, a ceiling with which certain states, including Germany, do not agree. Thus, 15 countries, including France, Italy, Poland, and Romania, have called on Brussels officials to set a price cap for all gas purchases to limit inflation, which ought to be sufficiently high and flexible level to enable Europe to supply the necessary energy sources.

Some EU member states contested the Commission's estimates that an extended capping of gas prices may call for important financial resources to support buying gas at once in the case that market prices exceed this target. In this regard, it has been estimated that €2 billion

will be needed since most European gas imports are based on long-term contracts or come through pipelines for which other buyers are not easily found. The amount might be just a part of the €140 billion the EU expects to collect from windfall taxes on energy companies' profits.

But Germany, Austria, the Netherlands, and others have warned that capping gas prices may let countries now striving to purchase gas at a time when no competition with buyers on price-competitive global markets, which could present "*risks to the security of supply*" as Europe comes into an uncertain cold season from this point of view.

For this reason, the European Commission has encouraged the EU to continue with tighter price caps, aiming only at gas supplied from Russia or gas burned in power plants. By introducing measures at the EU level, officials in Brussels hope to standardize national governments' approaches to the energy crisis, as richer countries have been able to afford significantly higher compensation for companies and consumers affected by the energy crisis.

As such, according to an EU Regulation, adopted at the end of December 2022 [CEU, 2022], the European Commission must introduce ***a gas market correction mechanism***, which will act as an efficient tool to combat such events of unusual sky-scraping gas prices and which will be on work when prices top high levels compared to global markets, to bypass considerable market disturbances as well as supply contract disruptions that could lead to serious risks to the security of supply.

The establishment of this market alteration tool has to ring the bell to the market that the EU does not agree to unreasonably raised gas prices resulting from faulty price mechanisms. This may bring, as well, reliability to market players regarding confident gas marketing capping and could generate significant savings for both businesses and households, to no longer be exposed to high energy prices. The dynamic safety cap may be activated if the price increase does not correspond to a similar increase at the regional or global level, and this recommended price has to take into consideration the LNG price estimation characteristics for Europe's market status.

As a result, the Ministers of Energy from all over the European Union have established a ceiling for wholesale transactions, so that the

records of 2022 will no longer be reached. *According to this agreement, the Romanians, but also the other Europeans, would be protected from the very high increases in natural gas prices.*

The mechanism will enter into force from mid-February 2023 (currently, in Romania, the price of gas for consumers is capped until April 2025). Thus, after weeks of debate, the Ministers of Energy of the European Union agreed on a ceiling of €180 per MWh, for natural gas on the reference market, from Amsterdam.

In particular, this cap should act as a brake when there are very large price increases for wholesale gas transactions. For example, it was in August 2022, when gas reached almost €350 per MWh. Now the price is below the ceiling. For Romania, this limit of €180, for wholesale transactions, would only apply to imports as for gas produced in the country there is already a ceiling. National producers can sell to suppliers for a maximum of 150 lei per MWh, i.e. €30, so much less than the European ceiling.

In other words, the mechanism will be activated if two conditions are met. First, the TTF (Title Transfer Facility - that is the title transfer mechanism) gas price exceeds €180 per MWh for three consecutive days. Second, the difference between TTF gas and LNG from other global markets is more than €35 for the same period. Once the mechanism is activated, it will remain so for at least 20 working days.

This cap should also have a positive effect on the price of electricity, given that the high price of gas has also put pressure on electricity in 2022. European leaders have established many mechanisms by which the cap can be suspended, in order gas supply not to be affected.

On the other hand, however, if it is found that there are not enough interested sellers or that LNG transactions fall below optimal levels to fill the storage facilities in the winter of 2023-2024, with the existence of this cap, which has so many exceptions and mechanisms applied to it, it is not clear at the moment whether it will apply, for how long this will happen, and how credible it is to calm the price crisis.

### ***1.2. Measures at the level of some EU member states***

High demand for natural gas and rising prices for tradable emissions certificates have led to price increases in many European coun-

tries. Under these conditions, each state adopted its own set of measures to mitigate these shocks [RCT, 2022], which will be presented in the following paragraphs.

