

THE ENERGY CRISIS AND ITS IMPACT ON ROMANIA'S SMEs

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Abstract

The electricity and gas price crisis started in Romania and in the European Union as of 2021, which took the country's leadership and the management of state institutions, with responsibilities in the energy field, by surprise. In Romania, this price crisis is only part of a deep energy crisis, which started immediately after 1990 and continued step by step until today. This paper tries to present the factors that pushed Romania in to crisis along with the recent war between Russia and Ukraine. Also, the research shows that the measures taken by the Government to limit the effects of the electricity and gas price crisis are not helping the consumers, either individuals or companies. The research presents the impact of the energy crisis on the Romanian economy and on Romanian SMEs.

Keywords: energy crisis, Romanian SMEs, Romanian economy, war, impact, factors

JEL Classification: H12, O13, P22, P24, P18.

1. Introduction

In the current economic context, after the Covid-19 pandemic, the national energy market is in a continuous transformation of a technological, economic, geopolitical, and climatic nature, this being in the same trend as the international changes taking place at the global and European level. In this context, Romania is forced to position itself in relation to international trends, as well as in relation to geopolitical changes that influence strategic partnerships within the EU.

The conflict between Russia and Ukraine had an impact on and implications for the EU's energy system, causing price instability and energy insecurity around the world. To address the need for inexpensive energy and to consider changing geopolitical realities, the EU and its Member States are dynamically redefining their energy plans. This includes stepped-up efforts to boost gas supplies from the EU's reliable allies. Since the second half of 2021, record-high energy costs have been worsened by the conflict because of Russia using energy supplies as a weapon.

With the advancement of technological progress, the energy sector of every country, regardless of continent, has become one of the most important sectors for the national economy, both at the microeconomic (for each individual economic agent) and

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macroeconomic levels (for all SMEs involved in the production process in each sector or branch of the national economy).

The energy crisis causes economic stagnation, and changes in macroeconomic indicators, both in importing and exporting countries, result in a change in the energy balance, which has a direct impact on the trade balance, the balance of payments, and, ultimately, the well-being of the population.⁴

The redistribution of non-contracted volumes of liquefied gas to the Asian market, where the price has always been higher than the European one in 2021, is one of the main causes of the reduction in natural gas supply on the European market.

The price of liquefied gas on the Asian market in February 2021 was 1.6 times higher than the price at the TTF hub (The Title Transfer Facility is *a virtual trading point for natural gas in the Netherlands*). According to Chinese customs data, China imported 5.4 million tonnes of Liquefied Natural Gas (LNG) from the United States of America (USA) from January to August 2021, which is 4.8 times more than in the same period of 2020.⁵

The current priorities in the energy sector are aimed at correcting dysfunctions and falling behind the EU average: expanding regional and European connectivity of electricity and natural gas transport networks until disruption is eliminated, reducing emissions and progressive electrification of final energy consumption in all sectors of the economy, including the residential environment, and the replacement of physically and morally obsolete technological inadequacies.⁶

2. Energy crisis in the European Union

The greater a country's level of development and industrialization, the greater its long-term consumption of energy resources. The increase in demand by household consumers and SMEs against the backdrop of the government's shrinking supply in the energy market inevitably leads to an increase in price in the medium and long term, resulting in a significant increase in inflation.

Due to concerns about limited gas supplies for the winter months, European energy markets became extremely tight and volatile in the fall of 2021. Fortunately, Europe had a mild winter, but once market concerns subsided, Russia invaded Ukraine. Energy is becoming a factor in the conflict. European gas and energy prices rose in August 2021 as markets panicked over Russian supplies and politicians warned citizens to brace themselves for a harsh winter.

Prices were almost fifteen times more than usual for the season. After Russia announced that it would shut down the crucial Nord Stream gas pipeline for three days on August 31, 2021, to conduct maintenance, gas prices began to rise.

Radu Puiu, in an article from Republica.ro, on August 28th 2022⁷ wrote about the “In addition to the geopolitical factor, the causes that fuelled the energy crisis in 2021:

⁴ Gutium Tatiana (2022), *Criza Energetică: Cauzele și impactul asupra bunăstării populației*, Institutul Național de Cercetări Economice, Republica Moldova, p. 48.

