JUST TRANSITION ACTION PLAN

1. INTRODUCTION

1.1.Energy and climate policies and regulations

The urgent need to reduce and eventually completely eliminate modern society's dependence on fossil fuels is a result of the crisis caused by climate change. As of February 2021, 197 countries have supported the Paris Agreement. The goal of this agreement is to hold the increase in the average global temperature to "well below 2°C above pre-industrial levels" and to pursue efforts to "limit the temperature increase to 1.5°C above pre-industrial levels".

As a member of the Energy Community and a candidate country for accession to the European Union, Serbia signed the Paris Agreement in 2015 and, with its ratification by the National Assembly in 2017 (Law on the Ratification of the Paris Agreement, "Official Gazette of the RS - International Treaties", No. 4/17), the Republic of Serbia agreed to actively work towards reducing greenhouse gas emissions. This commitment was confirmed in 2020 with the signing of the Sofia Declaration on the Green Agenda for the Western Balkans, by which the Republic of Serbia agreed to work, together with the EU, towards achieving the goal of making Europe a carbon-neutral continent by 2050.

Accordingly, the Republic of Serbia has adopted a new legislative strategic framework with the aim of establishing the decarbonization process:

- The Law on Amendments to the Law on Energy ("Official Gazette of the RS", number 145/2014, 95/2018 as amended, 40/2021, 35/2023 as amended, 62/2023 and 94/2024) was adopted, with the aim of regulating the balancing market, establishing "active customers" and introducing dynamic tariff contracts. These amendments also mark the return of nuclear energy to the Serbian energy sector and introduce certification for installers of renewable energy facilities.
- The Law on the Use of Renewable Energy Sources ("Official Gazette of the RS", No. 40, _ dated 22nd April 2021, 35 dated 29th April 2023, 94 dated 28th November 2024 - as amended), which enables new investments in renewable energy sources and facilitates an increase in the share of renewable sources in the overall energy mix. It introduces market premiums instead of the previous feed-in tariffs, which only apply to small plants and demonstration projects, in accordance with EU state aid rules. Together with the by-laws, this law provides a stable and predictable legal framework for investors, which implies simpler and faster administrative procedures with the introduction of e-energy. This further facilitates greater penetration of RES into the market, by defining the roles of citizen and consumer energy communities. The accompanying by-laws, such as the regulation on balancing and the regulation on the feed-in premium, which were subsequently adopted, enable faster integration of new RES capacities into the Serbian electricity system and market, while preserving the reliability and stability of the system. With such a legislative framework, Serbia published its three-year renewable energy auction plan, which foresees a total allocation of market premiums for 1,000 MW of wind capacity and 300 MW for solar power, and successfully conducted the first auction for 400 MW of wind power and 50 MW of solar power in 2023 with the support of the EBRD.
- The Law on Energy Efficiency and Rational Use of Energy ("Official Gazette of the RS", number 40/2021) was adopted in 2021 with the aim of harmonization with EU regulations in the field of energy efficiency. This law represents a key part of the legislative framework

in the field of energy efficiency and in establishing conditions for the efficient use of energy and energy resources, energy efficiency policy; energy management system; energy efficiency policy measures (use of energy in buildings, in energy activities and by final customers, for energy facilities and energy services); energy labelling and requirements related to eco-design; financing, incentives and other measures in this field. Its main purpose is to create conditions for the efficient use of energy and improvement of energy efficiency, thereby contributing to energy savings, security of energy supply and reduction of the impact of the energy sector on the environment. This law also creates a legal basis for the establishment of the Administration for Financing and Encouraging Energy Efficiency, with the aim of rationalizing and increasing the financing of energy efficiency.

- The Law on Climate Change ("Official Gazette of the RS", No. 26/2021) of the Republic of Serbia has established one of the main components of the institutional and legal framework necessary to combat climate change, namely the establishment of a system for reducing greenhouse gas (GHG) emissions and adapting to changing climate conditions. By adopting it, Serbia is moving towards fulfilling its obligations to the international community, namely the UN Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. With this law, Serbia reserves the right to create a legislative framework and set development goals, taking into account all the specificities of the economic and energy sectors and other national socio-economic parameters.
- In September 2022, the Republic of Serbia updated its Nationally Determined Contribution (NDC) for the period 2021-2030, in accordance with Articles 3 and 4 of the Paris Agreement and paragraphs 22 and 24 of Decision 1 CP/21, increasing its ambition to reduce GHG emissions by 13.2% compared to 2010 levels, or 33.3% compared to 1990 levels, by 2030.
- On 1st June 2023, the Government of the Republic of Serbia adopted the Low-Carbon Development Strategy of the Republic of Serbia for the period from 2023 to 2030, with projections until 2050. The adoption of the Low-Carbon Development Strategy aims to establish strategic directions of action and public policies to reduce greenhouse gas emissions throughout the economy.
- The Integrated National Energy and Climate Plan of the Republic of Serbia until 2030 with projections until 2050 (hereinafter: the INECP), ("Official Gazette of the Republic of Serbia" number 70/2024), based on Article 8a) paragraph 3 of the Law on Energy ("Official Gazette of the RS" No. 145/14 and 95/18 as amended and 40/21), and in connection with the Treaty establishing the Energy Community between the European Community and the Republic of Albania, the Republic of Bulgaria, Bosnia and Herzegovina, the Republic of Croatia, the former Yugoslav Republic of Macedonia, the Republic of Montenegro, Romania, the Republic of Serbia and the United Nations Interim Administration in Kosovo pursuant to Resolution 1244 of the United Nations Security Council ("Official Gazette of the RS", number 62 dated 19th July 2006) and Article 50 of the Law on the Planning System of the Republic of Serbia ("Official Gazette of the RS" No. 30/2018).
- Energy Sector Development Strategy of the Republic of Serbia until 2040 with projections until 2050 (hereinafter: Energy Sector Development Strategy), ("Official Gazette of the Republic of Serbia" number 94/2024).

