

Marko Miljković<sup>1</sup>  
Dejan Molnar<sup>2</sup>  
Svetozar Tanasković<sup>3</sup>

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## Energy prices and their direct effect on inflation in Serbia during 2016-2025

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**Abstract:** *Over the past fifteen years, inflation in Serbia has generally remained low and within the NBS target range, except during the period from 2021 to 2023. The aim of this paper is to assess the direct contribution of energy prices to inflation in Serbia. Energy accounts for approximately 16% of the consumer basket, and fluctuations in energy prices influence non-core inflation, which includes price growth that is prone to significant short-term oscillations due to supply shocks. The paper examines the price trends of electricity, gas, solid fuels, heat energy, and fuel for passenger vehicles, as well as the effects of changes in these prices on overall inflation in Serbia from 2016 to 2025. Throughout most of this period, the direct contribution of energy prices to inflation was less than one percentage point a year, representing between 15% and 30% of the total contribution of all components of the consumer basket. The largest impact on inflation was due to rising electricity prices, followed by increases in fuel prices for passenger vehicles and solid fuels.*

**Keywords:** *inflation, consumer prices, energy prices, electricity, Serbia.*

### Cene energije i njihov direktan efekat na inflaciju u Srbiji u periodu 2016-2025

**Apstrakt:** *Tokom poslednjih petnaest godina inflacija u Srbiji je uglavnom bila niska i u okvirima zadatog cilja NBS, sa izuzetkom perioda 2021-2023. Cilj ovog rada je da proceni direktan doprinos cena energije inflaciji u Srbiji. Energija čini*

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<sup>1</sup> University of Belgrade – Faculty of Transport and Traffic Engineering, m.miljkovic@sf.bg.ac.rs.

<sup>2</sup> University of Belgrade – Faculty of Economics and Business.

<sup>3</sup> University of Belgrade – Faculty of Economics and Business.

*oko 16% potrošačke korpe u Srbiji, a kretanje cena energije utiče na nebaznu inflaciju koja sadrži rast cena koje su sklone velikim kratkoročnim oscilacijama usled šokova ponude. U radu je prikazano kretanje cena električne energije, gasa, čvrstih goriva, grejanja i goriva za putnička vozila, kao i efekti promene navedenih cena na inflaciju u Srbiji u periodu 2016-2025. Direktni doprinos cena energije rastu opšteg nivoa cena u Srbiji u većem delu posmatranog perioda iznosio je manje od jednog procentnog poena godišnje, odnosno između 15 i 30 procenata ukupnog doprinosa svih elemenata potrošačke korpe. Pri tome, najveći doprinos inflaciji dalo je povećanje cena električne energije, a zatim povećanje cena goriva za putnička vozila i čvrstih goriva.*

**Ključne reči:** *inflacija, potrošačke cene, cene energije, električna energija, Srbija.*

## 1. Introduction

Inflation receives significant attention in both theoretical and empirical economic research, especially due to the social costs it entails, such as the erosion of money's value, loss of trust in currency, wealth transfers impacting lenders and individuals with fixed and lower income, or reduced investments amid rising uncertainty. Recent research also indicates that inflation is strongly linked to financial crises. Albertazzi et al. (2025), in an empirical study of a sample of 18 developed economies over an extended period of 151 years, indicate that a rise in inflation of just one percentage point doubles the likelihood of a financial crisis in the country.

After the breakup of the former Yugoslavia in the 1990s, Serbia experienced a turbulent period marked by a variety of economic problems, including very high inflation, culminating in one of the largest hyperinflations in history by the end of 1993. During the first decade of the 21<sup>st</sup> century, while transitional reforms were underway, inflation was significantly lower than in the 1990s but remained generally high, often reaching double digits. Finally, in the second decade of this century, inflation was stabilized at a low level within the target ranges set by the National Bank of Serbia (NBS), with some years even falling below 2%. However, following this prolonged period of low inflation and the recent coronavirus pandemic, mainly due to the influence of global factors, inflation rose again to double digits. Nonetheless, the year 2025 ended with inflation aligned with the NBS target range, precisely at 2.7%.

Considering this historical experience with inflation, each episode of rising prices in Serbia tends to foster strong inflationary expectations among the population, which in turn become an important factor driving inflation.

Therefore, maintaining high credibility of the central bank is crucial for controlling inflation, as it helps anchor inflation expectations around the target, preventing even temporary inflation shocks from becoming persistent. According to research by Martin (2020), inflation expectations in Serbia are well anchored for all economic actors except households. Another recent econometric study on global and domestic factors influencing inflation, conducted by Ivković et al. (2022), highlights the importance of anchored inflation expectations for maintaining stable domestic inflation. Energy prices could play a significant role in shaping inflation expectations, as rising energy costs, particularly in the case of electricity, may lead households, especially those with low income, to develop stronger inflation expectations under these circumstances (Wehrhöfer, 2023).

Serbian inflation in recent years has been characterized by a relatively new phenomenon called cheapflation. Dživdžanović (2025), analyzing price data in Serbia from 2022 to 2024, concluded that prices of cheaper brands increased by an average of 4.5 percentage points faster than those of more expensive brands of the same products. This phenomenon indicates, on one hand, the redistributive effects of inflation, and on the other hand, helps explain why inflationary expectations are strongest among the poorer segments of the population, who are most affected by this type of price increase.

The aim of this paper is to assess the direct contribution of energy prices to inflation in Serbia over the past ten years. Various authors have examined the impact of energy prices on inflation in recent research. Praščević & Ješić (2022) emphasize that rising energy prices, primarily resulting from supply-side shocks, have historically caused cyclical downturns in economic activity worldwide. As a result, considerable attention has been paid to monitoring oil price movements, given its status as the most important energy resource. Today, in addition to oil, natural gas and electricity are also vital, considering their significant roles in industrial production and household consumption.

