Republic of Serbia
FISCAL COUNCIL

STRUCTURAL PROBLEMS OF THE SERBIAN ENERGY SECTOR IN THE LIGHT OF THE GLOBAL CRISIS: ROOT CAUSES, COSTS AND POTENTIAL SOLUTIONS

EXECUTIVE SUMMARY:

Perennial mismanagement of EPS and Srbijagas finally took its tool in midst of the global energy crisis. The global energy crisis was the trigger that has exposed the local crisis of state-owned energy enterprises, which has been smoldering for quite some time now. As a result of these two crises (the global, and especially the local one), since the autumn of 2021 the question of how to finance and secure the uninterrupted supply of electricity and gas in the country has become Serbia's main problem. EPS can no longer produce enough electricity to meet domestic needs because it did not invest in its coal mines when it was time to do that - so now it has to import the lacking quantities of both coal and electricity, at record high prices. In contrast to EPS, which should be the backbone of the domestic economy and whose own production should cover not only local consumption but also exports, Srbijagas depends on imports at a systemic level. It is true that import prices are beyond the control of the domestic economic policy, but a major failure of Srbijagas is that it has not yet built a gas storage facility of sufficient capacity (which was scheduled to be completed a long time ago). This storage facility would secure stable supply of the country in the wintertime when consumption is the highest because of heating. Due to the lack of storage capacity, and partly due to the mismanagement of the existing storage facility in Banatski Dvor, during the last winter a good portion of gas for heating had to be imported on the market at extremely high prices. Since the problems of EPS and Srbijagas are of a structural (more permanent) nature, they will persist during the coming heating season as well, which is why the domestic energy sector will continue to face huge challenges.

Total losses of EPS and Srbijagas during the 2021/2022 heating season amounted to about EUR 1 billion. Approximately half of the losses made so far, (i.e., around EUR 500 million) has already been financed by the state budget through subsidies to Srbijagas. The remaining EUR 500 million was paid by EPS, for the time being, mostly by taking out liquidity loans. The question remains, however, whether this EPS's debt will also be shifted onto the taxpayers at some point, because the current operations of EPS are unsustainable. New heavy losses of EPS and Srbijagas could be incurred next winter too, in the absence of a quick and sharp turnaround in the business operations of these companies. In such a case, these losses would probably be only slightly lower than EUR 1 billion and it would be impossible to indefinitely continue incurring them - because at some point they would become an unsustainable burden not only on the companies themselves but also on the overall public finances. What currently constitutes an additional threat to Serbia is the fact that the stable supply of electricity and gas during the next heating season will again depend on the available infrastructure and energy sources from abroad - which are not guaranteed. All this could and should have been avoided by better management of the public enterprises in previous years.

The current method of managing EPS (and EDS) can no longer be tolerated. Most of the indicators that describe the operations of public enterprises in the power sector (EPS and EDS) are disastrous. Production has been in decline for many years and is now significantly lower than domestic consumption, while losses and thefts on the distribution network are huge, over 12%, which is two times higher than in comparable CEE countries. The operations of EPS and EDS are suffering because of the overstaffing and poor qualification structure of employees, excessively high salaries for jobs with general qualifications, dubious public procurement processes, an overly low price of electricity for households (below production costs), high environmental pollution, delays in the energy transition and numerous other problems (Table 1). To put it simply, EPS (and EDS) started to neglect their core function a long time ago – and that is to secure a stable supply of electricity to Serbia on market terms, and to build the energy infrastructure needed for the country's economic development and prosperity. Instead, EPS operates under strong political influence, it is used as a funding source for covering numerous failures of the domestic economic policy, and its societal role has been extended to include social objectives (both in terms of low electricity prices and in terms of employment levels). For example, EPS has been covering the losses of GSP (Belgrade Public Transport Enterprise), Jumko and other failed state-owned enterprises for many years by tolerating their arrears; it is implicitly financing non-privatized companies that were spun off from the system in the past (Pro tent, Kolubara usluge and others) etc.

A price increase of 15-20% is a necessary, but by no means sufficient, condition for EPS recovery. Our analyses show that, in order to stabilize EPS, a 15-20% increase in electricity prices for households is necessary as an urgent measure, along with a similar increase for industry. Such an increase would not only stop the current financial "bleeding" of the company but is also economically justified - since the current price for households is not at an economically appropriate level, and it also encourages wasteful consumption. At the same time, even after such increase, the price for households in Serbia would remain one of the lowest in Europe (together with Georgia and Ukraine). Price increases alone, however, are not nearly enough to cure EPS. This has been clearly demonstrated by the previous experience with liberalization and the consequent rapid growth of prices for industry since 2013. The robust growth in EPS revenue that occurred at that time was not accompanied by improvements in the company's operations. Quite the opposite, the new financial resources were squandered on numerous overhead costs and other inefficiencies while the production of EPS kept falling each year and the company’s gradual decline continued. Therefore, a new price hike can only be a smaller segment of comprehensive measures, because otherwise it will be pointless. What we primarily have in mind here is a temporary freeze of the company’s wage bill, intensified control of public procurement processes, as well as the launch of many other reforms that will be completed in the medium term (Table 1).

The higher costs of gas purchases have to be reflected in the final price of gas and heating. In contrast to EPS, where the most important and crucial channel for the recovery of the company is the implementation of reforms and a shift in the management of the company, while the (economically justified and necessary) price increase is just a supporting measure - with Srbijagas, the situation is the opposite. Serbia is importing more than 90% of the gas it consumes, so the final price has to be adjusted to the purchase price. There is definitely room for internal improvements in the operations of Srbijagas, and their implementation must be insisted upon (along with the construction of the much-needed storage facility). However, these improvements are still far below the cost of gas purchases in balance sheet terms. The price of gas for industry would have to go up by about 75%, just as much as it went up in other CEE countries back in the second half of 2021 (while the price in Serbia has remained practically frozen). Due to such an increase in the gas price in the region, maintaining a low price for domestic companies, especially in the tradable sector, is economically unjustified. This actually means that all taxpayers are subsidizing the extra profits of companies that have significantly lower energy costs than their competitors. In line with the European practice, approval of temporary state aid should only be considered for individual companies in the energy-intensive industries, whose output is intended for the domestic market. The price of gas for households should be hiked by 65-70%, which at first glance seems to be a hefty increase, but it would be no precedent since similar prices were in force during 2013-2015. District heating prices should go up between 10 and 40% depending on the share of gas costs in the total costs of heating plants.