The Green Agenda encompasses various areas of action in order to realize the transition to a green, sustainable and circular economy. The essence of this transition is the decarbonization process, in which the energy sector plays a key role. In order to implement the decarbonization process, it is necessary to define an energy and just transition. There are two key documents that define the decarbonization process in Serbia, namely the INECP and the Energy Sector Development Strategy.

By Decision of the Ministerial Council D/2021/14/MC-EnC, the adapted regulation 2018/1999 was adopted, which prescribes the obligation to develop an Integrated National Energy and Climate Plan for all Contracting Parties. The adapted regulation 2018/1999 prescribes the consideration of the aspect of just transition.

The INECP defines the objectives, measures and policies, the structure of the energy sector, the required capacity of new plants, the required energy production and final energy consumption for the period up to 2030 that need to be implemented in order to implement the energy transition process. This document also shows the macroeconomic impact and, to the extent feasible, the impact on health, environment, employment and education, skills, as well as society, of the planned policies and measures, with the fact that it is established that a more detailed analysis of the impact on employment in specific areas will be defined in the Just Transition Action Plan.

The Energy Sector Development Strategy defines that the process of implementing the energy transition must be gradual, but also decisive, transparent and inclusive, professionally, socially and economically sound, based on good professional dialogue, international obligations and acceptable solutions that will ensure secure energy supply, respect for environmental protection standards and human rights. The key challenge of the transition in the Republic of Serbia is solving the problem of mining basins, i.e. creating a new development paradigm for regions whose economy is dominantly dependent on coal. Therefore, one of the most important goals of the social dialogue on the energy transition is to reach an agreement on a just energy transition, which requires an appropriate legal-political, socio-cultural and strategic framework, with mutual coordination of different professions, the management of energy companies, employees and the civil sector. The Energy Sector Development Strategy considers the aspect of just transition and defines the adoption of the Just Transition Action Plan as the first step in the process of establishing a just energy transition.

Given the scope and complexity of Serbia's energy transition process, the aspect of just transition was specifically considered and analysed within the project Just Transition Diagnostic Study of Serbia, within which the Just Transition Action Plan was prepared.

1.2. Link between the objectives of the energy and climate policy and the Just Transition Action Plan

The goals of the energy sector of the Republic of Serbia for 2030 defined by the INECP are:

- RES share in gross final energy consumption of 33.6%;
- Increasing the share of RES in electricity production to 45%, which will make RES an equal domestic source of electricity alongside coal;
- Significant increase in energy efficiency: final energy consumption in 2030 will be a maximum of 9.6 Mtoe, while primary energy consumption in 2030 will be a maximum of 14.68 Mtoe;
- All these measures should result in a reduction in greenhouse gas emissions by 40.3% compared to 1990, which is in line with the Nationally Determined Contribution (NDC) adopted and submitted to the United Nations.

The realization of goals is directly related to the social, economic and financial aspects of the future development of Serbia. The decarbonization process leads to a reduction in the number of employees in coal and electricity production, and it is therefore necessary to define measures and policies to prevent negative consequences.

The Energy Sector Development Strategy establishes general priorities for energy sector development and the principles on which the energy policy of the Republic of Serbia should be developed, namely: energy security, decarbonization and economic competitiveness of the energy sector. One of the prerequisites for the implementation of these priorities is the intensification of activities for a just socio-economic transition of coal regions. It is necessary to start preparatory activities as soon as possible, which include legislative changes, the introduction of necessary changes in sectors such as education, tourism and agriculture, planning the economic development of affected municipalities/regions in an alternative way and openly informing stakeholders on the ground about the changes that will come in the next few decades in order to prepare for the changes on time.

1.3. Definition of just transition

A just transition aims to promote environmentally sustainable economies in a way that is fair and inclusive for all – workers, businesses and communities – by creating opportunities for decent work and leaving no one behind. This initiative should not be seen as a fixed set of rules, but as a dynamic process based on dialogue with a focus on addressing the concerns and needs of local populations and affected stakeholders. Community engagement will also be key to realizing the full potential of low-carbon energy and greening the economy, giving priority to the feedback from local authorities and NGOs on the appropriateness of developing specific projects, as well as establishing an inclusive and fair supply chain process, including the core principles for a just transition.

At the heart of a just transition lies a sustainable energy policy that will include actions to reduce dependence on fossil fuels, improve the security and efficiency of energy supply by shifting to renewable energy sources such as hydropower, biogas, biomass, solar energy, wind, etc., and increasing energy efficiency. However, activities are not limited to the energy sector, but the concept of a "just transition" includes using all the opportunities that transitioning to a "green economy" brings. A "green economy" is defined as a socially inclusive economy with low carbon emissions and efficient resource management. In a green economy, employment and income growth are driven by public and private investments in economic activities, infrastructure and assets that enable the reduction of pollution and carbon emissions, improved energy and resource efficiency, as well as in preventing the loss of biodiversity and ecosystems. Investment in renewable energy sources, energy-efficient buildings, sustainable transport and waste management systems is essential. These initiatives not only address environmental challenges, but also create new economic opportunities and jobs, stimulating innovation and technological progress.

Moreover, fostering a green economy involves increasing the resilience of communities and ecosystems to climate impacts, promoting social equity and ensuring inclusive growth. By integrating environmental and economic goals, a green economy aims to achieve sustainable development that balances environmental health with human well-being. Green investments should be enabled and supported through targeted public spending, policy reforms and changes in taxation and regulations. The emphasis is on building a resilient economy that can withstand environmental shocks, on promoting the sustainable use of natural resources and on supporting a high quality of life for current and future generations. The concept of a green economy is realized through:

- Development of policies, technical support and knowledge that will result in policy tools and guidelines
- Financing mechanisms and new business models
- Institutional training (including the organization of educational institutions so that they integrate green economy concepts into sustainable autonomous curricula) and capacity building

However, the phasing out of fossil fuels has the potential to have a critical impact on regions, communities and workers, especially in relation to the three main pillars discussed below. Therefore, appropriate measures and approaches, which we refer to as the "Just Transition", must be designed to mitigate any negative consequences:

1. Retraining of the workforce: Fossil fuel-fired power plants and thermal power plants and the mines that supply them provide direct employment for thousands of workers. In addition, there are significant indirect employment opportunities related to these industries, including transportation, equipment manufacturing, and maintenance. The transition will require significant investments in retraining and reskilling programs to help workers adapt to the new industries.