⁵ General Administration of Customs of the People's Republic of China <http://english.customs.gov.cn/Statistics/Statistics?ColumnId=1>

⁶ Strategia Durabilă a României 2030, București, Paideia, 2018. <http://www.ddd.gov.ro/>, p. 51.

⁷ <https://republica.ro/criza-energetica-isi-intinde-tentaculele-asupra-industiilor-europene-ajungand-si-peste-ocean>, Radu Puiu, 28 august 2022.

- France has very low nuclear availability (Electricite de France has decreased its 2023 output projection to 300-330 TWh and is currently experiencing cooling challenges that will further reduce 2022 availability).
- Given the widespread drought conditions, there are historically low levels of hydropower storage from Scandinavia to the Iberian Peninsula.)
- closures of thermal power facilities in Western Europe (including coal, nuclear, and gas reactors with outdated technology.)
- Logistics for the supply of fuel brought on by a confluence of extremely low water levels in the Rhine (e.g., effects on coal deliveries to German power plants) and logistical issues resulting from the conflict in Russia.
- Low wind and solar energy output periods.”

The Versailles Declaration, adopted in March 2022, was an agreement between the leaders of the 27 EU member states to gradually reduce their reliance on Russian fossil resources.

The European Council decided on May 30-31, 2022, to prohibit roughly 90% of all Russian oil imports through the end of 2022, except for pipeline crude oil.

Given the different energy mixes, conditions and circumstances of EU member states, EU leaders have called for:

- a greater variety of sources and pathways for energy supply;
- expanding the usage of renewable energy;
- enhancing the linkages between the gas and electricity networks;
- increasing energy efficiency.

On August 5th 2022⁸, Through a formal process, the Council approved the regulation reducing gas usage by 15%. The political agreement reached in July is followed by the adoption. The regulation went into effect the next day after it was published in the Official Journal on August 8.

Electricity prices are 35% higher now than they were during the same period in 2021, according to EUROSTAT data from September 2022.

EU nations have come to an agreement on a market-correction mechanism that will prevent excessive spikes in gas prices inside the EU and lessen the effects of price hikes on consumers and the economy. Gas transactions will be subject to a tariff cap when and if gas prices reach unusually high levels⁹.

The new regulations will make it possible for energy corporations and member states to buy gas on international markets together. By pooling demand at the EU level, member states would avoid bidding wars and will have more negotiating power when buying gas on international markets. The new law also adds a new pricing benchmark that complements the Title Transfer Facility and ensures stable and predictable prices for LNG transactions (TTF).

On December 19, 2022, the reforms were formally approved by the Energy Council. In light of Russia's invasion of Ukraine and the EU's 2050 climate targets, the leaders of the 27 EU member states decided to gradually reduce their reliance on Russian fossil resources at an informal summit of heads of state or government in March 2022.

⁸ <https://www.consilium.europa.eu/ro/press/press-releases/2022/08/05/council-adopts-regulation-on-reducing-gas-demand-by-15-this-winter/>

⁹ <https://www.consilium.europa.eu/ro/policies/energy-prices-and-security-of-supply/>

The leaders agreed at the March meeting to gradually reduce Russian imports by:

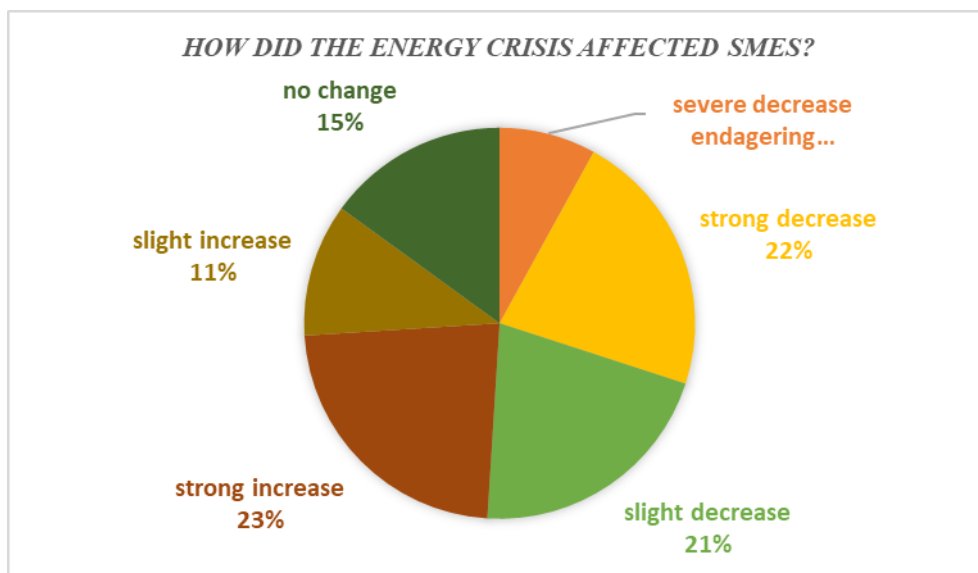
- reducing overall reliance on fossil fuels
- diversifying energy supply sources and routes, including liquefied natural gas (LNG)
- accelerating the development of renewable energy sources and hydrogen
- improving interconnections between EU energy networks; and
- increasing energy efficiency.