There is a need for reform and a substantial increase in the coverage by the Energy Vulnerable Customers Program. Serbia needs a radical turnaround in the energy pricing policy for households (gas, electricity and district heating). More specifically, instead of all consumers having low, non-market-based energy prices as has been the case so far - the Government should financially protect only the socially vulnerable, and the rest of the population would have to pay market-based prices of the energy products they use (commensurate with their consumption). A prerequisite for the implementation of such a substantial and important shift in the domestic economic policy is the reform of the existing program for the energy vulnerable customers. The main weakness of the existing program is its low coverage. Although there are more than 250,000 energy vulnerable households in Serbia, only 68,000 households receive fiscal support. An increase in the coverage could be achieved by including into the program the costs of district heating, by introducing the principle of granting support automatically rather than on the initiative of citizens themselves and local self-governments, and possibly by relaxing the criteria for granting support. The fiscal cost of increasing the coverage of the energy vulnerable customers program four times (and of including district heating) could go up from the current EUR 10 million to EUR 50 to 80 million. This increase in budget expenditures would be justified, primarily because this measure has the important function of improving the quality of life and health of socially vulnerable households - so all energy vulnerable citizens should actually use it. Likewise, the economic benefits of this reform are more than obvious. The loss that would be incurred if energy prices were not hiked before the beginning of the next heating season would be more than 10 times higher than the rise in budget expenditures for the energy vulnerable customers program.

Table 1: Overview of the key problems in the electricity sector in Serbia and the recommendations for overcoming them

STRUCTURAL PROBLEMS		
PRODUCTION	**DISTRIBUTION**	**BUSINESS OPERATIONS**
EPS is no longer able to meet domestic electricity demand • Production of thermal power plants is decreasing ever since the beginning of the previous decade (2011-2020) • In 2020 it was 10-15% lower compared to 2011 • In 2021 it dropped to 21,500 GWh (20% below 2011 level) **Deteriorating quality of coal from Kolubara basin** • Thermal power of coal from Kolubara decreased by 10-15% in the last ten years • Currently around 6,700±10% kJ/kg, which is the minimum acceptable tolerance for the operation of thermal power plants **Multi-year insufficient investment and delays in investment realization** • New mines in Kolubara (Field E and Radljevo), due to replace the existing ones, haven't been opened yet, nor has the accompanying mechanization been procured • Overdue construction of Kostolac B3 thermal power plant, as well as the expansion of mine Drmno	**Excessive technical losses and thefts** • Electricity sent to final consumers has approx. 12% losses while in circulation through the distribution network • Two times more than in comparable CEE countries **Unreliable distribution of electricity** • Over 6 unplanned outages in distribution per consumer annually in Serbia (2 in CEE) • Over 10 hours in duration of outages in one year (2.5 hours in CEE) **Insufficient and poorly prioritized investment** • 25% of network comprised by wooden pillars • Merely 3% of household consumers have smart meters	**Excessive wage bill** • At least 10% of redundant employees in EPS, at least 20% in EDS • High average wage (disproportionate salary for generic duties) • Wage compression (the most competent employees are underpaid) **Poor employee structure** • Lack of highly qualified, surplus of workers in generic positions **Expenses of former workers** • EPS is financially supporting about 3,300 workers in Kosovo and Metohija • As well as over 10,000 employees implicitly, working in spin-off companies once part of EPS (large redundancies) **Public procurement inefficiencies** • Since 2017 the number of bidders per tender declined to 1.7 (3.5 in CEE) • Large number of contract agreements made directly between two parties **Regulated price for households is too low** • 25% below production costs • Twice as low as in CEE countries, among the lowest in Europe • Encourages irrational electricity consumption **Other inefficiencies** • Losses in purchase of energy made from renewable sources • Losses in paying the subscription to public media services (RTS and RTV)

RECOMMENDATIONS AND MEASURES	
URGENT MEASURES FOR COVERING LOSSES (SHORT TERM)	**MEASURES FOR PERMANENT RECOVERY (MID-TERM)**
• Increase in the regulated electricity price for households by 15-20% • Increase in the capped electricity price for industry, from 75 to 90 €/MWh (intending to revert back to free market pricing) • Wage bill freeze in 2022 and 2023 • Increase in the renewable energy production fee (environmental fee) by 25% • Accelerate procurement of mining mechanization and the opening of replacement coal mines • Enhance public procurement (increase the number of bidders and decrease the number of contracts made through direct negotiations with only one company) • Adoption of a transparent action plan with clear deadlines and targets	• Targeted lay-offs of redundant workers based on a comprehensive systematization of positions (not ad hoc) • Decrease wage compression: wage freeze for generic positions, increase for highly qualified employees • Investments appropriately prioritized: coal, production, environmental protection • Resolution of the status of workers from Kosovo and Metohija • Cut off state-owned enterprises that depend exclusively on EPS • Permanent resolution for the costs of purchase of energy from renewable sources (privileged producers) • Install smart meters and reduce theft of electricity • Redefine the relation with public media services (collection of subscription)

Table 2: The size and causes of losses in EPS and Srbijagas and fiscal cost for protection of energy vulnerable citizens

Estimated losses of EPS	
Losses in 2021/2022 heating season: around 500 million EUR	**Potential losses in 2022/2023 heating season: 400-450 million EUR**
• Lack of domestic production of 15-20% due to problems with coal → EPS imported electricity in the amount of 2,900 GWh • At the average price of over 200 €/MWh → Estimated total cost for EPS 650 million EUR • Price of imported electricity higher than domestic prices multifold → Total revenue of EPS 150 million EUR	• Expected partial recovery of production and imports of a better coal → EPS still needs to import about 2.000 GWh of electricity • At prices around 200 €/MWh → Estimated cost of electricity (and better coal) import for EPS 500-550 million EUR • Domestic electricity prices remain unchanged → The revenue of EPS from selling the imported electricity 100 million EUR
Estimated losses of Srbijagas	
Losses in 2021/2022 heating season: 450-500 million EUR	**Potential losses in 2022/2023 heating season: around EUR 450 million**
• Imported about 1.8 bn m^3 of natural gas → 60% long-term contract (250 EUR) + 40% in the market (1,000 EUR) • At average price of about 550 EUR/1,000 m^3 → Estimated total cost for Srbijagas 1 bn EUR • Gas prices on domestic market 300-360 EUR/1,000 $м^3$ → Estimated revenue of Srbijagas 500-550 million EUR	• More than 1.8 bn m^3 of natural gas is needed → 75% long-term contract (350 EUR) + 25% in the market (1,000 EUR) • At average price of about 520 EUR/1,000 m^3 → Estimated total cost for Srbijagas 950 million EUR • Gas prices on domestic market remain unchanged → Estimated revenue of Srbijagas 500-550 million EUR
Estimated fiscal cost for protection of energy vulnerable households	
Existing social scheme for energy vulnerable consumers: around 10 million EUR	**Proposed reform of the social scheme for energy vulnerable consumer: 50-80 million EUR**
• Social assistance for about 70,000 households (3% of the total number of households in Serbia) • For electricity and gas bills	• Extending the coverage to 250-300,000 households (10-15% of the total number of households) • Extending the assistance to cover the district heating bill (+ electricity and gas bills)