2. Education: Skills development initiatives should focus on providing workers with the necessary competencies to advance in emerging sectors, such as renewable energy, energy efficiency, and sustainable agriculture. Green economy skills should be prioritized, given that the energy transition is not the only transition that has the potential to impact Serbia.

3. Economic diversification: Local economies often rely heavily on coal supply chains and the disposable income of workers in fossil fuel-based industries. The closure of these industries can have consequences for local businesses, suppliers and service providers. To mitigate these impacts, promoting economic diversification is key. Encouraging the development of new industries and supporting small and medium-sized enterprises (SMEs) can create alternative sources of income and employment. Investments in infrastructure, technology and innovation can stimulate economic growth in affected regions.

4. Energy dependency and resources: Regions that rely heavily on fossil fuel-based energy may face challenges in ensuring energy security during the transition. Investing in renewable energy infrastructure, such as wind, solar and hydropower, is essential to achieve a stable and sustainable energy supply. Allocating financial and technical resources is essential to support affected regions. Government policies and financial mechanisms, such as transition funds and green bonds, can provide the necessary support to facilitate the transition and help ensure that no region is left behind.

5. Social and economic issues: Social dialogue mechanisms should be established to ensure that the voices of all stakeholders are heard and their concerns are addressed. This includes consultations with trade unions, local self-governments and civil society organisations. The environmental impact of fossil fuel extraction and use must be addressed. Initiatives aimed at restoring the natural environment, such as land remediation, pollution control and biodiversity conservation, can create new employment opportunities and contribute to the overall well-being of the affected communities.

Given the objectives set out in the INECP, as well as the consequences of the energy crisis affecting the region, it is of utmost importance to envisage and implement actions aimed at the relevant regional aspects of the energy transition. These actions should be developed with a coordinated approach to the opportunities for cross-border and regional cooperation, using their full potential.

By switching from fossil fuels to renewable energy sources and increasing their share in the energy mix, Serbia can significantly reduce carbon emissions. This not only helps mitigate climate change, but also improves air quality and public health. Investing in renewable energy sources such as wind, solar and hydropower can improve Serbia's energy independence by diversifying energy sources. Implementing energy efficiency measures as part of the transition to greener energy sectors can lead to significant energy savings. As a result, energy costs for consumers and businesses could be reduced. The transition to a green economy can create new employment opportunities and stimulate economic growth. Moreover, related investments in renewable energy infrastructure, energy efficiency and sustainable technologies can trigger entrepreneurial innovation that will lead to new jobs in different sectors. Adopting sustainable practices can have a positive impact on the environment, including conserving natural resources, preserving biodiversity, and mitigating the harmful effects of climate change.

High capital needs at the beginning of the process represent the main challenge in the transition to a green economy, due to the necessary investments and reforms for the transformation of the energy sector, which are proposed in the INECP. Another major challenge is the process of changing the established business models in the economy and gradually adopting a "climate-neutral" and circular economy. This requires a new way of thinking about business with the adoption of sustainable practices, such as reducing carbon footprints, minimizing waste, using renewable energy sources and designing products with a long lifespan and the possibility of being recycled, as well as acquiring new skills through appropriate training. This is a project that will take several years, but Serbian society and the economy of Serbia will benefit from attracting and retaining highly qualified workers and developing their communities in line with the new environmental plan.

Achieving all of the above requires a stable and well-designed governance plan and implementation program, which also represents a significant challenge, as it encompasses legal, regulatory and institutional changes and reforms. The governance framework, which is a structured set of policies, procedures and guidelines, should ensure that all actions are in line with Serbia's objectives and regulatory requirements. The implementation program, which is a detailed plan of activities designed to implement the strategies and policies outlined in the governance framework, should ensure that the transition to new business models is carried out effectively and efficiently.

2. WHY JUST TRANSITION IS NECESSARY

Serbia's energy sector is largely based on coal, and Serbia does not have significant amounts of other natural resources such as oil and gas. Domestic coal is used in the production of electricity in thermal power plants – low-quality lignite, which is produced in the two largest surface mines in Serbia: Kolubara and Kostolac. In addition to these surface mines, there are also underground coal mines within the PE UCM Resavica, as well as the underwater coal mine Kovin. However, underground and underwater coal mines account for only 1% of total domestic coal production.

Until December 2021, domestic electricity production met domestic needs, although even before that, the power system had been making maximum efforts for many years to provide sufficient amounts of electricity, or rather, to provide sufficient amounts of coal for the operation of thermal power plants. The fact is that existing electricity generation plants are old, and most of them are not in line with new operating conditions and standards when it comes to environmental protection.

Therefore, it is quite clear that in the case of the Serbian energy sector, the energy transition should lead to a radical change in the structure of sources and methods of electricity production.

The closure of old thermal power plants is certainly inevitable, and necessary when it comes to the decarbonization process. The closure of old thermal power plants in order to reduce the use of coal leads to a decrease in coal demand which may affect the decline in production in individual mines and change their status from active to reserve. In this sense, this affects the change in the structure of the economy, i.e. the reduction of coal production, and may also have an impact on other economic activities that are closely related to coal production.