Most of the energy used in the EU in 2020 was imported, with Russia serving as the region's primary source of fossil fuels.

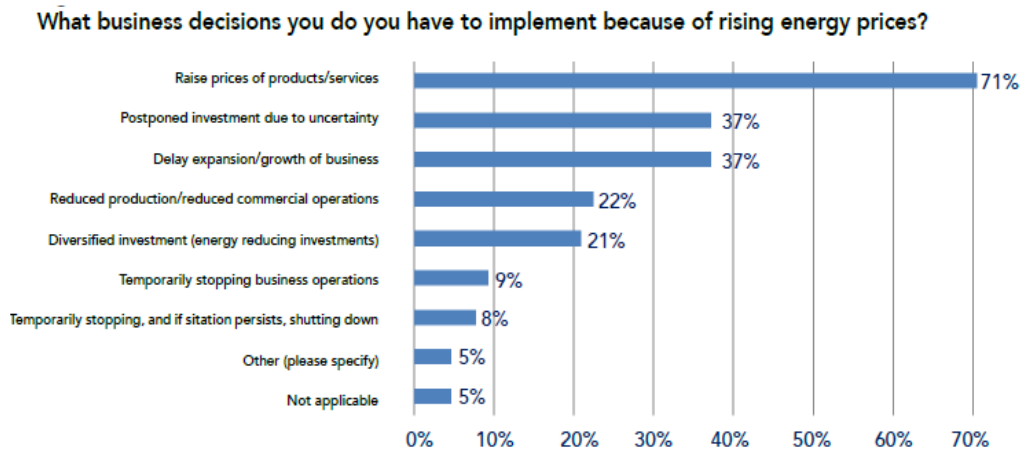
For SMEs all throughout the world, the energy crisis has posed significant obstacles, with particularly detrimental consequences on productivity and profits. Even while some SMEs have been able to maintain profitable operations, rising inflation and input costs indicate that business viability is uncertain, particularly at a time when electricity contracts need to be renewed.

When analysing the activity of European SMEs, some key factors need to be considered, according to the OECD study "EMERGENCY CRISIS IMPACT FOR SMEs," published in the issue of December 2022. Only 1% of the SMEs polled said their operations and overall productivity had not been harmed; 42% of respondents said they had been severely impacted. According to 33% of the respondents, they were able to maintain growth. However, 51% of SMEs saw a decline in both productivity and revenue. Up to 8% of SMEs have experienced a significant decline in productivity and revenues that puts their company's survival in jeopardy.

Figure 1. How did the energy crisis affect SMEs



Source: The authors based their findings on information from the December 2022 release of the Business at OECD (BIAC) SME Survey, ENERGY CRISIS IMPACT FOR SMEs.

Figure 2. What actions SMEs must take because of energy prices rising?

Source: Business at OECD (BIAC) SME Survey, December 2022, page 6 "ENERGY CRISIS IMPACT FOR SMEs."

To deal with rising energy costs¹⁰, the most used business strategy was to immediately and temporarily raise the price of goods and services - 71% of respondents saw no other option. Due to uncertainty, 37% of respondents had to change their long-term strategies and postpone investments, delaying business expansion or growth. One in every five SMEs also reduced production and/or commercial business operations while diversifying their investments (22% and 21%, respectively). If the current situation continues, 8% of SMEs said they would have to temporarily halt operations or close completely.