According to the findings of Minasyan et al. (2023), global energy prices are a significant factor influencing inflation across all Western Balkan countries, while relatively lower energy inflation could be linked to a greater reliance on domestic energy sources. Mehmedi (2024) employed an empirical study focusing also on countries of the Western Balkans over a twenty-year period from 2002 to 2022. The study concluded that rising energy prices have a positive impact on inflation, with this relationship being more notable in countries that are more dependent on imported energy.

Miletić et al. (2023) found that global oil prices have a significant impact on inflation in European countries, including Serbia, both in the short and long run. The supply-side inflation in the USA in 2021 was also driven by rising

commodity costs, including oil (Hajdini et al., 2025). Alvarez & Kroen (2025) determined that the transmission of energy shock effects on the supply side to inflation remains stable over time and occurs, among other mechanisms, through energy dependence. Mladenović et al. (2024), examining Serbia, concluded that changes in energy prices significantly influence inflation, with the impact of global energy prices being stronger when prices increase than when they decrease, as well as at higher inflation rates.

Analyzing energy prices and subsidies in the Western Balkans, the OECD (2025) identified that energy prices in Serbia are low. Consequential subsidies reduce efficiency in the energy sector and place a heavy burden on public finances. In that context, Batas Bjelić & Molnar (2021) previously established that the total production cost (direct plus externalities) of electricity from lignite is very high, indicating significant inefficiencies in the production process.

Bearing in mind the literature on the impact of energy prices on inflation, this paper focuses on calculating the direct contribution of all individual energy-related items, such as electricity, gas, solid fuels, heat energy, and fuels and lubricants for personal transport equipment, to inflation in Serbia over the ten-year period from 2016 to 2025. The methodology and data sources are detailed in the second chapter. The third chapter presents the energy price trends in Serbia during the observed period, along with the calculation of their direct contribution to inflation. The fourth chapter summarizes the key conclusions derived from the analysis.

## **2. Research methodology**

To understand the extent of inflation in Serbia, the annual inflation rates, measured by the consumer price index (CPI), will first be presented. The CPI reflects the average price change of a fixed basket of goods and services that households purchase to meet their needs, comparing the current year to the previous year. The consumer basket is defined according to the COICOP – Classification of Individual Consumption According to Purpose (United Nations, 2018) and includes the following categories:

1. Food and non-alcoholic beverages,
2. Alcoholic beverages, tobacco and narcotics,
3. Clothing and footwear,
4. Housing, water, electricity, gas and other fuels,
5. Furnishings, household equipment and routine household maintenance,
6. Health,
7. Transport,

8. Communication,
9. Recreation and culture,
10. Education,
11. Restaurants and hotels, and
12. Miscellaneous goods and services.

Additionally, data on year-on-year and monthly overall inflation rates will be displayed, along with core and non-core inflation rates. Year-on-year indices measure the change in prices in a given month compared to the same month of the previous year, while monthly indices reflect the change in prices from one month to the next.

Core inflation reflects the long-term tendency of general price growth because it does not include the growth of any price category subject to large short-term oscillations due to supply shocks. As such, it indicates the intensity of persistent price changes. In the narrowest sense, core inflation excludes increases in the prices of energy, food and beverages (both non-alcoholic and alcoholic), and tobacco. Therefore, it encompasses price growth of non-energy industrial goods (under COICOP), as well as the price growth of services.

On the other hand, non-core inflation reflects the short-term tendency of general price growth because it includes the growth of all price categories prone to large short-term oscillations due to supply shocks. Consequently, it indicates the intensity of temporary price changes. In the broadest sense, non-core inflation includes increases in the prices of energy, food products and beverages (both non-alcoholic and alcoholic), and tobacco (Economics Institute & Chamber of Commerce and Industry of Serbia, 2025).

The focus then shifts to changes in energy prices. Within the COICOP classification, energy-related items include:

- Electricity (code 4.5.1),
- Gas (code 4.5.2),
- Solid fuels (code 4.5.4),
- Heat energy (code 4.5.5), and
- Fuels and lubricants for personal transport equipment (code 7.2.2).

Accordingly, the monthly price changes of electricity, gas, solid fuels, heat energy, and fuels for passenger cars will be presented and analyzed to identify trends and the underlying dynamics of energy prices.

Finally, the direct contribution of each energy-related item to overall inflation will be calculated using the following approach:

$$CE_i = \frac{E_i w_i}{10,000} \quad (1)$$

where  $CE_i$  refers to the direct contribution of the  $i$ -th energy-related item to inflation,  $E_i$  is the annual price change of the  $i$ -th energy-related item, and  $w_i$  is the weight of the  $i$ -th energy-related item. The product of  $E_i$  and  $w_i$  is divided by 10,000, which represents the total sum of weights for all individual items of the entire consumer basket.

Table 1 presents the weights of all energy-related items used in the calculation of overall inflation in Serbia from 2016 to 2025. Energy accounts for approximately 15.68% of the consumer basket, with minor fluctuations throughout the observed period. The largest shares within the energy-related items in the consumer basket are attributed to fuels for passenger cars and electricity.