The main factors contributing to the need for Serbia to urgently adopt a decarbonization plan across all sectors of the economy are:

- 1. Technical-technological Modernization of the energy sector and establishment of a new concept of work in accordance with modern technologies, practices and current policies, given that the existing structure is old and based on low-quality coal and that Serbia has no other significant reserves of fossil fuels.
- 2. Improving environmental protection and quality of life in the face of climate change (and fulfilling Serbia's international obligations in this area), as well as, very importantly, improving poor air quality in affected territories.
- 3. Economic factors, due to the tendency for energy prices to rise, the lower levelized cost of electricity from renewable sources compared to coal, higher economic costs in determining the prices of external factors (such as carbon taxation), and the age of coal-fired power plants, which leads to their low efficiency.
- 4. Social impacts, such as when the assets "locked" in coal production limit the development of communities and regions. There is also potential resistance to the transition to green energy in vulnerable communities. This would have consequences for the timeframe of the transition, if the planned mitigation activities are not implemented effectively and while fostering social cohesion. Social impacts will therefore primarily require a well-timed set of interventions that will act as a social security net for those affected, and in parallel, a well-planned and implemented awareness-raising/public information campaign, to enable citizens not only to understand and accept the necessity of the changes, but also the availability of mitigation measures, which will enable a just transition for all, but especially for the socially vulnerable. This is particularly important in the predominantly mining municipalities with coal production.

3. STARTING POINTS FOR DEVELOPING A JUST TRANSITION ACTION PLAN

The Action Plan is developed in line with the European Commission's (EC) "Just Transition" concept, which encompasses clean energy, social, demographic, economic, health and environmental dimensions of the transition to a climate-neutral economy, and which is expressed through the regulatory framework (EC 2021/1056 establishing the Just Transition Fund) and the Just Transition Platform.

The basic information on which the Just Transition Action Plan (hereinafter: JTAP) is based are the following:

- Serbia's energy sector goals for 2030 defined by the INECP. The policy and targets for reducing GHG emissions are directly related to the operation of the energy sector and the country's energy security, and in this sense have a special significance for the energy sector of Serbia. In this sense, Annex II of the INECP presents the results of the analysis, taking into account primarily the aspect of security of supply, which covers the risks associated with uncertainties in the energy sector at the international level. The INECP primarily defines the structure of electricity production, taking into account the goal of reducing GHG emissions.
- The Energy Sector Development Strategy of the Republic of Serbia until 2040 with projections until 2050 determines that the dynamics of the operation of thermal power plants will depend primarily on energy security, so that it is not threatened at any time. The operation of thermal power plants will be adjusted to the current needs for electricity. This means that some units will operate at maximum capacity, while a number of them will operate at reduced power or, in a later period, will be in the reserve status. In order for the operation of these power plants to be in line with the needs of decarbonization, it is also necessary to consider the application of technologies for the collection and storage of carbon dioxide. The possibility of operating at reduced power will enable variability in the overall electricity generation portfolio. Of course, all this assuming that the production portfolio will include RES with a targeted (or higher) share in electricity production of 45% in 2030, or 73% in 2040.
- The decarbonization plan, i.e. the withdrawal from operation of thermal power plants, as well as the transition plan for individual mines within the PE PEU Resavica will be defined in the coming period. The energy transition process in Serbia is complex and is at its beginning because it is an energy system based primarily on domestic coal and old plants. Such a system has a major impact on the social and economic aspects of society and the state. On the other hand, the energy transition process in Serbia has begun and is taking place at a very uncertain time, with an unpredictable and uncertain international energy situation.
- The Republic of Serbia is not a member of the European Union and, in this sense, it did not have an obligation to reduce GHG emissions compared to the countries which are members of the European Union until the adoption of the Intended National Determined Contribution (INDC) in 2015. The Republic of Serbia is not part of the EU greenhouse gas emissions trading system and does not have an established greenhouse gas emissions taxation system. Greenhouse gas emissions trading and greenhouse gas emissions taxation affect the speed of the decarbonization process and the dynamics of the withdrawal of thermal power plants from operation. Accordingly, this also has a significant impact on the perception of the just transition process.
- The EU Carbon Border Adjustment Mechanism (CBAM) entered into force on 1st October 2023 as a mechanism that aims to address the risk of "carbon leakage" by establishing a carbon price when importing certain goods from non-EU countries. The key objective of the mechanism is to level the playing field for European producers facing a carbon price for their emissions under the EU ETS, at the same time to encourage the decarbonisation of the industry at a global level.

CBAM initially covers six industrial sectors: iron and steel, cement, fertilizers, aluminium, power generation and hydrogen. In a transitional phase, from 1st October 2023, EU importers of goods covered by CBAM originating in non-EU countries will be required to include the emissions of their imports in their declarations, without being incurred any financial obligations. The obligation to purchase and surrender CBAM certificates will then

apply from 1st January 2026, effectively establishing a carbon price that should reflect the level of the carbon price in the EU ETS.

There are two ways to be exempted from the application of the CBAM to electricity imports: (I) participation in the EU ETS or an established emissions trading system linked to the EU ETS, or (II) having an established national electricity market that is integrated with the EU internal electricity market through market coupling, timely transposing the relevant EU energy acquis, being committed to working towards climate neutrality by 2050 and committing to implementing an electricity emissions trading system, with a price equivalent to that of the EU ETS by 1st January 2030.

The introduction of domestic carbon pricing in Serbia as a strategy to mitigate the effects of the EU CBAM could provide significant environmental and economic benefits, aligning the country with international climate policies and protecting its trade interests. However, this also brings certain challenges, such as economic costs, potential problems and complexity of implementation. Balancing these factors will be crucial to ensure the success of the policy and its acceptance by the economy and the public. In order to balance the economic and environmental impacts of the introduction of domestic carbon pricing in Serbia, a phased approach could be adopted, starting with a modest carbon price and gradually increasing it. Support for affected industries, such as subsidies for low-carbon technologies and worker retraining programs, along with recycling revenues to finance green projects and providing direct rebates to citizens, can mitigate negative effects. Engaging stakeholders, ensuring transparent communication, and combining carbon pricing with complementary policies such as energy efficiency programs and emission standards are of essential importance. Regular policy reviews and adaptive governance will help fine-tune the system to achieve economic sustainability and ensure public support.

The introduction of a carbon tax mechanism will make domestic coal-fired power plants increasingly uncompetitive, especially in regional electricity markets. This will have an impact on the operation of thermal power plants, as well as on the consideration of the aspect of a just transition.

- socio-economic analysis of regions where coal is produced and used for electricity generation.