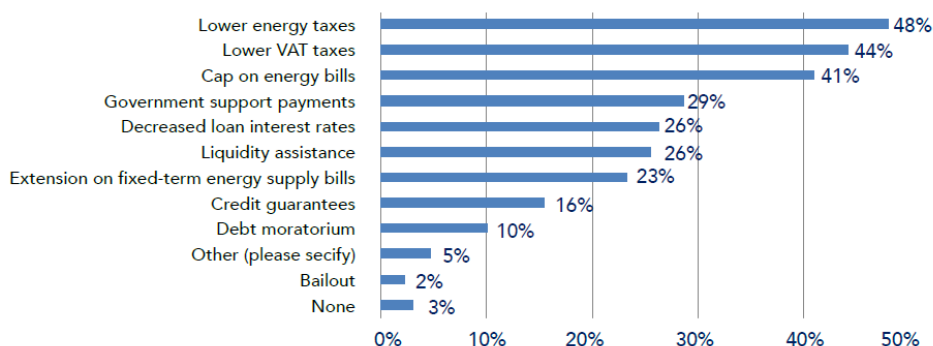
In contrast to 2022, when achieving expansion and concentrating on business consolidation were SMEs' top priorities, in 2023, two out of every three SMEs will place a high premium on cost cutting. Additionally, members concentrate on combating inflation (33%), rising energy prices (30%), increasing employee compensation because of inflation (25%), and addressing labour shortages (23%).

The energy crisis¹¹ has a clear impact on which business choices SMEs are prioritizing. However, there are still almost one third of SMEs (31%) who have indicated a focus on business growth/expansion.

SMEs have given the following responses when asked what form of assistance would be more beneficial to their operations:

¹⁰ ENERGY CRISIS IMPACT FOR SMEs, Business at OECD (BIAC) SME Survey, December 2022, <https://25159535.fs1.hubspotusercontent-eu1.net/hubfs/25159535/website/documents/pdf/SMEs/2022-12-FIN%20Business%20at%20OECD%20SME%20Survey%20-%20Energy%20crisis%20impact%20for%20SMEs.pdf>, p. 6.

¹¹ ENERGY CRISIS IMPACT FOR SMEs, Business at OECD (BIAC) SME Survey, December 2022, <https://25159535.fs1.hubspotusercontent-eu1.net/hubfs/25159535/website/documents/pdf/SMEs/2022-12-FIN%20Business%20at%20OECD%20SME%20Survey%20-%20Energy%20crisis%20impact%20for%20SMEs.pdf>, p. 7.

Figure 3. What financial assistance would be useful for SMEs?

Source: Business at OECD (BIAC) SME Survey, December 2022, page 10 "ENERGY CRISIS IMPACT FOR SMEs."

3. The energy crisis and its impact on Romanian SMEs

According to INSR, Romania had the highest average rate of decrease in energy intensity in the EU between 1990 and 2013, at 7.4%, due to the restructuring of industrial activity following the fall of communism in 1989.

If Romania had design-research, construction-assembly, and manufacturing capacities of thermoelectric power plants with power groups of up to 330 MW, nuclear units of 706.5 MW, hydroelectric power plants with power groups of up to 200 MW, stations and power lines with a voltage of up to 400 kV in 1990, today there are only about 10-20% of these capacities and a large number of commercial companies for design-research, construction-assembly, and manufacturing of energy.¹²

The 2020 energy efficiency goal for Romania was 19%, which matched the country's 500 TWh primary energy demand.

Romania used to be a net exporter of energy, but in recent years it has switched to being an importer on the European market.

Distribution operators on the national electricity and natural gas market made investments totaling 10.5 billion lei between 2018 and 2021, according to official statistics published by ANRE in 2021.

The national companies involved have worked together to secure a portion of the liquidity required to carry out the investment and maintenance programmes at optimal parameters for better operation of the electricity networks, ensuring that the quality of services provided to domestic consumers is not compromised.