*Table 1. Weights ( $w_i$ ) of energy-related items in the consumer basket used for calculation of inflation in Serbia, 2016-2025*

Year	Energy-related items					Total energy
	Electricity	Gas	Solid fuels	Heat energy	Fuels for passenger vehicles	
2016	492	57	269	155	584	1,557
2017	499	53	262	157	592	1,563
2018	507	46	253	160	593	1,559
2019	509	40	240	156	605	1,550
2020	499	39	241	160	610	1,549
2021	503	37	244	158	603	1,545
2022	505	35	240	160	611	1,551
2023	507	34	242	159	615	1,557
2024	512	36	241	157	622	1,568
2025	513	37	239	156	623	1,568

*Source: Statistical Office of the Republic of Serbia (2025)*

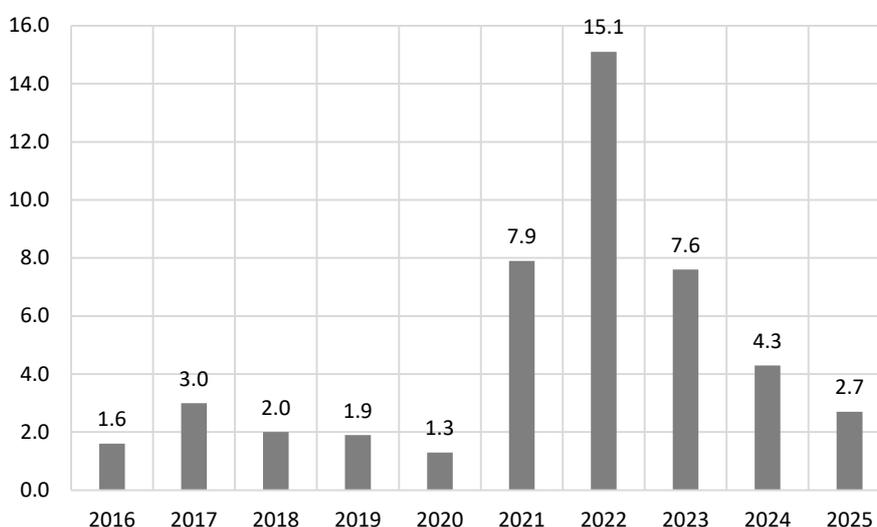
The total contribution of energy prices to inflation ( $CE_{total}$ ) is calculated as the sum of the direct contributions of all five individual energy-related items (electricity, gas, solid fuels, heat energy and fuels for passenger cars):

$$CE_{total} = \sum_{i=1}^5 CE_i = \sum_{i=1}^5 \frac{E_i w_i}{10,000} \quad (2)$$

### 3. Results and discussion

Over the ten-year period from 2016 to 2025, inflation in Serbia remained low until 2020, staying below 3%. In 2021, inflation experienced a more significant increase, driven by demand-side pressures during the economic recovery following the recession caused by the pandemic, which was expected, given the amount of money injected into the economy through various support programs (Molnar, 2022). The year 2022 saw additional price growth, influenced by global trends such as rising energy prices and agricultural prices, primarily due to supply-side factors. In 2023, inflation stayed above the upper limit of the NBS target of 4.5%, but efforts were made to bring it within the target range by the end of 2024. By 2025, Serbia concluded the year with an inflation rate of 2.7%. The movement of the annual inflation rate during this period is illustrated in Figure 1.

Figure 1. Annual inflation rate in Serbia, 2016-2025, in %

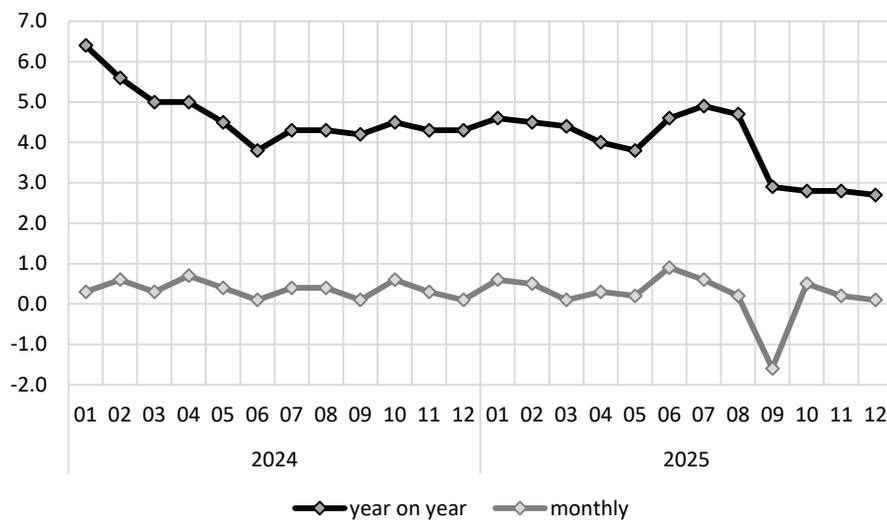


Source: Statistical Office of the Republic of Serbia (2025)

Figure 2 illustrates the year-on-year and monthly inflation rates during the last two years of the observed period. Year-on-year inflation entered the limits of the NBS target in May 2024, and by May 2025 it was reduced to 3.8%. However, it began to increase again under the influence of a significant rise in food prices, particularly unprocessed foods, fruits, and vegetables, as well as

global trends such as higher oil prices resulting from geopolitical events. This upward trend was abruptly halted in September when a decree was enacted to limit margins in wholesale and retail trade and to establish special trading conditions for certain types of consumer goods (Government of the Republic of Serbia, 2025). As a result, food prices, in particular, decreased. Currently, inflation remains within the NBS target.