**Austria.** On January 28, 2022, the government announced a €1.7 billion aid package for almost all households. As such, households will receive compensation of €150 for energy costs, a compensation that may be twice bigger for households in financial trouble. In addition, the compulsory tax on green electricity (a tax favoring the support of RES) has been suspended for 2022.

Another measure includes a 90% reduction in natural gas and electricity tariffs in the 1st semester of 2023, amounting €900 million, and subsidies for employee commuting, totaling €400 million.

The government will provide, as well, assistance to businesses by deferring certain tax payments and providing €250 million worth of investment help aiming to reduce energy dependency on gas supplied from Russia.

**Bulgaria.** On October 22, 2021, the government launched a tool to offset businesses by €55 per MWh for two months, thus resulting in a total of €225 million accrued by taxing on the windfall profit of the Kozlodui nuclear power plant. Later, on 16 December 2021, has been agreed on electricity and heating price freezing for households until the end of March 2022.

On 10 February 2022, the new budget was adopted including some measures to reduce the economic effect of increased electricity and gas prices, for which the Bulgarian state was to spend €476 million to help companies.

On May 16, 2022, the government adopted some measures worth €1.1 billion, targeting gasoline prices and increasing end-users energy prices. They are meant to completely offset companies for the 14% rise in gas prices and eliminated excise duties on natural gas, electricity, and methane.

**Czech Republic.** In November and December 2021, electricity and gas have been given exemption from VAT payment. The government has requested, as well, that households (and other consumers, like cottages) were to be exempt from energy taxes if electricity is supplied from renewable sources.

On September 27, 2022, through the newly adopted budget, 100 billion Czech crowns (that is €4 billion) were allocated for electricity and natural gas price caps. For households, prices are limited at 6 kroner (that is €0.24) per kWh of electricity (that is 200 kroner per MWh) and 3 kroner (that is €0.12) per cubic meter for gas, and these measures were to be in force starting with November payments.

On October 6, 2022, the government suggested a 60% tax on the windfall income of energy companies and major banks from the production, distribution, and trading of electricity and natural gas, as well as from fossil fuel extraction, oil processing, and fuels wholesaling starting from 2023 to 2025.

**France.** On 15 September 2021, the government launched a plan for a single payment of €100 for the 5.8 million households that were previously provided with energy coupons and a gas price cap till April 2022. These two measures were afterward reinforced on 21 October 2022, by increasing the number of coupon recipients (for all those earning under €2,000 net per month which is approximately 38 million individuals), and by widening the price cap until the end of 2022. Under these conditions, payments to those over 38 million people cost €3.8 billion, mostly paid in 2022.

On 23 June 2022, the government extended until the end of 2022 the cap a 4% increase in the regulated electricity tariff. This measure, together with the freezing of gas tariffs, has cost €38 billion so far.

On August 4, 2022, the Parliament adopted other support measures, amounting to €20 billion that provide an overall number of grants replacing aimed assistance. These grants set a new 4% limit to electricity price rise and maintain the same gas prices till the end of 2022.

On 14 September 2022, the government notified the population that the tax protection, previously prolonged till December 2022 for gas and till February 2023 for electricity, would be resumed in 2023. These measures comprise: limiting gas and electricity price rise to 15%; a medium invoice rise cap to roughly €25 per month for household gas based-heaters and approximately €20 per month for electricity based-heater, and others. Based on governmental predictions, this package may amount to €17.8 billion net (out of which €1.8 billion for energy

invoice assistance, €11 billion for gas price limiting, and another €5 billion for electricity price limiting), while by its application about 12 million households will benefit.

**Germany.** On June 19, 2022, the government launched a program to support the population, and some of the measures contained in this package aimed at: greater confidence in coal-fired power plants instead of gas-fired ones; a new gas auction model, which should stimulate gas-based industry consumers to economize gas; credit lines for gas storage companies and renewed support for utility companies and businesses under the impact of natural gas and electricity price increases.

On September 29, 2022, Germany announced its biggest package of measures yet, aimed at increasing gas prices. This represents an “*economic defense shield*” worth €200 billion. There are three main novelties in this regard. First, these measures involve a more substantial financial engagement than before (i.e., those measures already notified on September 7, 2022, totaling €65 billion, mainly paid by taxes, not from new loans).