MAIN FINDINGS AND RECOMMENDATIONS:

The accumulated problems in the Serbian energy sector are currently by far the biggest challenge for the Government and its economic policy. Serbia was unprepared for the global energy crisis that flared up last year. Problems in the domestic energy sector that have been neglected for decades have taken their toll and increased the price the country is now paying due to unfavorable international circumstances several times. These problems are the root causes of the huge losses incurred by EPS and Srbijagas in the previous heating season, which taken together amounted to around EUR 1 billion (2% of GDP), and roughly half of that loss has already been shifted onto all Serbia's citizens. Since the global crisis is not abating, and many of the problems at home cannot be solved overnight even with the best of will, in all likelihood the huge losses of the key energy companies could take their toll again in the short run. However, the energy challenges that the country is facing go beyond the realm of public finances and go much deeper than the costs that are shifted onto the budget. The developments over the past year have shown that the enduring failure to address essential problems in this sector is now seriously threatening the security of energy supply to consumers. At this point, it is uncertain whether Serbia will even have enough energy sources to meet all needs in the medium term, which calls into question one of the main assumptions for the country's further economic development, and even the prosperity of society at large. The only way out of this complex and very dangerous situation is for the Government to urgently make a radical U-turn in relation to the fundamental mismanagement in the energy sector and key companies in this sector, which has been going on for thirty years now.

Serbia's energy system is on the verge of collapse due to the state's inadequate attitude towards the energy sector and numerous problems in EPS and Srbijagas. The current energy crisis has hit the entire world and it is a global shock that Serbia could not influence or avoid. However, its consequences would not have been nearly as strong if the domestic energy sector had not been drowning in its own problems. External factors were not the main reason why the Serbian energy system threatened to break down last winter, but rather decades of neglect of this critically important sector. The falling of the system into disrepair in the 1990s was caused by the objectively difficult economic and social situation in the country, the 2000s were spent on achieving a minimum of stabilization, and its development in the last decade was prevented by numerous failures in the energy policy. The situation in some parts of the energy sector has actually worsened due to a lack of investment, poor prioritizing and inefficient implementation of projects, mismanagement and political interference with the management of the energy companies, unfinished market transition, social policy pursuance through economically unjustifiable low energy prices, etc. As a consequence of these and other mistakes, Serbia has lost another decade in making a crucial step forward in the development of this sector. Domestic energy capacities were practically stagnating while the demand for energy products was growing relatively strongly, and the opportunity to make progress in environmental protection and catch up with Europe in the field of energy transition was also missed. Due to the global crisis, all these problems are now taking their toll, and their further non-resolution could have incalculable fiscal, economic and social consequences in the future.

Eliminating the country's deep-rooted energy problems requires radical changes in the management of society's important resources. The source of problems in the energy sector lies in the fundamentally wrong manner in which the most important resources of society are managed in Serbia. Hence, a way out of this difficult situation is only possible through a fundamental turnaround in the conduct of energy, economic and social policies - that is, through a reexamination of the entire system and its setting on a sound foundation. In brief, it requires an urgent launch of an investment cycle in the energy sector in order to reverse the negative trends in domestic energy generation and supply. In order to make this possible, two important prerequisites need to be met. *First*, it is necessary to put in place competent and professional management in EPS and Srbijagas and to give full freedom and clear political support to that management to finally implement all the reforms that have been put off for years. *Second*, in order for the energy companies to have enough funds to invest, the cost-recovery price of energy products must be charged to everyone. This is crucial for their sustainable operation, but at the same time it is the only way toward a more efficient use of energy in the country. *De facto*, this requires abandoning the current practice of the state conducting social policy through unrealistically low electricity and gas prices for all consumers, but this also requires a reform of the social protection system in order to provide the most financially vulnerable groups with maximum protection from an economically justified increase in energy costs. Cosmetic changes in the form of some administrative measures or isolated price increases within the existing system will not bring lasting improvement, as was the case in the past when they were only putting off its total collapse.

A lot of effort and budget resources have been invested in mitigating the consequences of the energy crisis, the Government must now fully concentrate on addressing its causes. The energy crisis, global uncertainties due to the war in Ukraine and runaway price growth in the international environment have left their mark on the Serbian economy. Economic activity has slowed down, inflation, which was already high, has accelerated further, and the trade deficit has sharply risen. Serbia's macroeconomic results in early 2022 were noticeably worse than in other CEE countries, which indicates that part of the deterioration is attributable to inadequate domestic policies - among other things, mismanagement of the public energy enterprises. In a comparative perspective, only domestic inflation was slightly lower than in CEE countries, since the year-on-year price growth measured in May was 9.2% against the CEE average of 10.7%. However, underlying this better result are not healthier economic fundamentals, but primarily the tighter price control in Serbia, which is particularly true for electricity and gas prices. The Government has "frozen" the prices of these energy products at their pre-crisis levels, so that so far, unlike other countries in the region, the Serbian economy and citizens have not directly felt the record-breaking increase in their prices on the foreign market. To a certain extent, the rigid control of electricity and gas prices did help in keeping inflation in check over the previous months, but this measure has led to huge losses in the public enterprises, which for the most part spill over into the budget deficit and public debt. Such policy is not sustainable in the medium term, and in the coming period the Government has to focus primarily on eliminating the structural causes of the energy crisis in Serbia, and its consequences have to be redressed in a fiscally and socially responsible manner.

The poor performance of EPS is currently a pressing fiscal risk and will be a growing threat to public finances if not reversed soon. Many years of mismanagement of EPS have resulted in the fact that this company can no longer produce enough electricity for the needs of the domestic market and for some time now imports have been compensating for this shortfall. During last winter, this structural problem plaguing EPS coincided with a period of record high electricity prices on power exchanges in Europe, which pushed the company into huge losses. Last winter, electricity was bought on the power exchanges at prices exceeding EUR 200 per megawatt-hour and sold on the domestic market several times cheaper, which is why EPS made a loss of almost EUR 500 million for the six months of the 2021/2022 heating season. EPS closed this gap in its balance sheet by itself, mostly by borrowing from banks in the amount of around EUR 400 million, which has abruptly increased the company's debt by 40%. However, next winter, too, EPS will not be able to offer enough electricity for the needs of the Serbian market and will have to purchase it from European energy exchanges at the prices that will remain very high. Our calculations show that in the "business as usual" scenario, EPS will again make a loss similar to that incurred during the last heating season, on the order of EUR 400-

450 million. The practice of stopping the financial "bleeding" of the company by short-term borrowing cannot go on forever, and since EPS is owned by the state, at the end of the day the costs of its poor performance (if it is not immediately reversed) will be paid by all taxpayers. It poses not only the risk of state subsidies being necessary to cover EPS's current losses next winter, but also the big question of whether the company will be able to service its mounting debt on its own or that burden will also be shifted onto the budget.