The aspect of security of supply, primarily due to the global escalation of geopolitical conflicts, especially the war between Russia and Ukraine, in early 2022, which completely changed the international circumstances in the energy sector, primarily on the European continent. Sanctions and embargoes on the import of energy products from Russia, as well as physical sabotage, have disrupted the established routes for supplying Europe with natural gas and oil.

It is important to emphasize that a just energy transition is a process within which a new structure of economic and social development should be created.

Considering the legislative and strategic framework, as well as the fact that the defining of policies, that are a key parameter for the decarbonization process and the aspect of just transition, is expected in the coming period, the Republic of Serbia is only at the beginning of the decarbonization process, i.e. the energy transition. Accordingly, the Just Transition Action Plan represents an introduction to the process of just energy transition and defines the measures and activities that need to be implemented in order to establish just transition management, as well as preparatory activities to prevent negative consequences of the energy transition and stimulate regional development.

4. ANALYSIS

The analysis covered only the process of closing the Kolubara A and Morava TPPs, as the oldest plants. By adopting the Decarbonization Plan for the Serbian Electric Power Company and the transition plan for individual mines within the PE PEU Resavica, considering the consequences of the CBAM and establishing policies related to the implementation of the CBAM and carbon taxation, it is necessary to conduct a detailed analysis of the entire energy transition process and accordingly define all other measures and activities that need to be further implemented.

4.1. Open-pit coal mining

The following table shows the installed TPP (lignite fired) capacities of EPS.

Plant	Number of units	Installed Capacity (MW)	Start-up year
Nikola Tesla A TPP	6	1,765	A1: 1970 A2: 1970 A3: 1976 A4: 1978 A5: 1979 A6: 1979
Nikola Tesla B TPP	2	1,300	B1: 1983 B2: 1985
Kolubara A TPP	5	271/239	A1: 1956 A2: 1957 A3: 1961 A4: 1961 (Out of order) A5: 1979
Morava TPP	1	125	1969
Kostolac A TPP	2	310	A1: 1968 A2: (of 210 MW): 1980
		697	B1: 1987
Kostolac B TPP	3	350 (new)	B2: 1991 B3: 2024

Table 1: Thermal Power Plants installed in the country (sources: EPS)

The oldest is the Kolubara A (239 MW) built in 1956, and the youngest is the Kostolac B (697 MW which started operation in 1992), with the exception of the new 350 MW unit of TPP Kostolac B3, which is currently in trial operation.

Most coal reserves are located in two main coal basins: **Kolubara** and **Kostolac**, which supply Serbia's TPPs. The two mining basins jointly, located in the **Kolubara** and **Braničevo** districts respectively, produce approx. 32 million tons per annum (75% at Kolubara and 25% at Kostolac). Kolubara supplies 3 TPPs (Nikola Tesla A & B, and TPP Kolubara; 12 units in total), whereas Kostolac 2 TPPs (Kostolac A and B; 5 units in total). Apart from the open cast mines located in the vicinity of the TPPs, coal is supplied also from the underground coal mines owned by the state-owned company **PEU Resavica**, which serves the EPS TPPs. Resavica holds and maintains 9 underground coal mines (total annual coal production 0.3 to 0.4 million tons). The main coal assets of Resavica are located in the regions of Šumadija and Western Serbia, Southern and Eastern Serbia, and parts of Belgrade.

4.2. Underground coal mining

The PE PEU Resavica's share of Serbian coal production is less than 1% making the company a marginal, high-cost producer. The mines with the most production are Rembas, Ibarski Rudnici, Soko and Štavalj. Production has declined year by year (current production volumes are approximately one-third of peak production, which was recorded in 1968), while the staff costs are gradually increasing. PE PEU Resavica produces 300,000 to 400,000 tons of coal per year. Primarily it is lignite, brown and hard coal, of which more than half is transported to thermal power plants Nikola Tesla A and B, and Morava, run by joint-stock company Elektroprivreda Srbije (EPS). The production of coal per employee by PE PEU Resavica is more than ten times lower than comparable mines in the region. Resavica has also a poor work safety record. These conditions put PE PEU Resavica in an unfavorable position compared to national and regional competitors. The coal produced within the PE PEU Resavica has a high calorific value, which significantly reduces the amount required for combustion compared to coals that are low in calories.



Figure 1: Locations of Resavica mines

As potential closure of Resavica mines is not deternined in the NECP or any other official act, the diagnostic report and JTAP focus only on the possible impact of the closure of TE Morava and TE Kolubara on some of the mines within JP PEU Resavica the associated Municipality, Despotovac, as an illustrative case study. There are four pits within the Rembas mine and exploration of the first pit began in 1853, and all pits are connected by underground tunnels. Rembas is the largest underground coal mine in Serbia. About 130,000 tons of coal from Rembas mine per year is currently delivered by train to Morava power plant, a 125 MW TPP. Regardless of the process of energy transition, the mines Bogovina, Jasenovac and Aleksinac (which is not an active mine but its employees are engaged in performing mining works in other mines within JP PEU Resavica) are close to the exhaustion of coal reserves or the further exploitation of coal.

PE PEU Resavica is not systemically important for the whole coal sector, even though its mines can be systemic to the economic and social environments in specific localities. Restructuring of PE PEU Resavica and phased closure of its mines will be a complex process, with numerous

challenges to ensure that the winding down process is properly managed and that negative impacts are minimized. Therefore, *pilot* projects should definitely be considered to alleviate the possible impact on the employees of PE PEU Resavica and on the socio-economic development of the region, as well as on the process of a just energy transition.

Social protection instruments and approaches can help mitigate the negative impacts from potential coal mine closure on labor and help coal sector workers return to productive employment. Redistribution of labor to other mines, the introduction of active labor market policies, coupled with income support and auxiliary services, can address frictional unemployment, build human capital, and be helpful in a number of other ways. A key issue is how to design and implement social protection and labor services in a manner that facilitates private sector investment to grow the economy and create jobs, while not overextending public resources. On the policy level, instruments to help mitigate the consequences of labor redundancies should accompany reforms to promote private sector development, remove obstacles to job creation, and modernize labor market policies. Lastly, effective and continuous dialogue and consultation has proven to be an essential element of any hard coal sector adjustment strategy.