Secondly, another assistance measure called “*the gas price brake*” is designed to decrease average gas prices. The measure was already part of the former aid pack, while the details were presented quickly, until the end of October 2022; based on previous predicts, this might be worth from €15 and €24 billion if meant for households only.

Thirdly, a support tax on all gas consumption worth €0.027 per kWh from 1<sup>st</sup> October was removed as it was deemed no longer necessary. A financial help for those importers who have lost contracts with Gazprom will be in turn financed from this fund.

On 10 October 2022, governmental experts searching for means to decrease gas prices came up with a short-term plan, in which the main objective was to avoid gas shortages while at the same time decreasing the adverse effects of gas prices increasing. For end-users, such an option was meant to support the December 2022 gas bills, and afterward, subsidize 80% of regular consumption from September 2022 with €0.12 per kWh beginning in the next spring. Moreover, this scheme provided that, beginning from January 2023, industrial enterprises may be given back 70% of the year 2021 gas consumption, at €0.07 per kWh.

This measure may cost around €91 billion of the €200 billion saved by the German government in September 2022, out of which €66 billion go helping end-users and SME companies, and €25 billion go helping industrial companies.

**Italy.** On 18 December 2021, the government notified the population of the way the 2022 funds were meant to be directed: €1.8 billion to expel taxes for electricity end users (households and micro-enterprises with an energy requirement of up to 16.5 KW); €480 million to expel taxes out of gas bills for all end-users; VAT decrease by 5% for civil and industrial uses, beginning in September 2022, with a predicted revenue deprivation of €608 million; €912 million to enhance social coupons (invoice reduction for families in financial troubles or those with vital health issues) to offset the new rises. The government has initiated, as well, the alternative that all end users may pay the energy bills in several installments during 2022.

On 12 January 2022, the Italian Minister of Industry notified about the future rise in corporate taxes for energy businesses benefiting from rising energy prices.

Late in July 2022, the government drafted the law project called „*Aiuti bis*” worth €13 billion, with an additional €2 billion for supplementary measures. Over €6 billion were meant to offset the prolongation of the already agreed measures: €1.05 billion for extending the reduction of VAT on gas (from 22% to 5%) and fuel taxes (by 30 cents per liter), and €5 billion for cancellation of taxes on energy bills. In addition, till October 31, 2022, the application of any price-related contractual provision enabling electricity and gas supplier companies to one-sidedly alter them has been suspended.

**United Kingdom.** To ensure the proper function of the „*provider of last resort*” system, through which the UK’s the energy regulatory authority re-orientates bankrupt firms’ end-users toward other suppliers, the government is taking into consideration the possibility of giving loans granted by the state to energy businesses accepting end-users from companies that went bankrupt due to rising wholesale natural gas prices.

On 26 May 2022, the UK government announced a £15 billion emergency package to ease households on the cost of living. The aid

pack introduced a general support rise to £400 (for all households), while the October 2021 abatement on energy bills was twice bigger, while the demand to pay it back in the next five years is removed. Moreover, 8 million income-based benefit households get an extra £650, with larger payments for pensioners and disabled persons.

The aid pack is funded by 30% of the tax on the windfall profits of oil and gas firms, which is expected to rise to £5 billion in 2023 to support households with their life cost. This windfall tax is going to be followed by a new investment allocation to stimulate businesses investing in oil and gas extraction in the UK.

The government has also drawn up a scheme to preserve yearly household spending on electricity and gas at £2,500 (that is over €2,700). The losses this law induces to energy companies will be reimbursed by the government and are expected to amount about €150 billion by the end of 2023.

***The Netherlands.*** The government has decreased households' and companies' energy tax for 2022, out of which €2.7 billion was meant to compensate households and another €0.5 billion to compensate businesses. The government makes available, as well, €150 million to help households in need against increased energy bills and/or defectively insulated houses to support ameliorating their insulation.

On 4 October 2022, the government reached at last an agreement on price limiting that was notified in September 2022. Trying to protect end-users from increasing energy prices, the government secured the price of electricity at €0.40 per kWh and maintained the gas price at €1.45 per cubic meter of gas. These price limits are in force solely for the consumption of 2,900 kWh of electricity and 1,200 cubic meters of gas and are valued at approximately €23.5 billion. Under this agreement, households were meant to receive, as well, compensation of €190 for the remaining months of 2022.