EPS has become a risk for Serbia's entire economy and an obstacle to the country's economic development. EPS's problems, which caused a sharp drop in electricity production last winter, substantially contributed to the deterioration of macroeconomic trends in Serbia. By importing huge quantities of expensive electricity, EPS not only exerted direct impact on the deceleration of GDP growth, but also contributed to the rise in the trade deficit and the outflow of foreign exchange from the country, which is why the National Bank of Serbia had to additionally spend reserves in order to preserve the stability of the exchange rate. This is not the first time that EPS, as the largest company in the country, undermines the results of the entire Serbian economy with its poor performance. However, a much worse thing is that EPS has now put itself in a position that it cannot guarantee steady supply of electricity to the households and businesses; instead, it is increasingly dependent on the availability of electricity on the international market. The energy crisis and other problems trouble the whole of Europe, and the uncertainty is so high that at this point in time no one can confidently say that it will be possible to buy on the market the quantities of electricity that will be lacking next winter when we need it, even at exorbitant prices. In such a manner, this public enterprise has been put in a position to no longer perform its main social role - to produce enough of relatively cheap electricity and thus be one of the pillars of the country's economic development.

The cause of EPS's decline is not the energy crisis, but rather long-lasting mismanagement and disregard for the company's structural problems. There were no objective reasons for which EPS had to run into difficulties when the crisis broke out in the European energy exchanges last autumn. It is true that electricity prices skyrocketed in Europe at that time, but EPS should not have been allowed to reach the point of depending so much on imports. This occurred because of the long-lasting mismanagement of this company by the Government and the company's senior executives, i.e., numerous structural problems that have existed for a long time but have not been addressed. The biggest problem of EPS that has now surfaced is the multi-year decrease in electricity production, which has been caused by the company's decade-long poor investment policy. Investment in production capacities was significantly lower than needed, often coupled with a problematic choice of priorities and unreasonably lengthy delays in the implementation of many important projects (such as completing the construction of a new thermal power unit in Kostolac, preparing and opening new mines in the Kolubara Mining Basin, etc.). Low investment and the gradual deterioration of production capacities result from the chronically weak financial results of EPS, whose operations are burdened by structural problems that the Fiscal Council has often warned about. More specifically, EPS has been suffering for many years now from overstaffing and the poor employee structure, an inadequate compensation plan, irrationally low electricity prices for households, dubious public procurement processes, excessive technical losses and thefts of electricity, political interference with the management of the company, etc. Despite the fact that essentially all these problems have been long known, the reforms that were necessary to resolve them have been avoided, or at best just simulated.

The direct cause of the power system breakdown in December 2021 are poor-quality coal and incompetent management of EPS in the course of last year. The structural problem underlying the last year's drop in production in EPS's thermal power plants is the decline in the quality of coal that was coming from the Kolubara basin. EPS itself is responsible for the multi-year trend of diminishing thermal power of coal used for electricity production, because it did not invest enough, which resulted in delays in the opening of new mines with better coal. The problem escalated in mid-2021, when the thermal power of coal fell below the minimum acceptable for the operation of the EPS power plants. Despite this, EPS continued to use low-quality coal with an excessive content of impurities while abundantly adding heavy fuel oil, which not only directly affected the drop in electricity production, but also indirectly created operational problems and caused the outage of plants that were designed to burn higher-quality coal. Last year, EPS also experienced delays in the overhaul of its power plants, and then tried to compensate for the shortage of electricity by increasing production in gas-fired and hydro-power plants. By doing so, it inflicted enormous damage to the country because it used up a sizable portion of domestic gas reserves to produce a relatively small amount of electricity in its inefficient gas-fired power plants, which later had to be replenished by purchases of this fuel on the European market at record high prices. According to our estimates, the mistakes made by EPS cost the national budget close to EUR 200 million, which was the amount spent on the purchases of gas that this company inefficiently used before the winter. The final outcome of numerous problems and a series of bad decisions by the EPS management was the complete collapse of electricity production and distribution in the country in December, and then there was no other way to secure a stable supply to domestic consumers but to buy very expensive electricity on the European energy exchanges.

In order to halt the further decline of EPS, radical changes in its operations are needed, and this is only possible with clear political support. The Government and EPS face enormous challenges: in the short term - the further financial decline of the company has to be stopped; in the medium term - the faltering production has to be recovered, while in the long term - the road map for the country’s energy transition has to be prepared. We need to immediately stress that these challenges can only be successfully taken on with a comprehensive set of reforms in EPS and measures whose implementation is not possible without strong political will. Any halfway solutions, such as an increase in the electricity price, which would not be complemented by a full turnaround in the operation of EPS, will not yield results - as was the case in the past. The previous decade actually saw a gradual but considerable increase in the electricity price in Serbia, by about 40% in total. However, this did not improve business operations of the company because higher cash inflows into the company were spent on pay raises and numerous other unreasonable expenses. The real problems of EPS were ignored, and they were only getting deeper; hence, the cost of such an approach in the coming years will certainly be higher because the power system is already pushed to the brink. The implementation of such a comprehensive reform is only possible if there is strong political support for that process and the Government's resolve to fundamentally change the way EPS is managed. More specifically, besides the EPS management itself, the line ministry and the entire Government are also responsible for the company’s long-lasting decline. In addition to its key impact on electricity tariff on the domestic market, the Government imposed numerous obligations and costs on EPS in the past (payments to the budget on various grounds, sponsorships, tolerating the electricity arrears of failed state-owned enterprises, etc.) instead of ensuring that these funds were earmarked for the development of the company itself. Finally, it is the Government that is under an obligation to appoint a competent management team that will professionally and responsibly manage the biggest company in Serbia.