Figure 2. Year-on year and monthly inflation rates in Serbia, 2024-2025, in %



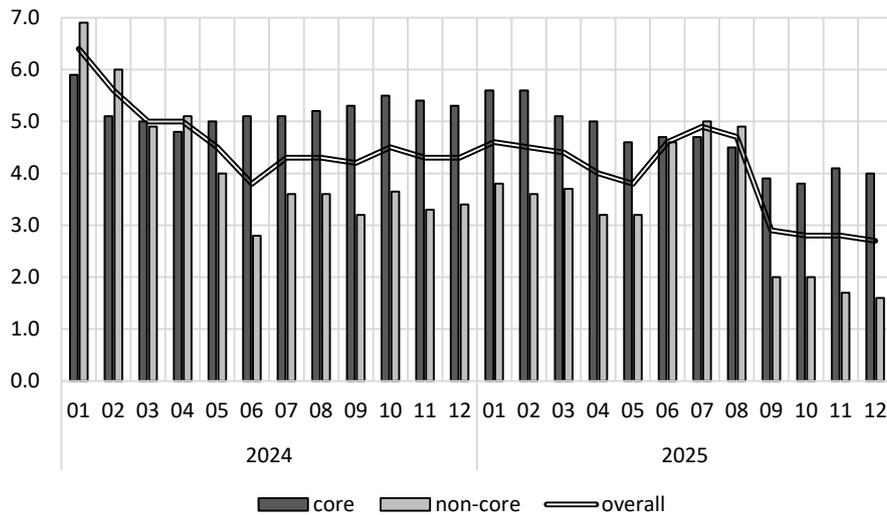
Source: Statistical Office of the Republic of Serbia (2025)

Looking at the last two years of the observed period, 2024 and 2025, until June 2025, core inflation was noticeably higher than non-core inflation, hovering around 5%, which is above the NBS target for overall inflation. This difference temporarily changed in July and August, but following government intervention in September, which strongly impacted the non-core segment, core inflation was once again prominent. The year ended with a core inflation rate of 4%, indicating that long-term inflationary pressures in the economy are still present, albeit at a lower intensity than in previous years. Meanwhile, non-core inflation amounted to only 1.6%. The movement of the core and non-core inflation rates is shown in Figure 3.

Figure 4 shows the monthly growth of electricity prices in Serbia compared to the previous month. According to data from the Statistical Office of the Republic of Serbia, the price of electricity for households increased several times

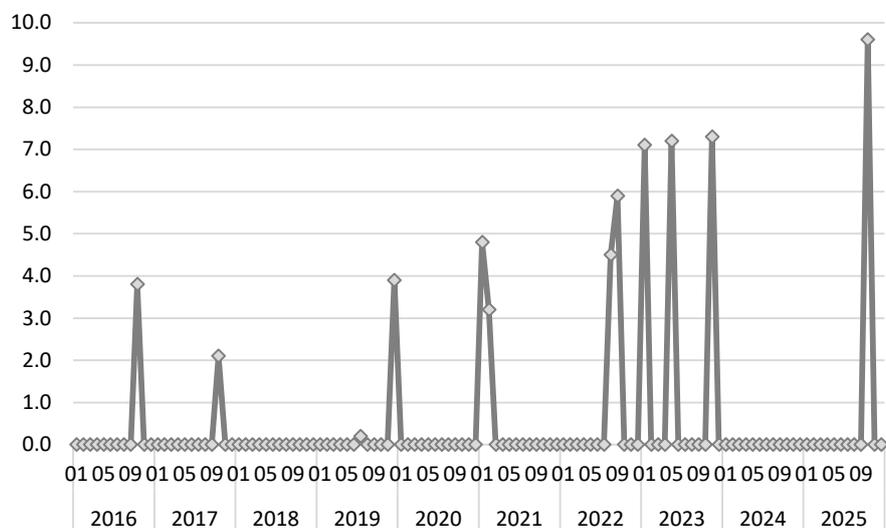
between 2016 and 2025. The largest increase was recorded in 2023, with a cumulative rise of 23.2%, followed by 2025, with a 9.6% increase. Although the price of electricity in Serbia remains among the lowest in Europe (Nikolić & Filipović, 2020), these individual increases over the observed ten-year period resulted in an overall increase of 78.3% in electricity prices in Serbia, i.e. approximately 6% per year. Such price increases could significantly impact household electricity consumption and, to some extent, accelerate progress toward energy efficiency (Krstić et al., 2019).

Figure 3. Core and non-core year-on-year inflation in Serbia, 2024-2025, in %



Source: Statistical Office of the Republic of Serbia (2025)

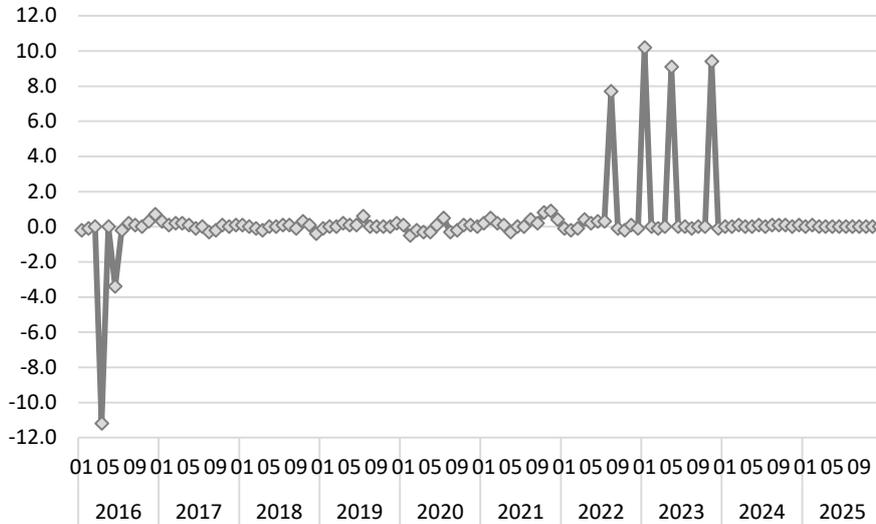
Figure 4. Monthly changes in electricity prices in Serbia, 2016-2025, in %



Source: Statistical Office of the Republic of Serbia (2025)

Figure 5 shows the monthly growth of gas prices in Serbia, compared to the previous month. Significant price changes are observed in 2016, 2022 and 2023. Namely, prices fell in 2016 due to a significant drop in energy prices on the world market, which was reflected in the formula by which the price of gas in Serbia is calculated. On the other hand, gas prices increased in 2022 and 2023 as a result of price changes on the world market, bearing in mind the significant price surge that occurred after the crisis in relations between most European countries and Russia. In these years, regardless of the existence of a gas arrangement with Russia, larger quantities were procured at market prices that exceeded the terms of the agreement (Srbijagas, 2023), and this was reflected in the gas prices for households. In the period between 2016 and 2022, price changes were in the range of plus/minus 1%, and during 2024 and 2025, there were no price changes.