***Spain.*** On September 14, 2021, the first measures to support the population were adopted. Thus, Spain began by capping natural gas prices [AP, 2022], reducing taxes and redirecting energy company profits, so that the special tax on electricity fell from 5.1% to 0.5%, as part of a package of measures designed to reduce rising utility prices. The

redirection of profits from utility companies has been used to cap natural gas prices and reduce energy costs for consumers.

On October 26, 2021, a new Royal Decree-Law no. 23/2021 increased the social coupon for vulnerable consumers from 25% to 60%, and for the very vulnerable ones from 40% to 70%, both until March 31, 2022. In addition, the amount for social coupons for heating was twice greater as in 2021, reaching €202.5 million. The government has notified about a rise of the social coupons for heating, up to €90 on average (€35 in the hottest areas and €124 in the coldest areas) to support households in need to cope with escalating electricity and gas prices. This law introduced, as well, a few exemptions from applying the provisional decrease in market revenues for energy facilities that do not emit CO<sub>2</sub>.

On March 25, 2022, Spain obtained EU permission to implement special measures to reduce electricity prices, together with Portugal, in accordance with their status as an “*energy island*” (Spain’s electrical interconnection with northern Europe is only 2,8%), meaning price limitations to minimize the role of gas as a stability factor in the electricity market. As a result, on 26 April 2022, the European Commission accepted gas price capping for these two Iberian countries at €50 per MWh – meaning the de facto decoupling of electricity price from gas price – for the following 12 months, which should have halved electricity bills for around 40% Spanish and Portuguese rate-regulated end-users.

Later, on 8 June 2022, the European Commission endorsed subsidies worth €6.3 billion for Spain to reduce wholesale electricity prices till the end of May 2023. In the first six months after the measures have been applied, it was also set a gas price cap at €40 per MWh. Beginning with the seventh month, this price limit is supposed to rise by €5 per month, leading to a gas price limit of €70/MWh in the twelfth month.

## **2. Measures to reduce the negative effects induced by the increase in gas prices in Romania**

Analysts believe that the new capping of energy prices brings temporary benefits for consumers, but also additional uncertainties for the market [Bădin, 2022]. The pressures on the energy market in 2021, which generated the accelerated increase in prices, led to the implementation of specific measures in most European countries, mainly for consumer protection. Romania also adopted such measures last fall, such as the capping of energy prices, the partial compensation by the state of electricity, and natural gas bills, but these were thought of as temporary solutions, to overcome the winter, applicable until the end of March 2022.

Specifically, the Romanian Government has taken a series of measures to protect households and companies in the context of significant increases in energy prices. In October 2021, the Government of Romania approved Government's Emergency Ordinance (GEO) no. 118/2021 for setting a scheme to compensate for electricity and gas consumption for the 2021-2022 winter. Thus, the ordinance provided for the granting of monthly compensation for bills payment related to electricity and natural gas consumption for the period November 2021 - March 2022. The support schemes are applied to household customers, SMEs, public and private hospitals, academic institutions and kindergartens, NGOs, and religious institutions, and social services' public and private providers.

But the conflict that broke out at the end of February 2022 in Ukraine brought new challenges and prolonged tensions in the energy market. Based on these developments, superimposed with already existing inflationary pressures and with the warnings of economists regarding the worsening of the situation starting from April 2022, immediately after the expiry of the measures regarding the capping of energy prices applicable in the cold season, the Romanian authorities decided to adopt additional measures to limit the impact of electricity and natural gas bills on the population and companies. Thus, the government issued a new GEO for the capping of tariffs for end consumers, which, however, also contains an extension of charging for electricity producers, both in time and as an area of application.

Consumer protection measures were extended by GEO no. 27/2022 for the period April 2022 - March 2023, subsequently modified by GEO no. 119 of September 1<sup>st</sup>, 2022 for the period April 1<sup>st</sup>, 2022 - March 31<sup>st</sup>, 2023. The measures were also extended to protect all economic agents in Romania. To support budget revenues, a surcharge was introduced by Law 259/2021 regarding price capping and invoice compensation.