Reforms in EPS have to start immediately, and our suggestion to the Government is to prepare an action plan defining urgent measures and precise deadlines for their implementation. In the short run, the financial stabilization of EPS is necessary in order to prevent the company from incurring, once again, a loss of EUR 400-450 million in the next heating season, which would be almost certainly translated into a fiscal cost. In order to achieve this, it is necessary to implement urgent measures in 2022 to increase the company's revenue and exercise tight control of the most important expenditures. On the revenue side, this implies an adequate increase in the electricity price for households and industry, while the most important measure on the expenditure side should be the freeze of total employee expenditure at its 2021 level over the next two years. Within this constraint, it is necessary to find funds to increase the salaries of employees in jobs that require the highest competence and are vital for the recovery of production, which can be achieved by targeted layoffs of redundant workers who are not needed. In the short term, it is also necessary to take measures to improve the public procurement process in EPS, because there are strong indications of numerous weaknesses, due to which tens of millions of euros on an annual basis are imprudently drained from the company. In addition to the already planned measures for the partial recovery of EPS production, such as the emergency import of better-quality coal, the Government should as soon as possible prepare a full set of short-term reform steps, set measurable objectives and adopt an action plan with firm deadlines for their implementation. In order to prevent the circumvention of essential changes from happening again, it is also necessary to fundamentally improve the monitoring of the implementation of such a plan. The proposal of the Fiscal Council is to select a set of 10-20 precise, easy-to-understand and verifiable indicators related to reforms, on which EPS will report to the general public at regular intervals, semi-annually or quarterly (see Annex 1). Otherwise, it may happen again that the growth in the company's revenue, driven by the increase in electricity prices, slips through the cracks in EPS's business operations.

The Fiscal Council's analyses show that the electricity price increase should range between 15 and 20%. The most important revenue measure for the financial stabilization and recovery of EPS in the short term is the increase in the electricity price paid by industry and households. In the short run, this measure is necessary to stop the high losses and unsustainable borrowing by EPS, while in the longer run it is needed to provide the necessary funds for investment in production capacities, environmental protection and energy transition. On condition that the company's biggest expenditures are kept under strict control, our analyses show that EPS needs a 15-20% increase in electricity tariffs. This would increase the company's revenues by nearly EUR 350-400 million, which, along with other short-term measures, would be enough for EPS to get through the next heating season without accumulating new losses and borrowing. The proposed electricity price increase is definitely a painful measure, but if it is delayed further, the damage to EPS, the economy and citizens will be even greater. Without it, the financial decline of the company will continue, coupled with an unsustainable rise in EPS debts that will almost certainly be repaid with interest by all taxpayers in the coming years. In any other scenario, the company would not have enough funds left for investment in the recovery of production and the country would become permanently dependent on the availability of electricity abroad, which would considerably reduce the domestic impact on its price which would, in fact, be dictated by movements on the international market. Nevertheless, as we keep pointing out, the increase in the electricity price is a necessary measure to stabilize Serbia's electric power system, but it will be pointless if the operation of EPS is not radically turned around at the same time, and it will be only socially justified if the state provides greater protection to objectively vulnerable citizens.

The increase in the electricity price for households and industry is also justified in a broader economic sense. The electricity price paid by households in Serbia does not cover the total costs incurred by EPS to produce the electricity it delivers to them. As a result, the company is constantly making losses in this segment of the market, which so far it has managed to cover predominantly from a positive result in business operations with industry. Comparative analyses also show that the electricity price for households in Serbia is too low –among all European countries, electricity is currently cheaper only in Ukraine and Georgia. If we only look at comparable CEE countries, Serbian households are currently paying almost half the price. The economically unreasonable low electricity price for households is not only a problem from the perspective of EPS, but also because it encourages its inefficient consumption, while crowding out other energy sources. More specifically, the electricity consumption of the average Serbian household is on average by 50% higher compared to the EU, and as much as 90% higher than the CEE average. The price of electricity for industry has been liberalized since 2013, and up until the second half of 2021, it generally followed market trends and was similar as in other CEE countries. However, late last year, due to the energy crisis, electricity prices for industry in CEE rose by an average of 30%, while in Serbia, a similar increase in prices was prevented by a Government decision. Thus, at the cost of EPS's losses, it is ensured that the entire economy pays for electricity at prices far below the market ones and far below those in the countries of the region – even companies that are currently posting exceptionally high profits due to the increase in commodity prices of their products (such as Zijin, formerly RTB Bor). Therefore, the moderate increase in the electricity price for industry that we suggest would not harm its international competitiveness, and the current policy under which EPS (potentially even all citizens of Serbia) are subsidizing the low electricity price for companies that are objectively not vulnerable is absolutely unacceptable. Naturally, the Government should consider mechanisms for providing selective support to companies that are expected to run into temporary trouble due to rising electricity prices, in line with the European practice.

The recovery of EPS is not possible without wage control and a meaningful reform of employment in the company, which has been persistently avoided. The Fiscal Council has been warning for years that one of the main problems within EPS itself is related to deficient and unregulated compensation and employment system. The problems are numerous: overstaffing of at least 10%, the allocation of employees is not aligned with the needs of the company, total employee costs are too high, the compensation system is inadequately structured because wages are particularly high for workers with low and general qualifications and disincentivizingly low for jobs that carry the most responsibility, etc. Due to the fact that labor costs account for a huge portion of EPS's total expenditures, any attempt to recover this company is doomed unless tight control over them is established. Although all these problems have long been publicly known, the Government and the company itself have so far only simulated the reforms, persistently avoiding the genuine revamping of the employment and salary systems in EPS. For instance, in the past, the problem of overstaffing was haphazardly "addressed" through the voluntary separation of workers from the company, with generous severance payments that averaged around EUR 20,000, rather than through targeted lay-offs of clearly identified redundancies. As a result, those who were leaving were mostly workers who had met one of the requirements for retirement, or the most skilled workers who would easily find another job, which is why the problem of non-productive redundancies still exists and the composition of the company's employees has deteriorated in the meantime. EPS also avoided implementing a fiscal consolidation measure that required an across-the-board public sector wage cut of 10% in 2015. Although the then company's management challenged this assessment by the Fiscal Council, made upon the analysis of their financial reports, a few years down the road it was implicitly confirmed by the State Audit Institution (SAI).

This is necessary to make short-term savings as well as to achieve long-term improvement of EPS's business operations. The temporary freeze of the EPS wage bill at last year's level is justified for two reasons. First, the average net salary in this company is still too high - according to EPS data, it amounts to about RSD 103,000 and is by 70% higher than the national average. More importantly, the company is currently in a disastrous financial position, and it is unacceptable for the entire burden of its consolidation to be borne by the citizens and the economy through the payment of higher electricity prices, only for EPS to use part of the higher cash inflow to increase the already high salaries of its employees. Furthermore, structural reforms of employment in the company must be finally initiated, implying clear identification of redundant labor and addressing this problem through targeted layoffs rather than haphazardly as before; adoption of a new act on job systematization that will precisely define how many workers EPS needs, with what qualifications and in which positions; reform of the compensation plan to ensure, with the same wage bill, pay raises for those holding key positions in the company, etc. More specifically, one of the main prerequisites for the successful performance of all reform tasks in EPS, and generally for the long-term successful operation of the company, is for the Government to appoint competent and professional management free from political influence. However, with the existing compensation system, it will be hard to find and retain sufficiently qualified staff capable of performing such responsible jobs.