Figure 5. Monthly changes in gas prices in Serbia, 2016-2025, in %

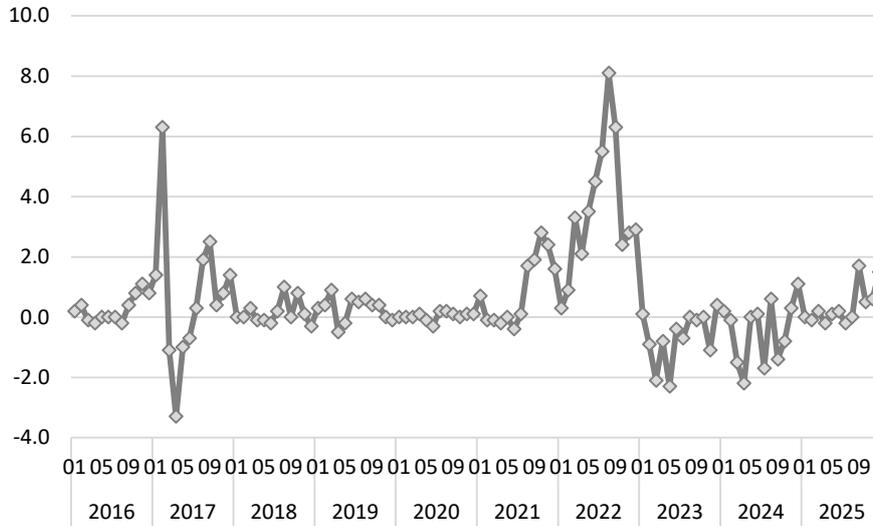


Source: Statistical Office of the Republic of Serbia (2025)

As a result of all the aforementioned developments, the price of gas has cumulatively increased by 28.6% in the observed ten-year period, i.e. approximately 2.5% per year, which is significantly lower than the increase in electricity prices.

The monthly growth of solid fuel prices compared to the previous month is presented in Figure 6. In the solid fuels price structure, wood fuel accounts for approximately three-quarters, while coal makes up about one-quarter. Over the ten-year observation period, notable increases occurred during 2022 and 2023. These spikes were driven by heightened demand for these energy sources following the recession caused by the pandemic and disruptions in Europe's relations with Russia, as well as issues related to domestic coal production. At one point, the government had to completely ban the export of wood fuel to address shortages caused by increased exports to Europe (Government of the Republic of Serbia, 2022).

Figure 6. Monthly changes in solid fuel prices in Serbia, 2016-2025, in %

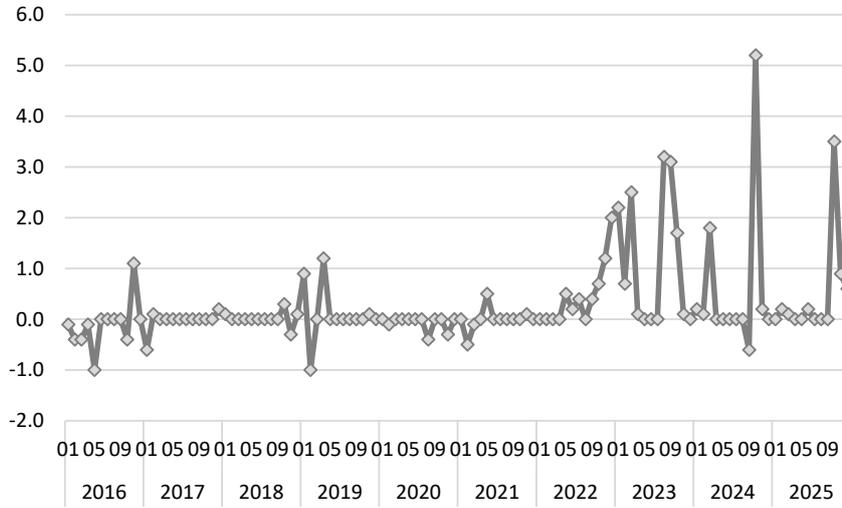


Source: Statistical Office of the Republic of Serbia (2025)

Despite these challenges, the market for solid fuels has stabilized over the past two years. Throughout the entire analyzed period, prices have cumulatively increased by 81.9%, i.e. approximately 6.2% per year, representing the largest growth among all energy-related items.

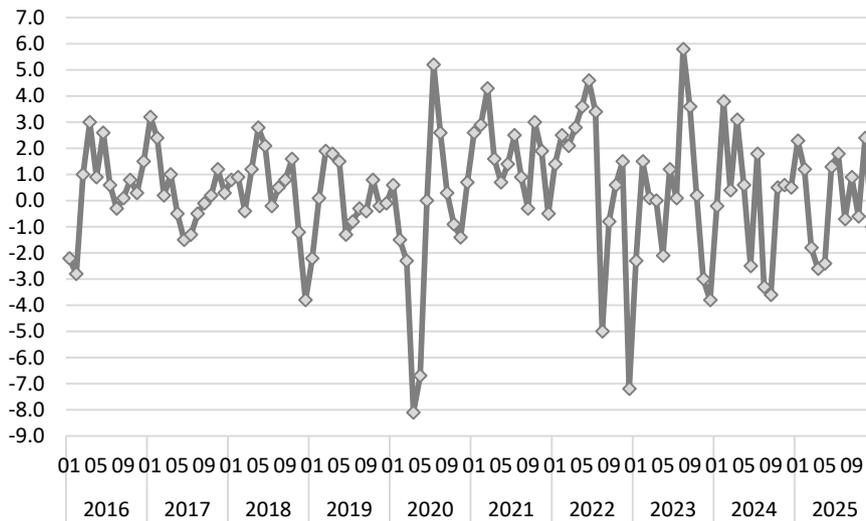
During the observed period until 2023, the price of heat energy remained stable for a long time, primarily due to social factors, with no significant fluctuations. However, starting in 2023, a wave of price increases occurred, driven by higher energy procurement costs for heating plants. Over the ten-year span, the total price has increased cumulatively by 34.9%, i.e. an average of about 3% per year (Figure 7).