The law also provides that the supplementary income made by electricity producers occurring from the difference between the average monthly selling price of electricity and the price of 450 lei/MWh be taxed at 80%, except for electricity producers based on fossil fuels, including cogeneration. The provision was taken over in the new GEO and was extended both as a period, by one year, and as an area of applicability, for all electricity producers, regardless of source. At the same time, the calculation methodology for this tax (applicable to revenues obtained from quantities sold at prices higher than the regulated ceilings) was detailed. Instead, the new normative act provides for the exemption of new production capacities, put into operation after March 22<sup>nd</sup>, 2022, from the additional tax, a measure that could partially compensate for the lack of predictability and would stimulate much-needed investments in the field.

This new regulation (GEO 27/2022) was issued just a few days before the expiration of similar measures adopted in the fall of 2021, amid fears about the explosion of all prices in the economy in the event of a return to market rates for energy and natural gas. In fact, from this perspective, the National Bank of Romania also warned, in its most recent communications, that it expected an acceleration of inflation starting in April 2022. This phenomenon was also registered before this announcement. For example, in the context of the suboptimal functioning of global value chains and increased volatility of domestic and external demand, energy prices rose significantly in the second part of 2021. The outbreak of war in Ukraine in February 2022 increased the pressures on energy prices, especially natural gas.

Specifically, the latest GEO imposes new price ceilings for consumers (table 2).

**Table 2. New regulated consumption price caps for electricity and gas in Romania, according to GEO 27/2022**

<b>Domain</b>	<b>Maximum price</b>	<b>Compensated consumption quota</b>	<b>The beneficiary of the compensation</b>
Electricity	0.68 lei/kWh	0 - 100 kWh	Household customers
	0.80 lei/kWh	100.01 – 300 kWh , for a maximum monthly consumption of 255 kWh	Household customers
	1.00 lei/kWh	for 85% of the average monthly consumption at the place of consumption in 2021	Small and medium enterprises
Natural gases	0.31 lei/kWh	Regardless of consumption	Household customers
	0.37 lei/kWh	For annual consumption in 2021 of no more than 50,000 MWh	Non-household customers

Source: GEO 27/2022.

Subsequently, the Parliament of Romania adopted the Law no. 357 [PR, 2022] of December 13, 2022, regarding the approval of GEO no. 119/2022 for the amendment and completion of GEO no. 27/2022.

### **2.1. Impact on market players**

Tariff capping will undoubtedly have a positive impact on consumers during the implementation period. At the same time, the measure, which is intended to be provisional, could have long-term effects on the companies in the field, depending on their ability to manage the measures imposed by the authorities.

For the companies involved, especially distribution companies, the impact depends on how and when the compensation measures from the

state will be applied (for the difference between the purchase price, at the market level, and the sale price, capped) provided for in the Ordinance. According to the regulation, for domestic customers, compensation is granted from the budget of the Ministry of Labor and Social Solidarity, and for non-domestic customers, from the budget of the Ministry of Energy, but it also depends on how well this compensation mechanism will work. Delays in the disbursement of the respective amounts will put high pressure on the financial availability of the distribution companies, with an impact on their solvency.

At the same time, the additional tax imposed on electricity producers will affect their profitability and the ability to invest, at a time when energy independence, impossible to obtain without additional investments, is increasingly invoked at the European and local levels.

From the perspective of the state budget, it is affected in both directions: costs of supporting the distribution companies, respectively the compensations that the state will have to grant on account of the price cap, but also revenues from the additional tax of 80%. Moreover, it remains to be seen how these measures will influence energy consumption, the economy as a whole, and, consequently, the related budget revenues from related taxes (VAT, excise, corporate tax, etc.).

## ***2.2. Long-term perspectives in the context of the Ukraine conflict***

If last autumn, the long-term plans of the EU and Romania were built around the European Green Deal, the nowadays situation postpones, for now, the envisaged measures. Hence, the EU and member states are seeking alternatives to limit their energy dependence on Russia, a challenge that overlaps with the one involving the protection of consumers against price rises.