Due to irregularities in the public procurement process, EPS is losing tens of millions of euros a year, and this must be urgently stopped. Public procurement transactions in EPS are fraught with irrationalities, due to which substantial financial resources are imprudently drained from the company, and this problem has worsened in particular since 2017. One of the main shortcomings is the evident lack of competition in EPS's tenders, coupled with the fact that only several companies often compete in those tenders, appearing in different combinations. Results of international studies suggest that lack of competition increases the price in public procurement transactions by 10-15% on average, which is also confirmed in principle by certain domestic analyses that show on a case-by-case basis that certain procurement transactions in EPS were concluded at prices significantly above the market prices. EPS itself directly contributes to this, by setting unusually specific requirements for the submission of bids, thus *de facto* preventing the participation of a larger number of companies in its tenders. In its audit reports on this company's operations, the State Audit Institution has also pointed to numerous irregularities and violations of regulations in the public procurement procedures in EPS. More specifically, in its December 2020 report, it said that more than a quarter of all procurement transactions in EPS were carried out by violating statutory procedures in one way or the other. Although these remarks very often refer to various procedural mistakes, among them there are also those that can be interpreted as potential sources of wasteful spending, i.e., as an indicator that EPS paid more than it was necessary for certain works, goods and services. The Fiscal Council's rough calculations show that tens of millions of euros a year are imprudently drained from EPS in this manner. As early as this year, the Government would have to take steps towards making EPS public procurement transactions completely transparent, with more competition in tenders and the elimination of procedural mistakes brought to the attention by the SAI.

Other unreasonable costs that unnecessarily burden EPS operations must also be prevented. EPS is still indirectly funding a large number of spin-off companies that were formally separated from the parent company in the early 2000s (e.g., Protent, Kolubara usluge, Kostolac Prim and others), but fifteen years later they essentially still depend on its performance. It is high time to complete the initiated reform, which implies privatizing these companies and leaving them to the free market, or to bankruptcy if it turns out that they cannot operate successfully without the protection of EPS. The Government is also responsible for solving the problem of the lack of funding for incentives that should be paid to privileged producers of electricity from renewable sources and for redefining the relationship with public media broadcasters (RTS, RTV), because the existing arrangements are to the detriment of EPS. It makes no sense for EPS to cover part of the costs of the Government's policy on subsidizing the generation of electricity from renewable sources, and there are two possible solutions to this problem. The first involves regular adjustments by the Government of feed-in tariffs for electricity produced under the incentive system, which is normally paid by end consumers. This would ensure that EPS earns as much as it has to pay to privileged producers, i.e., that it is not making losses in performing the task entrusted to it. Failing this, the shortfall of funds for the payment of subsidies should not be covered by EPS from its business operations, but directly by the state budget. The same assessment applies to the subscription fee for the public media services which is collected through the electricity bill, and which EPS cannot collect from all citizens, but it is nevertheless required to pay the full amount to RTS and RTV, thus making losses. Similarly, even though EPS has not been managing its companies in the territory of Kosovo and Metohija for two decades now, pursuant to a Government decision, the company still spends tens of millions of euros a year to pay the wages of the workers there without any grounds.

Together with EPS's production-related problems, a big challenge lies in the outdated distribution network which leads to huge electricity losses. The recovery of production in EPS is definitely the most urgent task of the Government; however, it is necessary to simultaneously start fixing the situation in the distribution system, from which too much electricity "disappears" on its way to the consumer (about 12%). Although losses in the distribution network have somewhat decreased in the last ten years, they are still more than two times higher in Serbia compared to the average for CEE countries, and the situation is currently worse only in Montenegro and North Macedonia. Lagging behind comparable countries can be partially explained by justified technical losses because in Serbia the share of consumption at low voltage (households), where losses are generally more substantial compared to higher voltage levels (e.g., businesses and other big consumers), is higher. However, worn-out infrastructure and the widespread problem of electricity thefts due to outdated metering infrastructure and ineffective meter control further contribute to this. Finally, standard distribution system performance indicators clearly show that electricity distribution in Serbia is becoming less reliable, i.e., that power outages occur more often, with their total duration steadily rising over the last few years. The main cause of these problems is again the lack of investments and their inefficient implementation, since the investments in distribution over the past decade were significantly below the plan and depreciation in that period, i.e., the level that was needed to merely maintain the existing infrastructure - without any room for its improvement. Until recently, all this was part of EPS's inadequate investment policy, but in 2021, Elektrodistribucija Srbije (EDS) was spun off, thus becoming a separate company that is now responsible for managing and solving problems in the distribution system.

The problems of EDS are similar to those of EPS, from which the company was formally spun off last year, and their resolution requires the Government's close attention. EDS is an unsuccessful company that officially incurred a cumulative loss of EUR 15 million in the 2015-2021 period, with the core business loss exceeding EUR 200 million (it is the result obtained after excluding the effect of financial transactions in the observed period, such as exchange rate differences and default interest). The poor performance of EDS is the result of numerous structural imbalances, with the main reason being the company’s enormous costs incurred for compensating distribution losses and obvious overstaffing. It follows from this assessment that the main remedy for the recovery of this company is a rise in, and more efficient implementation of, investments, according to our calculations by approximately EUR 100 million compared to the current level. That the implementation of important projects in the past was very sloppy is best illustrated by the example of the installation of smart meters, which were reasonably expected to be of significant help in the prevention of electricity thefts. To be precise, back in 2010 the Government launched this project with the then EPS Distribucija, the funding was secured from EIB and EBRD credit lines, but the installation of smart meters was so slow that today a mere 3-4% of end users have them. Meanwhile, the EIB loan was cancelled since not a single dinar was disbursed, and a similar thing happened with the EBRD loan, where 90% of the originally negotiated amount was cancelled. If the project of installing smart meters was implemented now (which does not require huge initial investment) and if the rightsizing of workforce was achieved, along with the resolution of several other structural problems, EDS would have enough financial resources for the necessary structural increase in investments. Although the spotlight is currently on EPS, the Government must also put efforts to solve the problems of EDS because a secure electricity supply in the medium term requires getting all parts of the domestic power system up and running again.