Coordination and collaboration between the government of Serbia, PE PEU Resavica, and local municipalities is critical to design and provide development programs in regions affected by mine closure in order to avoid further impoverishment and outmigration.

Coal mine	Average annual coal production (t)	Employees	Municipalities
Resavica - Rembas	120,000-160,000	1,095 (year 2021) 1,074 (year 2022) ¹	Despotovac

4.3. Employment in the coal mining and TPP sector

The mining sector and associated electricity generation are large employers, with EPS recording in total 15,769 employees (2023 data) and ProTENT 5,954 employees, associated with the Kolubara and Kostolac basins. PE PEU Resavica reports a total of 3,565 employees². In 2023 the total number of employees at the Kolubara and Kostolac mines was 16,120. This figure includes employees from both EPS and ProTENT. Together with Resavica mines the total number of employees in coal mining is close to twenty thousand, as presented in the table below:

Table 3: Number of employees in coa	I mining in Serbia (Resavica, EPS (2023 data))
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	Mining Basin	Employees (Miners)
Underground coal mining	Resavica (9 mines)	3,565
Lignite mining EDS	Kolubara	13,593
	Kostolac	2,527
Total		19,685

² INFORMATOR-O-RADU-JP-PEU-RESAVICA.pdf (jppeu.rs)

Source: EPS and Ministry of Mining and Energy

For the same year, EPS reported a total of 5,603 employees, including ProTENT employees, at the TPPs, as shown in the following table.

Facility	Number of employees (TPPs)
Nikola Tesla A	2,033
Nikola Tesla B	1,312
TPP Kolubara	548
Kostolac A	533
Kostolac B	891
Morava	286
TOTAL	5,603

Table 4: Number of employees in the TPPs of the EPS and ProTent (2023 data)

Therefore the total number of employees in TPPs and coal mines in Serbia stands at 25,288.

According to the Statistical Office of Serbia – SORS (2021), the municipalities of Lazarevac, Obrenovac and Lajkovac respectively register 9,367, 1,855 and 1,341 people employed in the mining and electricity sectors. Ljig, officially, employs 159 people in the two sectors, since it is the smaller municipality, among the four. Apart from the municipalities of Lazarevac, Obrenovac, Lajkovac, and Ljig, there is a need to mention that two other municipalities, Ub and Aranđelovac, have in total 1,221 employees in EPS (in the Kolubara area, as analysed from EPS data, 2022). The majority of those workers are employed in the mines.

In the case of Despotovac, it is influenced by the operation of the PEU Resavica mines and especially the Rembas mine. According to the Statistical Office of Serbia (2021), the municipality registers 1.304 people employed in the mining and electricity sectors , that is 27.14% of their overall working force. The vast majority of them are in the mining sector.

4.4. SWOT Analysis of impacted territories

Kolubara Basin

Table 5: Strengths, Weaknesses, Opportunities and Threats table for Kolubara Basin- illustrative example

	Helpful	Harmful
Internal	 Strengths Proximity to Belgrade and the excellent geographical position. Most of the affected territory is located on transport Corridor XI, while Arandjelovac is just between the Corridor X (15 minutes driving distance) and Corridor XI (45 minutes driving distance) and lies on the highway "Karadjordje" that will connect the two corridors passing near Arandjelovac (start of the works planned for 2024). The economy in all the affected territories follows a stable growth over the last years. In Obrenovac, Aranđelovac, LJig and Ub, the local economies are already quite diversified meaning that the bases for the transition are already set. The existing power transmission infrastructure may be an attractor for RES investments. 	 Weaknesses Poor infrastructure including business infrastructure, especially in LJig and Lajkovac. Industrial zones in other parts of the territory also have infrastructure problems such as lack of access to railway network, gas infrastructure and waste management. The underdeveloped waste management system and the existence of non-compliant landfills. Youth unemployment is relatively high in Lazarevac and Lajkovac with a low number of open vacancies. The utilities infrastructure is weak in some of the municipalities expected to be affected. In Ljig, for example, only 50% and 56% of the households have access to the water and sewage network, respectively. Much of the Kolubara territory is not supported by a Regional Development Agency (RDA) exclusive to the territory.
External	 Opportunities There is great potential for FDI attraction due to excellent geographical position and existence of the free trade zone (Obrenovac). The experience of Obrenovac could be capitalised to the benefit of all the territory. The attraction of major investments in the area could also support the development of smaller enterprises operating under a cluster type model, especially in case of collaboration with research institutes and universities. Rural areas of Ub and LJig have tradition in agricultural production (cattle breeding and dairy production) which could be further exploited and used for food production. Existence of several touristic attractions (small mountains between 500 and 1,000m altitude, such as Rajac, Bukulja, Rudnik, etc.) provides opportunities for attraction of tourists interested in different types of tourism such as family and countryside tourism, hiking, camping, etc. The emerging innovation ecosystem in the broader metropolitan area of Belgrade could potentially provide an opportunity to proceed to innovative products and services in compliance with the Serbian RIS strategy. The upgrade and extension of the territory's waste networks, something necessary for local economic development and modern living, creates an alternative to companies of the construction business that are affected by the restriction of mining activity and new job opportunities for low skilled people and their employees which are facing the risk of unemployment. 	 Strong dependence on the mining and energy sector, particularly in Lazarevac (40% of employment is related to the mining and energy sector) and Lajkovac (over 40% related to the mining and energy sector). Depopulation could be α significant problem particularly in rural areas due to ageing and people emigrating to Belgrade, given that the conditions do not exist for the economically active population and students to make effective and efficient teleworking and tele-education. The territory is prone to natural disasters such as the flood of 2014. The characterisation of part of the territory as belonging to the highest level of regional development (on account of administratively belonging to the energy transition begins.