Energy costs for distribution network operation become unsustainable, jeopardising the smooth operation of current operational activities. Furthermore, the distribution operators' lack of liquidity is felt throughout the industry, as they are forced to postpone or delay payment terms to service and work providers, with the risk of filing requests to open insolvency procedures, and, as the situation worsens, the risk of a wave of bankruptcies in the area of service providers and, eventually, in the area of distribution operators increases.¹³

¹² Idem

¹³ Confederația Patronală Concordia. Dialog pentru Dezvoltare, *Către o soluție pentru criza din piața de energie*, București (octombrie 2022), <http://www.concordia.ro/>, p. 6.

In accordance with the provisions of the Government Emergency Ordinance No. 81/2019, a state aid programme was implemented in Romania for the 2019-2021 period to support businesses in sectors and subsectors exposed to a significant risk of relocation because of the inclusion of the cost of greenhouse gas emissions in the price of electricity.

Alba Aluminiu (aluminium), Hai Extrusion (aluminium), Hoeganaes Corporation Europe (ferrous metals), Monosuisse (fibres), Yarnea (fibres), and Zlatcup (inorganic chemicals) are the SME's that benefited from aid.).

These businesses have a significant role in the development of jobs in Romania¹⁴ and contribute about 6% of the country's yearly GDP. They also make significant payments to the state budget more than 100 million euros each year. (About 200,000 direct and indirect workers).

In the beginning of 2022¹⁵, According to a study done by the National Council of Small and Medium Private Enterprises in Romania (CNIPMMR), 1 in 10 SMEs are considering closing their doors because of the energy crisis. 98% of the 2260 organisations surveyed for the study said they had seen a rise in their electricity costs.

If, in 2021¹⁶, approximately 66% of companies had electricity bills of up to 2,500 lei, their rate would drop to 40%. However, the rate for companies that had to pay more than 30,000 lei for electricity was only 2% last year, and it has now risen to 7% this year.

In an article from 14 November 2022, Radu Dumitrescu¹⁷ says that "Romania has one of the oldest energy infrastructures in Europe, and fugitive emissions of methane have been documented in most of the oil and gas networks investigated at the national level, ... As the second most important gas-extracting country in Europe, Romania should have a proactive role in the European efforts to combat emissions. The need for taking relevant measures to this end is even direr considering the current efforts to increase Romania's gas exploitation in the Black Sea region."

On the other hand, 65% of Romania's population does not depend on the gas resource, given that five million households are using firewood for heating¹⁸, therefore showing higher resilience than other European Union countries.

Furthermore, according to an Energy Policy Group study, Romania will reach approximately 87% of total available capacity of natural gas stored in underground storages this year, exceeding the EU target of 80%.¹⁹. The data²⁰ so far shows a

¹⁴ <https://cursdeguvernare.ro/schema-de-sprijin-pentru-170-de-companii-energointensive-buget-de-15-mld-euro-pentru-perioada-2022-2030.html>

¹⁵ <https://www.zf.ro/companii/impact-criza-energetica-asupra-micilor-antreprenori-1-10-imm-uri-20528611>, Miruna Diaconu, 12.02.2022.

¹⁶ <https://www.zf.ro/companii/impact-criza-energetica-asupra-micilor-antreprenori-1-10-imm-uri-20528611>, Miruna Diaconu, 12.02.2022.

¹⁷ <https://www.romania-insider.com/romania-among-oldest-energy-infrastructure-europe-ngo>, Radu Dumitrescu, 14.11.2022.

¹⁸ <https://spotmedia.ro/stiri/politica/65-la-suta-din-populatia-romaniei-nu-depinde-de-resursa-de-gaz-pretul-va-fi-o-problema>, Magda Gradinaru, 12.10.2022.

¹⁹ https://www.enpg.ro/wp-content/uploads/2022/09/EPG-Policy-Paper_Pregatirea-pentru-iarna_v2.pdf, Energy Policy Group (2022), Cât de pregătită este România pentru aprovizionarea cu gaze naturale în iarna 2022-2023, accessed on 7.11.2022.

²⁰ <https://cursdeguvernare.ro/desenul-politica-energetica-a-romaniei-in-ultimul-deceniu-scaderea-productiei-la-cresterea-consumului-si-importurile.html>, accessed on 7th of November 2022.

reduction in primary energy production of 18.1% in 2020 compared to 2007, and a reduction in electricity production of 9% over the same period. Since 2019, Romania has been a net importer of electricity. According to Bruegel think-tank data, Romania has set aside EUR 6.9 billion from September 2021 to September 2022 to help households and businesses weather the energy crisis. The figure represents 2.9% of GDP and is the seventh highest in the EU²¹.