Huge amounts of budget funds have already been spent on gas supply issues, which will happen again if the Government continues to manage the crisis as it has done so far. Last winter, Serbia faced enormous challenges in the supply of natural gas. Due to the long-lasting scarcity of infrastructure capacities in the gas sector and the poor operational management of EPS and Srbijagas last year, the quantities of gas available at the start of the heating season 2021/2022 were far below what was required to fulfill domestic needs. Srbijagas then had to buy the missing quantities of this fuel directly at the European markets, at prices that, due to the energy crisis, were several times higher than what it was normally paying for Russian gas under the long-term contract with Gazprom. Although this led to a steep increase in the gas purchase costs of this company, its revenues remained at a similar level due to the Government's decision to freeze the price of this fuel on the domestic market at its pre-crisis level. The difference between the high import prices of gas and the low prices charged by Srbijagas to industry and households last winter pushed the company into a loss of EUR 450-500 million, which was already paid by all citizens because the Government undertook to compensate the company for the difference. Meanwhile, the crisis on the international gas market has flared up further due to the outbreak of war in Ukraine and, with the present state of things, it seems that the difficult situation could last for several years. For Serbia, this specifically means that already in this year the purchase price of gas will most likely be two times higher than until 2021. If the Government continues to ignore this structural change in the gas market by artificially keeping the domestic price of gas low, the bill for such a policy amounting to almost half a billion euros will again be paid by all citizens - regardless of whether they use this fuel or not.

The consequences of the global gas crisis last winter were aggravated by the domestic structural problems and mismanagement of EPS and Srbijagas. About 90% of gas consumption in Serbia depends on imports, which is why the direct exposure of the country to the developments on the international markets is incomparably larger than in the case of electricity. This practically means that Serbia could not have completely avoided the shock that happened on the international gas market, in contrast to the crisis in electricity supply we were hit by last winter, which was solely the responsibility of EPS. However, there are domestic factors that added fuel to the flames and intensified the acute crisis. The main structural problem is that the capacities of the domestic gas infrastructure are not sufficient to meet the country's needs for gas during the heating season, when domestic consumption of this fuel is two times higher than in the warmer half of the year. The quantities of gas delivered to the country under the long-term agreement with Russia are not sufficient to cover the daily consumption of this fuel in the coldest months, nor does our only storage facility in Banatski Dvor have the capacity to accumulate supplies in a timely fashion to cover this shortfall throughout the winter. As an additional problem, the generally inadequate storage facility was not sufficiently filled at the beginning of the 2021/2022 heating season and domestic supplies at the end of November 2021 were at a record low - as much as 50% below the multi-year average in that month. EPS and Srbijagas are directly responsible for that failure - EPS because since last summer it has irrationally consumed massive amounts of gas for electricity generation (40% of the storage facility capacity), and Srbijagas because it allowed this to happen on the eve of the global crisis and because the supplies were relatively low even if we exclude the consumption by EPS. As a result of these problems, already in early December 2021, Serbia had to rely unexpectedly heavily on very expensive gas that was bought on the foreign markets.

Total costs of gas purchases during the 2021/2022 heating season amounted to around EUR 1 billion, and yet a sizable portion of them could have been avoided. Since it entered the heating season unprepared, Srbijagas had to purchase unusually large quantities of gas directly on the market during the winter months, when gas prices on the European energy exchanges already skyrocketed. More specifically, our calculations show that in the period from October 2021 to March 2022, Serbia was able to meet about 60% of its needs for gas with regular imports under the long-term agreement it had signed with Gazprom, at a fairly favorable price of less than EUR 250 for 1,000 m^3. However, in order to meet the remaining 40% of domestic needs, it was necessary to additionally import gas at market prices (or possibly a bit more favorable prices) which were four times higher, on average around EUR 1,000 per 1,000 m^3. Translated into absolute figures, for the regular imports of Russian gas in those six months, Srbijagas had to set aside a little over EUR 250 million, while we estimate that the emergency imports cost almost three times more - close to EUR 750 million. A more detailed analysis of the cost structure of emergency imports reveals that around EUR 500 million was a consequence of insufficient storage capacity in the Banatski Dvor facility. Although this cost could not have been avoided in the short run, it is certainly the result of mistakes made by Srbijagas and the Government in the past. That is to say, the expansion of Banatski Dvor facility has been discussed ever since it was put into operation back in 2011, but nothing was done in the meantime. We assess the remaining EUR 250 million of emergency gas imports as an unjustified expense, because it is a direct consequence of current mismanagement of EPS and Srbijagas, which should have been prevented on time.

The fiscal cost of the gas crisis in Serbia during the last heating season reached half a billion euros and was higher than in comparable European countries. The Government's response to the challenges and risks faced by Serbia due to the crisis on the global gas market was not timely or preventive. Although the Fiscal Council warned of possible budget costs in its assessment of the 2022 Budget Bill, the Government was putting off its response to the strong increase in prices of imported gas until the very end of 2021. The price of gas was then frozen for all domestic consumers at its last November level by virtue of a separate decree, under which the state concurrently undertook to compensate Srbijagas for all the losses that the company was to incur due to the fact that its sales prices are far lower than the purchase prices. Our calculations show that this has caused Srbijagas to run a deficit of EUR 450-500 million by the end of March this year, and approximately the same amount was transferred to it from the state budget. More specifically, the company first received a subsidy in late December 2021, amounting to RSD 35 billion (about EUR 300 million), which was recorded under the item *Government loans (Net lending)*, and then another EUR 200 million in early January 2022. However, this subsidy was originally deemed to be temporary and was recorded "below the line", so it is not yet identifiable in the budget expenditures for this year. It is already quite clear that this is a subsidy that Srbijagas will not repay, and therefore we call on the Ministry of Finance to recognize this cost and include it in the current fiscal deficit. The decision to protect absolutely all domestic gas consumers against unfavorable market trends deviates from European practice, where fiscal measures to mitigate the consequences of rising electricity and gas tariffs were mostly targeted and aimed at protecting vulnerable consumers. Preliminary calculations show that direct budget outflows in the EU countries for mitigating the consequences of rising electricity and gas tariffs during the 2021/2022 heating season amounted to 0.5-1% of GDP, while Serbia had a fiscal cost of about 1% of GDP for overcoming the gas supply crisis alone (to which we should add almost the same amount of contingent costs due to EPS's losses).