Resavica territory

Table 6: Strengths, Weaknesses, Opportunities and Threats table for Resavica territory - illustrative example

Helpful	Harmful
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External

Strengths

- The local natural environment would be suitable for specific forms of tourism development
- The agricultural sector (in the form of individual farmers) is reasonably well represented, to the extent that it may be considered as a potential sector for development.
- Efforts undertaken by the municipality to address land fragmentation and the creation of cooperatives in the agricultural sector have been a success.
- The state company for forestry operates in Despotovac.
- The small enterprises in Despotovac have shown increased revenues in recent years. While they operate in retail mainly, the increased revenues are indicative of some potential in the municipality.

Weaknesses

- Local economic activity is linked to the operation of the Rembas mine either directly or indirectly to a very large degree.
- The industrial zone of Despotovac is not currently developed enough to attract large-scale investors.
- The population is ageing and doing so faster than the national average and faster than all the other territories affected.
- Long term unemployment is already high, with very few vacancies available for each 100 registered unemployed. The low levels of education for the female population cut them off from many employment opportunities.
- Living conditions in the settlements are not suitable for retention of youth or the workforce in general (for example only 55% of houses are connected to the water network).

Opportunities

- The municipality's industrial zone of Kablovka has not been provided with any amenities yet, meaning that these can be designed and installed according to the specialised needs of any potential investor. Only the roads have currently been laid out. The municipality has 50 hectares available in total, with no companies currently in the zones.
- Given the large number of potentially affected workers, both absolutely and as a proportion of the total population there is potential for planning to be made and implemented in a more holistic way, increasing the effectiveness of the planned measures.

Threats

- There is currently no clear timeline nor planning for the energy transition, something which has to be rectified so that targeted mitigation measures may be planned and implemented.
- The large number of potentially affected workers, both absolutely and as a proportion of the total population requires a more effective buy-in from the local authorities and population alike if the measures are to be successful. This is turn requires proper stakeholder outreach and co-planning of the details of the actions to be taken, to ensure ownership from the side of the community.

4.5. Key findings of the analysis

The Just Transition Diagnostic has indicated that for the Kolubara region 472 indirect jobs could be affected, mainly EPS subcontractors and businesses in the value chain of EPS, but these make up a manageable proportion of the total employment of the territory. Kostolac will face limited effects in terms of the green transition in the short term. The Diagnostic also looked at the possible effects of the closure of TE Kolubara and TE Morava and at the largest mine within PE PEU Resavica, the Rembas mine, as an illustrative example. The study considers that 930 miners (direct jobs), in total, could be at risk by 2030 at Rembas, and another 958-1,367 indirectly, mainly related to mine's subcontractors, thus with significant potential impact on the local income.

After 2030 the process of energy transition, as foreseen in the NECP, would see thermal power plants operating at a reduced capacity, though without accelerated closures. This would result in significant labour force reductions in lignite mining.

The Green economy transition will create new full-time jobs in the entire country to install, operate and maintain new RES capacity until 2030 and beyond. Key factors in determining a project's direct employment impacts include the extent of domestic manufacturing and the length of time required for construction, installation, and manufacturing (CIM), as well as for operation and maintenance (O&M) jobs. Given the pipeline of RES projects in Serbia and considering the length of the construction cycle for each different type of project, CIM jobs can be considered as "permanent" at least until 2030 and beyond. Jobs related to the O&M of power plants last during the entire lifetime of the power plant. It is expected that the RES industry in Serbia will create up to 6,105 jobs nationwide by 2030, most of which (c. 4,397) will be in the solar industry.

4.6. Key stakeholders of Just Energy Transition

The key stakeholders in the energy sector in Serbia are presented in the table below.

Key Stakeholders	Role in Just Transition process
Government of the Republic of Serbia	Proposing and adopting critical documents in the energy policy.
Ministry of Mining and Energy	Creation and implementation of energy policy and development of legal framework.
Energy Agency of the Republic of Serbia	Improving and directing the electricity and natural gas market based on the principles of non-discrimination and efficient competition, by creating a stable regulatory framework.
Transmission system operator and market operator (<i>Joint Stock</i> <i>Company Elektromreža Srbije</i> <i>Beograd</i>)	Is responsible for the transmission system operation, maintenance and development, its connection with other systems, and for ensuring a long-term capacity of the system to meet electricity transmission needs.
Distribution system operator (<i>Elektrodistribucija Srbije d.o.o.</i> <i>Beograd</i>)	Is responsible for the operation, maintenance and development of the distribution system in a particular area, its connection with other systems and for ensuring long-term capacity of the system to meet electricity distribution needs.
District Heating Business Association	Aims to improve cooperation among DHs, harmonize business programs, exchange experiences, harmonize the price of heating through common criteria, express joint interest to ministries, chambers, associations and other institutions.
Joint-stock company Electric Power Industry of Serbia (Elektroprivreda Srbije- <i>EPS</i>)	Secures supply to customers with electricity, under the most favorable market conditions, with continuous service quality improvement, promoting environmental awareness and increasing the well-being of the community in which it operates.
PE PEU Resavica	PE PEU Resavica is a mining company in Serbia known for operating and managing multiple underground coal mines, utilizing various mining techniques to extract coal safely and efficiently. PE PEU Resavica holds and maintains 9 coal mines producing 0.3 to 0.4 million tons of hard coal per year. Those mines are located in the regions of Šumadija and Western Serbia, and Southern and Eastern Serbia, and parts of Belgrade.

Table 14: Short Overview for each of the Key Stakeholders

Key Stakeholders	Role in Just Transition process
State-owned natural gas provider (<i>Srbijagas</i>)	Executes the country's energy policy by ensuring gas supply.
Association Renewable Energy Sources of Serbia (<i>RES Serbia</i>)	Aims to improve the business environment in renewable energy sources and promotion of the generation and use of electric power from renewable energy sources.
Ministry of Environmental Protection	Is responsible for developing and enforcing environmental policies and legislation, aligning with EU standards, and promoting sustainable development. Key functions include pollution control, natural resource management, environmental monitoring, public education, climate change mitigation, and waste management.
Ministry of Finance	Formulates and implements fiscal policies, oversees budget planning and execution, and manages public debt. It plays a pivotal role in ensuring financial stability, promoting economic growth, and fostering fiscal discipline.
Local self government	The operation of the mine affects the social and economic situation in the territory of the local self government to which the mine belongs.