Figure 7. Monthly changes in heat energy prices in Serbia, 2016-2025, in %



Source: Statistical Office of the Republic of Serbia (2025)

Figure 8. Monthly changes in fuel prices for passenger vehicles in Serbia, 2016-2025, in %

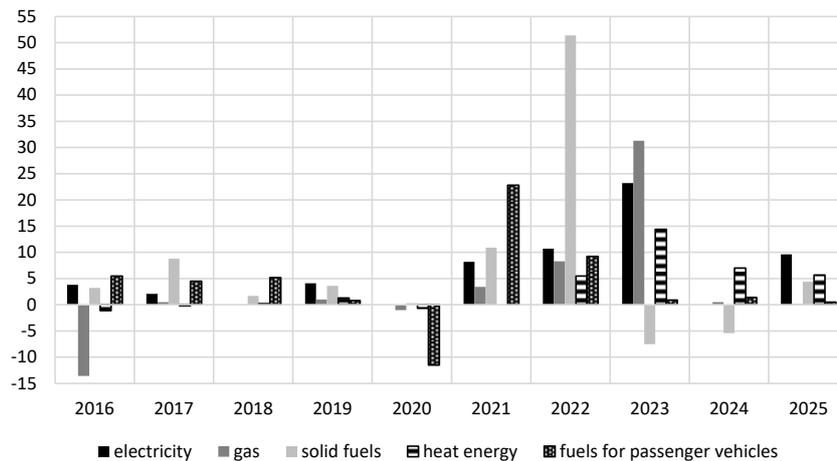


Source: Statistical Office of the Republic of Serbia (2025)

Among all energy-related items, the prices of fuels for passenger cars exhibited the most fluctuations over the ten-year period, as clearly illustrated in Figure 8, which displays the movement of monthly price changes. In Serbia, fuel prices over the past decade have ranged from historic lows during the pandemic to record highs driven by the global energy crisis. During the period of reduced global demand, prices fell to multi-year lows, with diesel costing approximately RSD 130 per liter and petrol less than RSD 125 in April and May 2020. Following the reopening of economies and the onset of the war in Ukraine, prices surged to record levels, with diesel reaching RSD 222 per liter in October 2022, and petrol exceeding RSD 200. Subsequently, the government implemented regulations to limit price fluctuations, causing diesel prices to mostly range between RSD 180 and 210, and petrol between RSD 170 and 195. By the end of 2025, prices showed slight declines or stagnation (Global Petrol Prices, 2025). Over the entire ten-year period, these fuel prices increased cumulatively by 42.7%, i.e. approximately 3.6% per year.

Figure 9 displays the annual variations in prices of all energy-related items over each year. It is evident that during the first five years of the observed period, from 2016 to 2020, there were no significant changes. Subsequently, the years 2021, 2022, and 2023 are characterized by substantial price increases in nearly all categories, ranging from about 10% per year to as much as 50% in certain categories in some years. The last two years of the analyzed period are marked by stabilization and moderate price growth of up to 10%.

Figure 9. Annual variations in energy prices in Serbia, 2016-2025, in %



Source: Statistical Office of the Republic of Serbia (2025)

Table 2 presents the calculation of the direct contribution of each individual energy-related item to inflation during the observed period from 2016 to 2025. For each year, the table shows the weights (out of a maximum of 10,000), the percentage change in prices, and, based on these data, the contribution to inflation was calculated using equation (1) introduced in the methodology chapter. The total contribution of energy prices to inflation was determined according to equation (2), also outlined in the methodology, as the sum of the contributions from all individual energy-related items.

*Table 2. The contribution of energy prices to inflation in Serbia, 2016-2025*

Year	Item	Calculation of contribution to inflation					Total (p.p.)
		Electricity	Gas	Solid fuels	Heat energy	Fuels for passenger vehicles	
2016	Weight (of 10,000)	492	57	269	155	584	<b>0.50</b>
	Price change (%)	3.8	-13.6	3.2	-1.1	5.5	
	Contribution in p.p.	0.19	-0.08	0.09	-0.02	0.32	
2017	Weight (of 10,000)	499	53	262	157	592	<b>0.60</b>
	Price change (%)	2.1	0.5	8.8	-0.2	4.5	
	Contribution in p.p.	0.10	0.00	0.23	0.00	0.27	
2018	Weight (of 10,000)	507	46	253	160	593	<b>0.35</b>
	Price change (%)	0.0	-0.1	1.7	0.2	5.2	
	Contribution in p.p.	0.00	0.00	0.04	0.00	0.31	
2019	Weight (of 10,000)	509	40	240	156	605	<b>0.37</b>
	Price change (%)	4.1	1.0	3.6	1.3	0.8	
	Contribution in p.p.	0.21	0.00	0.09	0.02	0.05	
2020	Weight (of 10,000)	499	39	241	160	610	<b>-0.71</b>
	Price change (%)	0.0	-1.0	0.3	-0.7	-11.5	
	Contribution in p.p.	0.00	0.00	0.01	-0.01	-0.70	
2021	Weight (of 10,000)	503	37	244	158	603	<b>2.07</b>
	Price change (%)	8.2	3.4	10.9	0.0	22.8	
	Contribution in p.p.	0.41	0.01	0.27	0.00	1.37	
2022	Weight (of 10,000)	505	35	240	160	611	<b>2.45</b>
	Price change (%)	10.7	8.3	51.4	5.5	9.2	
	Contribution in p.p.	0.54	0.03	1.23	0.09	0.56	
2023	Weight (of 10,000)	507	34	242	159	615	<b>1.39</b>
	Price change (%)	23.2	31.3	-7.5	14.4	0.9	
	Contribution in p.p.	1.18	0.11	-0.18	0.23	0.06	
2024	Weight (of 10,000)	512	36	241	157	622	<b>0.07</b>
	Price change (%)	0.0	0.5	-5.4	7	1.4	
	Contribution in p.p.	0.00	0.00	-0.13	0.11	0.09	
2025	Weight (of 10,000)	513	37	239	156	623	<b>0.72</b>
	Price change (%)	9.6	0.1	4.4	5.7	0.5	
	Contribution in p.p.	0.49	0.00	0.11	0.09	0.03	