The government still keeps the domestic gas price unchanged - if such a policy continues, the cost to all citizens will be another EUR 500 million. What is in store for Serbia in 2022 is a steep and by all accounts more durable hike in the natural gas import prices. A new three-year gas supply agreement with Gazprom has been in force since June, under which Serbia got a favorable price compared to current market trends, but it will still be higher by about 50% compared to the previous contractual price. However, the contracted quantities of gas remained the same, which means that considerable quantities of this fuel still have to be purchased on the market at prices that will definitely remain very high at least until the end of the next heating season. Taking into account all the uncertainties, our best estimate is that the average purchase price of the gas that will be consumed until the end of the next heating season could be around EUR 500 for 1,000 m^3. This is twice the price that Srbijagas was paying in the period before the crisis, and almost equal to the weighted average price that was paid for regular and emergency imports during last winter. If the Government decides to continue pursuing the policy of frozen gas prices for all consumers, next winter Srbijagas can once again incur losses of almost EUR 500 million, which would be shifted onto the state budget following the same recipe. In all likelihood, Srbijagas has already received certain budget funds that are earmarked for replenishing domestic gas supplies during the summer. More specifically, after the end of the last heating season, this company borrowed with a state guarantee the amount of EUR 200 million (on top of the already received EUR 500 million), and we have also identified some new government outflows that were recorded "below the line" similar to the January subsidy to Srbijagas.

The main priority of the Government is to secure enough gas for the coming winter, but the way of managing the gas crisis must be completely overhauled. The difficult situation on the gas market is not related just to the record high prices, but in the fierce global race for supplies of this fuel, the challenge in the first place is to secure sufficient quantities. In this regard, it is good that the Government is already undertaking activities aimed at ensuring as stable as possible supply of gas to domestic consumers in the coming heating season, because this is certainly a priority. For example, the agreement reached with Hungary on the temporary use of its gas storage facilities is a good short-term solution until our own capacity is increased, which must become the country's absolute priority in the medium term. In this context, it is also prudent to provide funds in due course to Srbijagas, which are necessary to replenish the gas supplies for the coming heating season in a timely manner. However, the global increase in gas prices has assumed the form of a structural shock, which is why it is absolutely necessary for the Government to make a radical shift in the way it deals with this crisis, which implies the adoption of measures to ensure that the Serbian economy and households are adapted to the permanently higher price of this fuel in a manner that is sound in economic, fiscal and social terms. This specifically means that gas prices paid by domestic consumers should go up commensurately with the rise in import prices of gas, and this transition to higher prices would have to be accompanied by fiscal and social policy measures in order to protect the most vulnerable consumers. Any other solution would send a false signal to the domestic market that gas is a much cheaper resource than it actually is (which creates distortions and leads to wrong investment and consumption decisions), it would be fiscally costly because, as it seems, Srbijagas will not be able to repay even the new funds that it has received, while without stronger social protection, such a transition would be socially unacceptable.

The price of gas for industry should fully take into account the increase in import prices of this fuel, while providing selective support to particularly vulnerable companies. Srbijagas earns the lion’s share of its income from the sales of gas to industrial companies and heating plants, which is why there is no other way to avoid losses in the coming period than to increase the price of gas in this segment of the market in proportion to the growth of its purchase prices. On the assumption that the average import price will be doubled, in order for Srbijagas to operate as successfully as in the pre-crisis period, the increase in the price of gas for industry (businesses and heating plants) should be around 75%. There is no doubt that such hefty price hike would constitute a major shock, but the economies of all comparable countries are in an equally difficult situation. More specifically, before the crisis, the domestic price of gas in the liberalized segment of the market was practically at the level of the CEE average. However, with the outbreak of the energy crisis, the average price of gas for industry in the CEE countries soared by 75% as early as the second half of 2021 (in some countries two or more times), which happened to a much lesser extent in Serbia, since the Government froze gas prices in the meantime. Consequently, in late 2021, the average gas price paid by businesses in the CEE region was about 50% higher than the price for Serbian businesses. Hence, the statements that can occasionally be heard in the public sphere to the effect that the cost-recovery price of gas would ruin the domestic economy and its international competitiveness are unfounded - on the contrary, it would put it on the same footing as the majority of its competitors in the region. On the model of European practice, the Government should definitely consider mechanisms for providing temporary and selective fiscal support to specific and particularly vulnerable companies.

It is inevitable for households to also feel the deterioration of the gas market terms, either directly or indirectly through a rise in the cost of heating. The gas price for households in Serbia is regulated and approved by the Energy Agency following a statutorily defined methodology. However, the economic rationale dictates that it must also go up in a situation where the imports of this fuel have become dramatically more expensive - at least to reach the level of the price at which Srbijagas is purchasing it, and probably slightly above it. This has already happened in the CEE countries, since the price of gas for households in the second half of 2021 increased by 30% on average, so that at the end of last year it was 50% higher than the price paid by Serbian households. The same goes for the prices of district heating services, since most of the heating plants in Serbia use gas to produce the thermal energy they are delivering, and which are faced with a steep increase in their costs for the purchase of energy fuels. In order to ensure their profitable operations, and thus prevent them from falling into arrears to Srbijagas, which was a major source of insolvency for the company in the previous decade, our rough calculations show that the prices of heating services in the cities and municipalities whose heating plants use gas could go up between 10 and 40%. The amount of the price increase depends on several factors, and the adjustment of the heating price should definitely be made by using a case-by-case approach, because heating plants are a heterogeneous group of companies that do not have a uniform pricing policy even now. It is necessary to point out here that the central government and local self-governments would have to get actively involved in order to prevent the heating price increases from being spent on other costs and irrational business moves in heating plants, as has already happened before.

The state must protect vulnerable citizens, but not with low energy prices for all, as it has been doing so far, but exclusively with properly targeted assistance from the budget. One of the problems in the Serbian energy sector is that for decades the state has been conducting social policy through relatively low energy prices, which is especially true for the electricity price. This has to change - otherwise, the public energy enterprises will incur losses amounting to about EUR 1 billion next winter too, and the bulk of these losses will, after all, be covered (from the budget) by all citizens of Serbia. However, in order to make a socially responsible transition to a system in which all consumers pay the cost-recovery price for the energy they consume, the Government has to put in place an efficient system for the protection of energy vulnerable households. In Serbia, budgetary assistance intended for paying electricity and gas bills is already being provided to energy vulnerable customers, and it is received by nearly 70,000 households at a total cost to the state of around EUR 10 million a year. Our analyses show that the present system is not sufficient to adequately protect all objectively vulnerable citizens against economically justified increases in the prices of electricity, gas and heating, which is why it must be urgently reformed. More specifically, several independent sources indicate that there are 250-300,000 households in Serbia that can be considered energy vulnerable, which is at least four times more than the number of households currently receiving assistance from the state. Comparative analyses also confirm that the coverage of this social program in Serbia is insufficient and that it should be expanded to cover 10-15% of all households. Another important change that seems necessary is that assistance for energy vulnerable households should be extended to include bills for district heating. According to our estimates, these changes would result in higher budget costs for protecting energy vulnerable households by around EUR 50 million, which is absolutely reasonable – having in mind that fiscal cost could go up to EUR 1 bn during next winter if domestic energy prices remain unchanged.