In Romania, an option to gain energy independence from Russia relates to the exploitation of gases from the Black Sea (we will return to this topic at the end of this article). But the offshore law, adopted almost four years ago, contains a series of provisions that limit the interest of investors in the development of projects in the area, and the changes promised by the authorities repeatedly are slow to appear. In addition, in the context of the ongoing conflict including in the Black Sea area, exploration and exploitation plans may be postponed until the situation is clarified.

At the same time, coal-fired power plants' capacities have increased in recent times. Nuclear power is a good solution, as well, so completing the Cernavodă reactors is mandatory, while developing other similar capacities may become a priority.

It remains to be seen whether the recently adopted measures are part of a wider strategy that the authorities have in mind to solve the fundamental problems of the Romanian energy market to ensure energy independence, more necessary than ever in the current context of the conflict from Ukraine and the increasingly strained relations between the EU and Russia, the EU's largest supplier of natural gas, with more than 40% of total imports. However, we currently have no clarification from the authorities on this matter, which indicates that for now, at least, there is no such strategy.

So, this new regulation seems to solve a momentary emergency (consumer protection), while raising many question marks for the period ahead. Will these measures remain temporary or will they become permanent? Will investments in energy, respectively domestic production, be encouraged in the context of fluctuations in European markets and the uncertain future? What will Romania focus on to cover the energy deficit - natural gas, nuclear energy, coal? What will happen to the energy transition plans and the green economy? The implications and consequences are uncertain, and the market remains tense in the absence of a medium and long-term vision for national energy policy.

It is obvious that the national legislation in the field of energy remains fragmented, based on momentary solutions, which deal with the effects, and not the causes of price increases, and which induce new challenges for the companies involved, without providing a minimum of predictability in the medium and long term. Under these conditions, the players in the field and the general public are still waiting for a national energy strategy that includes, in broad terms, solutions to deal with the causes of price increases, measures to stimulate domestic production, and concrete supply plans for the additional needs. Without following a "*red thread*" of the strategy, any new measures in the energy field will lack cohesion and complementarity, so temporary solutions may represent new obstacles to achieving energy independence.

### 3. Conclusions

As energy prices remain volatile on the markets, EU countries have agreed on measures aimed at improving solidarity across the EU and better coordination of joint gas purchases.

The new measures will allow member states and energy companies to purchase gas jointly on world markets. Pooling demand at the EU level will ensure that EU countries have better leverage in purchasing gas on world markets and that member states do not outbid each other in the process.

At the same time, the Ministers of Energy of the EU member countries agreed on a ceiling for the price of gas. It is a relevant consensus to safeguard the population from increased energy prices, being a reasonable and efficient tool aiming at secure supply and stable financial markets.

High energy prices hurt EU consumers, whether they are families or businesses. Coordinated measures at the EU level are ***immediate and essential*** to protect end-users from increased costs.

For this purpose, ***the vital objectives of the EU's reaction*** to the energy crisis have been identified as follows:

- to provide competitive and affordable energy for EU end-users;
- to enhance the EU's energy security and its level of emergency preparedness;
- to secure energy resiliency and self-sufficiency of EU countries.

As such, in October 2022, EU countries adopted an ***emergency regulation*** to tackle high energy prices and help those end-users and businesses most affected by the energy crisis. Moreover, the methodology for applying the new regulations was adopted in record time.

In our country, also, the Romanian Government (in March 2022) and then the Romanian Parliament (in December 2022) adopted a Government Emergency Ordinance and, respectively, a Law to ensure a high level of economic and social protection for the life, health, and safety of consumers, as well as the need to guarantee their right regarding the implementation of support measures established by primary

level rules to ensure better functionality for the energy market and to substantial safeguard end-users related to commercial practices that may affect their economic interests.

So, as different countries adopt different measures, it is clear that Europe as a region will face difficult questions in the weeks, months, and even years ahead. And the biggest of them all is: Should every nation think of itself first?

***In conclusion, the Romanian state authorities must also give the national energy strategy the importance and urgency of the moment, as public debates are needed to capture innovative ideas and constructive criticism. The further implementation of the strategy must allow Romania to use its high potential, compared to other European countries, to become energy independent.*** And this subject is covered extensively by the author in another article dealing with offshore exploitation of the Black Sea Romanian continental shelf<sup>1</sup>.

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