Following the EU's decision to reduce the demand for natural gas by 15% for the period August 2022-March 2023, data for Romania show that in the first 9 months of this year²², gas consumption was 11% lower as compared to the average consumption for the period 2019-2021. The largest part of the decrease comes from the high reduction of consumption in industry (63%)²³, which is the largest decrease in the EU.

Gas consumption decreased²⁴ more than the average for the EU in half of the member states, with the highest drops occurring in Finland (-53%), Latvia (-30%), Lithuania (-25%), Estonia, Denmark, Sweden (- 20%), and the Netherlands (-19%). Germany, where gas usage was 11% lower, and Italy and France both lowered their demand, albeit only little (2% and 1%, respectively). The demand for natural gas increased in four Member States at the opposite pole: Croatia (+8%), Slovakia (+4%), Greece (+3%), and Spain (+2%).

Until recently, there was no policy for supporting industrial consumers. However, in September, the EU agreed on providing aid schemes²⁵ for large energy-consuming companies and SMEs operating in certain sectors of activity. The government²⁶ approved an emergency ordinance in October 2022, by which large energy-consuming companies and SMEs operating in certain sectors of activity will be able to benefit from state aid worth up to 1.5 billion euros during 2022 -2030, 150 million euros annually.

State aid is granted in the form of non-refundable financial subsidies, with an estimated 170 economic operators benefiting.

Moreover, SMEs²⁷ will be compensated for 85% of their average monthly electricity consumption. Furthermore, Romania supports a decoupling of the gas price from the energy price in EU negotiations. This could help to alleviate the problems the industry is currently experiencing.

SME associations²⁸ praised the already-agreed-upon measures, such as price ceilings for intramarginal electricity producers and solidarity payments from fossil fuel

²¹ Sgaravatti, G., S. Tagliapietra, G. Zachmann (2021) 'National policies to shield consumers from rising energy prices', Bruegel Datasets, first published 4 November 2021, available at <https://www.bruegel.org/dataset/national-policies-shield-consumers-rising-energy-prices>, accessed on 7 november 2022.

²² <https://cursdeguvernare.ro/industria-din-romania-si-a-redus-consumul-de-gaze-la-o-treime-in-ue-cererea-totala-de-gaze-a-scazut-cu-doar-7.html>, accessed on 7th of November 2022.

²³ *Romania social briefing: Energy crisis and Romania's response*, posted on October 26, 2022, Weekly Briefing, Vol. 55. No. 3 (RO) October 2022, accessed on 7th of November 2022.

²⁴ <https://cursdeguvernare.ro/industria-din-romania-si-a-redus-consumul-de-gaze-la-o-treime-in-ue-cererea-totala-de-gaze-a-scazut-cu-doar-7.html>

²⁵ <https://cursdeguvernare.ro/schema-de-sprijin-pentru-170-de-companii-energointensive-buget-de-15-mld-euro-pentru-perioada-2022-2030.html>, accessed on 7th November 2022.

²⁶ <https://cursdeguvernare.ro/schema-de-sprijin-pentru-170-de-companii-energointensive-buget-de-15-mld-euro-pentru-perioada-2022-2030.html>, accessed on 7th November 2022.

²⁷ *Romania social briefing: Energy crisis and Romania's response*, posted on October 26, 2022, Weekly Briefing, Vol. 55. No. 3 (RO) October 2022, accessed on 7th of November 2022.

²⁸ <https://www.smeunited.eu/news/energy-crisis-risks-pushing-smes-into-recession>

firms, as well as the potential for price reductions for supplying energy to SMEs. They also emphasised once more the urgent need to strengthen and broaden the State aid crisis framework. To prevent needless business failures, the emphasis should now be on the quick deployment of SME support initiatives. If additional emergency energy market intervention can be made in a way that provides supply security without unanticipated increases in demand, SMEs are willing to consider it.