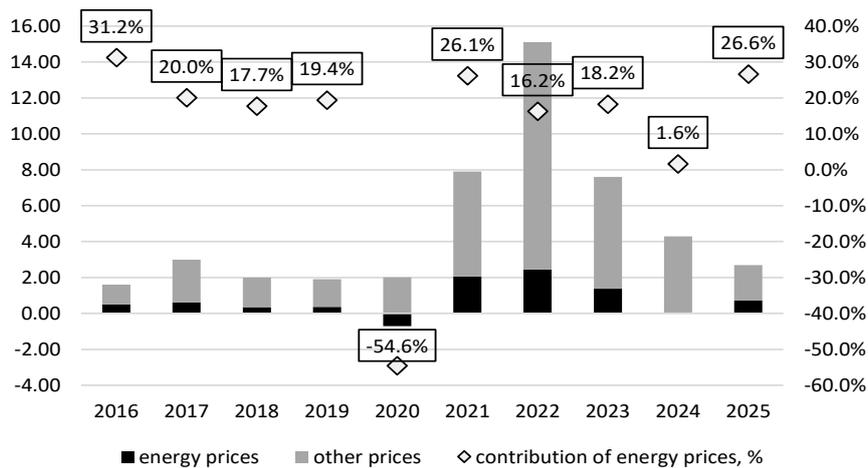
Source: Authors' calculation based on data from Statistical Office of the Republic of Serbia (2025)

Throughout the observed years, the contribution of energy prices to inflation was positive, except in 2020, the year of the most severe pandemic impact, when it was negative, amounting to -0.71 percentage points. The largest contributions occurred during the period from 2021 to 2023, exceeding 1 percentage point per year, with a peak in 2022 at 2.45 percentage points. In the other years, the contribution was less than 1 percentage point annually.

Over the entire ten-year observation period, the changes in prices of individual energy-related items contributed differently to the total contribution of energy prices to inflation. The most significant contributions came from electricity prices (approximately 40%), followed by fuel for passenger vehicles (around 30%), and solid fuels (about 20%).

Figure 10 displays the annual inflation rate in percentage, represented by columns composed of two components: the contribution of energy prices (black) and the contribution of prices of other products and services (gray), measured in percentage points (left axis). Additionally, the contribution of energy prices to inflation is shown as a percentage (right axis). It is observed that, in most years, the contribution of energy prices to inflation ranged between 15% and 30%. An exception occurred in 2020, when energy prices had a significant negative impact of -54.6%, and in 2024, when the impact was minimal at just 1.6%.

Figure 10. Structure of overall annual inflation by contributions of energy and other prices in Serbia, 2016-2025



Source: Authors' calculation based on data from Statistical Office of the Republic of Serbia (2025)

## 4. Conclusions

Serbia has a relatively long history of combating inflation, which in the 1990s reached hyperinflation levels. During the 2000s, amid transitional reforms, inflation remained high, typically in the double digits. Consequently, it is understandable that the population tends to develop inflationary expectations with each increase in price growth, making it more challenging to anchor these expectations, as they are a very important factor influencing inflation. Energy prices, as a component of non-core inflation that reflects short-term fluctuations caused by supply shocks, are also significant factors of inflation. The growth of energy prices, particularly electricity, further reinforces the population's inflationary expectations.

Over the ten-year period from 2016 to 2025, the highest cumulative growth among energy-related items was observed in the prices of solid fuels and electricity, which increased by approximately 80%, averaging about 6% annually. During this period, changes in energy prices were particularly pronounced between 2021 and 2023, coinciding with the highest levels of overall inflation and the energy crisis in Europe caused by strained relations with Russia, a major supplier. Throughout this period, the share of energy in the consumer basket in Serbia remained slightly below 16%, with minimal annual fluctuations.

Regarding the contribution of energy prices to inflation, it was generally less than 1 percentage point, except during the period from 2021 to 2023, when it reached nearly 2.5 percentage points. Throughout most of the observed period, this effect accounted for approximately 15% to 30% of the total contribution of all products and services in the consumer basket. Among all energy-related items, electricity prices had the most significant impact on inflation, contributing around 40% of the total energy contribution. This was followed by fuel prices for passenger vehicles, which accounted for about 30%, and solid fuels, with roughly 20%. Prices for gas and heat energy had a minimal influence on inflation during the period under review.