As the latest EU SME Barometer proves²⁹, the current crisis and the high level of uncertainty about future developments are preventing SMEs from investing. Even if the energy crisis spurs investments in energy efficiency and renewable energy, the overall business climate has an impact on such investments.

After the Russian invasion of Ukraine³⁰ in late February, geopolitical unrest and a significant increase in energy prices ensued. The ensuing inflation continued supply chain disruptions, and the effects of the sanctions have compounded the economic uncertainty, lowered the business confidence of European SME's and raised the possibility of a recession. The oppressive economic environment has particularly afflicted Eastern European nations with tighter ties to Russia, such as Bulgaria, the Czech Republic, Hungary, Poland, and Romania.

Mr. Gerhard Huemer³¹, in his article *"Impact of energy crisis on SME investment in sustainability"* from 11th November 2022 remarks there are some barriers blocking SMEs investments:

- SMEs complain about the lack of regulatory clarity, permitting procedures are often too complex, expensive, and time-consuming.
- a lack of skilled workforces and shortages of necessary materials due to high demand or supply chain disruptions
- Financial instruments alone are not sufficient, SMEs need also an advisory crutch to depend on.

4. Conclusions

Helping SMEs minimise their energy usage over the short and long terms is one of the most efficient methods to assist them mitigate energy prices and supply risks (covering gas, electricity, and oil). These include involving employees and the workforce, who have a unique perspective of how the business functions and where it may be more energy efficient, as well as analysing their business's energy use through energy audits and energy monitoring and management technologies.

Other cost-cutting options include moving forward any plans to invest in new energy efficiency measures and giving high-efficiency technologies preference when buying new or replacement equipment. By putting in place sound maintenance and housekeeping practises, SMEs could also save some money right away on energy costs.

Since the beginning of the energy crisis, the European Commission has proposed several initiatives aimed at assisting not only households but also small businesses.

²⁹ <https://www.smeunited.eu/news/impact-of-energy-crisis-on-sme-investment-in-sustainability>

³⁰ <https://www.consilium.europa.eu/en/policies/eu-response-ukraine-invasion/impact-of-russia-s-invasion-of-ukraine-on-the-markets-eu-response/>

³¹ <https://www.smeunited.eu/news/impact-of-energy-crisis-on-sme-investment-in-sustainability>

More recently, an emergency tool was agreed upon, which states that EU countries may temporarily set a price for the supply of electricity to SMEs to help those who are struggling with high energy prices. Apart from assisting them in reducing their energy consumption, which is one of the most effective ways to assist SMEs in mitigating energy costs and supply risks, the EU operates several SMEs-focused support schemes, including financing, innovation, and advice services.

These plans increasingly prioritise the transition to sustainable energy. Numerous projects that aid small firms in gaining access to capital and enhancing their operating environments are funded by COSME, the programme for the Competitiveness of Enterprises and Small and Medium-sized Enterprises. Despite the existing institutions, governments can take the following actions to help SMEs even more:

- support energy audits and advice services
- mandate the implementation of audit recommendations
- support the implementation of an energy management system
- strengthen the energy services market
- provide financial guarantees
- communicate the numerous benefits of energy transition measures
- support the process of transitioning away from fossil fuels
- support employee-led initiatives and behavioural campaigns
- facilitate networking
- ensure easy access to relevant information.

In 2022, there were approximately 536 thousand SMEs reported in Romania. Most SMEs, with approximately 483 thousand as of 2022, are micro-sized enterprises employing up to nine people. According to statista.com, SMEs in Romania contributed approximately 57 billion euros to the economy as of 2022. This year, micro-sized businesses contributed the most to the Romanian economy, totalling approximately 22.31 billion euros.

According to the World Bank's projections, Romania's economy will grow by 2.6% in 2023, which is less than the organization's previous estimate of 3.7% for the year.

By maximising the potential of hydrocarbons and offshore renewable energy sources from the Mediterranean, it is hoped that Romania will become a regional supplier of energy security by the year 2030. Additionally, the development of digital technologies, the diversification of sources and supply routes, the expansion and modernization of storage capacities that are compatible with the use of new gases and hydrogen, as well as the development of interconnection capabilities with neighbouring states, will all help Romania achieve its goal of becoming a regional energy supplier.

Unfortunately, as we have all learned, nothing is permanent, so the future will always be uncertain.

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