This paper assessed the extent of the direct contribution of energy prices to inflation in Serbia. However, based on the findings presented in the introductory chapter, it is evident that energy prices have a broader impact. On one hand, their rise generates strong inflationary expectations, which significantly contribute to inflation. On the other hand, increased energy prices are incorporated into the prices of other products within the consumer basket, leading to higher prices for goods and services, which further fuels inflation. This wider impact was not evaluated in this paper and will be the subject of future research.

## References

- Albertazzi, U., Hooft, J., & Ter Steege, L. (2025). *The Causal Effect of Inflation on Financial Stability, Evidence from History*. Working Paper Series No. 3108, European Central Bank.
- Alvarez, J., & Kroen, T. (2025). *The Energy Origins of the Global Inflation Surge*. IMF Working Paper No. WP/25/91.
- Batas Bjelić, I., & Molnar, D. (2021). Full Costs of Electricity Produced from Lignite in Serbia. *Energija, ekonomija, ekologija*, XXIII(4), 38-44. <https://doi.org/10.46793/EEE21-4.38B>.
- Dživdžanović, D. (2025). *Examining Cheapflation in Serbia in the 2022-2024 Period*. Working Papers Bulletin VIII – March 2025, National Bank of Serbia.
- Economics Institute & Chamber of Commerce and Industry of Serbia. (2025). *Macroeconomic Analyses and Trends*, No. 361. Available at: <https://api.pks.rs/storage/assets/MAT%20361%202025-02.pdf>
- Global Petrol Prices. (2025). *Database*. Retrieved from: [https://srb.globalpetrolprices.com/Serbia/diesel\\_prices/](https://srb.globalpetrolprices.com/Serbia/diesel_prices/).
- Government of the Republic of Serbia. (2022). Odluka o privremenoj zabrani izvoza određenih drvnih sortimenata od bitne važnosti za Republiku Srbiju. "Sl. glasnik RS", br. 87/2022, 99/2022 i 121/2022.
- Government of the Republic of Serbia. (2025). Uredba o posebnim uslovima za obavljanje trgovine za određenu vrstu robe. "Sl. glasnik RS", br. 76/2025, 78/2025, 93/2025, 106/2025 i 10/2026.
- Hajdini, I., Shapiro, A., Smith, A.L., & Villar, D. (2025). *Inflation since the Pandemic: Lessons and Challenges*. Finance and Economics Discussion Series 2025-070. Washington: Board of Governors of the Federal Reserve System, <https://doi.org/10.17016/FEDS.2025.070>.
- Ivković, A., Miletić, M., & Jakovljević, S. (2022). *Estimation of the Impact of Global and Domestic Factors on Inflation in Serbia*. Working Papers Bulletin II – March 2022, National Bank of Serbia.
- Krstić, J., Reljić, M., & Filipović, S. (2019). Factors influencing electricity consumption: a review of research methods. *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, 24(2), 13–22. <https://doi.org/10.7595/management.fon.2018.0021>.
- Martin, V. (2020). Development of Inflation Expectations in Serbia and a Comparative Analysis. *Journal of Central Banking Theory and Practice*, 9(1), 61-79. <https://doi.org/10.2478/jcbtp-2020-0004>.
- Mehmedi, B.R. (2024). The Effects of Energy Prices on the Inflation Rate of Western Balkan Countries. *Trends in Economics, Finance and Management Journal*, 6(1), 13-22. <https://doi.org/10.69648/NHXH4714>.
- Miletić, M., Cerović, D., & Tomin, A. (2023). *Impact of Global Supply Disruptions and Energy Prices on Inflation in European Countries*. Working Papers Bulletin V – September 2023, National Bank of Serbia.
- Minasyan, G., Ozturk, E., Pinat, M., Wang, M., & Zhu, Z. (2023). *Inflation Dynamics in the Western Balkans*. IMF Working Paper No. WP/23/49.

- Mladenović, Z., Arsić, M., & Nojković, A. (2024). Econometric Analysis of Energy Prices on Inflation in Serbia. *The 51<sup>st</sup> Symposium on Operational Research – SYM-OP-IS 2024 Conference Proceedings*. Tara, September 16-19, 2024. <https://doi.org/10.24867/SYMOPIS-2024-51-022>.
- Molnar, D. (2022). *Slučaj Covid-19: Završni račun?* Asocijacija „BANAT-INFO“ i GNB „Žarko Zrenjanin“, Zrenjanin.
- Nikolić, I., & Filipović, S. (2020). How Energy Transition Will Affect Electricity Prices in Serbia? *Industrija*, 48(1), 47-60.
- OECD. (2025). *Energy Prices and Subsidies in the Western Balkans: Reforms for a Fair and Green Future*. OECD Development Pathways, OECD Publishing, Paris. <https://doi.org/10.1787/082ea26a-en>.
- Pračević, A., & Ješić, M. (2022). Energy Prices as Significant Supply-Side Shocks: the Case of the Former SFRY and Višegrad Group Member Countries. *Economic Horizons*, 24(2), 129-149. <https://doi:10.5937/ekonhor2202139P>.
- Srbijagas. (2023). *Izveštaj o poslovanju JP "Srbijagas" Novi Sad u periodu 01.01.-31.12.2022*. Available at: <https://www.srbijagas.com/wp-content/uploads/2025/05/Izvestaj-o-poslovanju-JP-Srbijagas-za-2022.g.pdf>.
- Statistical Office of the Republic of Serbia. (2025). *Database*. Retrieved from: <https://data.stat.gov.rs/?caller=SDDDB&languageCode=sr-Latn>.
- United Nations. (2018). *Classification of Individual Consumption According to Purpose (COICOP) 2018*. Statistical Papers, Series M, No. 99. Department of Economic and Social Affairs, Statistics Division.
- Wehrhöfer, N. (2023). *Energy Prices and Inflation Expectations: Evidence from Households and Firms*. Deutsche Bundesbank, Discussion Paper No. 28/2023.