5. Pillars for addressing Just Transition

The objectives of the present Action Plan are derived in line with the EC concept for Just Transition that embraces social, demographic, economic, health and environmental dimensions of the transition to a climate-neutral economy, and which is expressed via the regulatory framework³ (EC 2021/1056 establishing Just Transition Fund) and the Just Transition Platform⁴. It is further informed by the ILO "Guidelines for a just transition towards environmentally sustainable economies and societies for all" ⁵ and the Action Plan for the implementation of the Sofia declaration on the Green Agenda for the WB 2021-2030⁶.

A. Green Economy Transition.

The notion of green economy creates a new focus on the economy, investment, capital and infrastructure, employment and skills and positive social and environmental outcomes. It is realized through a framework of:

- Policy development, technical assistance and knowledge products resulting in policy toolkits and guidelines.
- Financing Mechanisms and new Business Models.
- Institutional training (enabling educational institutions that integrate green economy concepts into a sustainable autonomous curriculum) and Capacity Building.

A1. Reforms and investments in the Power and DH Sectors aiming to:

• Reduce GHG emissions in the power sector and district heating by gradual coal phaseout in line with NECP and Energy Development Strategy and aiming for a complete phase-out by 2050. There are several alternative options for decommissioned TPPs as

³ REGULATION (EU) 2021/1056 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 June 2021 establishing the Just Transition Fund <u>https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1056</u>

⁴ <u>https://ec.europa.eu/regional_policy/en/funding/jtf/just-transition-platform/</u>

⁵ wcms_826060.pdf (ilo.org)

⁶ Action Plan FOR THE IMPLEMENTATION OF THE SOFIA DECLARATION ON THE GREEN AGENDA FOR THE WESTERN BALKANS 2021-2030

The EBRD's transition concept argues that a well-functioning market economy should be more than just a set of markets; it should be <u>competitive</u>, <u>inclusive</u>, <u>well-governed</u>, <u>environmentally friendly</u>, <u>resilient</u> and <u>integrated</u>.

presented in Table A1 below.

Table 7: Alternative options for decommissioned/ repurposing TPPs

Third party redevelops for new non-energy application	Sell to developer / investors for offices / industrial site / storage & logistics / retail center / data center / recreation facilities (e.g., events venue, golf course, Horse Racecourse, car or moto racetrack) Give assets to local communities to turn into community spaces / conference buildings / municipality buildings / culture center Sell grid permits to IPPs interested in RES/ PV near plants / mines Convert to Renewable Energy Education and Research Center Convert to Agroforestry or Urban Farming Site Convert to Urban Green Space / Community Park
Repurpose for new non-energy EPS Sell building for warehouse use Convert to waste management plant	
applications	Convert to Industrial Hub with Green Manufacturing
Pastoration	Fully restore mined land to it's previous condition (as required by Law
Residiation	Convert to natural gas CCGT CHP for DH, notentially combined with CCS
Energy related applications	Develop grid scale- storage plants (BESS) in the sites of decommissioned TPPs Mothballed (Strategic Reserve)

- Increase the share of renewable energy sources (RES) in gross final energy consumption, via:
 - 1. Build-up of renewables (in particularly Wind, PV and hydro) and energy storage schemes.
 - 2. Power networks strengthening and Digitalization in order to enable integration of large amounts of RES at all voltage levels.
 - 3. Increased electrification in the industrial, transport and spatial heating sectors.

Mining Lands rehabilitation and remediation from mines. There are several alternatives' options for rehabilitated mining land as presented in Table A2 below.

	Install PV parks
RES usage	Install Wind farms
	Use the rehabilitated lands for energy crops growths
	Sell land to investor for ecotourism park / amusement parks / commercial /
	industrial / residential centers
Third party redevelops	Convert to cultivable land / natural preserve with lakes & aquaculture
for new non-energy application	Sell to developer / investor for cargo airport / hospital complex / university or other
	educational institution facility
	Convert to military ground / depot
	Reforest for CO ₂ certificates
Restoration	Fully restore mined land to it's previous condition (as required by Law)
Repurpose for new non-energy EPS applications	Convert to a waste management unit (e.g., landfill)

Table 8: Alternative options for rehabilitated mining lands

• Empowering "Prosumers", through Regulatory Reforms (for example simplifying licensing and ownership/leasing issues around "Net Metering"), promoting the concept of "Energy Communities", Energy Market Reforms (competition and plurality in all market stages), and tariffs reforms. Such reforms will contribute to the enhancement of

the energy supply security and ensure the financial stability and efficient operation of the energy markets.

• With regards to district heating, promotion of "Waste to Energy" central plant for DH in the affected territories, promotion of "Renewable Heating" using solar thermal plant with centralized eat pumps and seasonal energy storage (PTES).

A2. Enhance climate "neutrality" of urban areas aiming to:

Promote investments for the renovation of the existing stock of buildings, aiming at their energy efficient upgrade.

- Develop and implement a new action plan to tackle energy poverty, and therefore avoid the uncontrolled use of biomass.
- Introduction of renewable heating and cooling and waste heat utilization in urban areas and promotion of rooftop heat collectors for hot water.
- In the area of urban planning, the improvement of the urban ecosystem through the reform of the urban policy framework and the promotion of sustainable urban transport infrastructure.

A3. Sustainable use of resources, climate resilience and environmental protection through cyclical economy.

- Actions contributing to preventing waste and efficient waste management, following the principles of waste hierarchy and circular economy (develop recycling and eco-industrial parks); deploy sustainable waste-to-energy technologies.
- Protection of water resources, the construction of infrastructure for water management and wastewater treatment and the introduction of reforms that promote efficient and sustainable use of water resources.
- B. As for human capital development, actions are focused on:

B1. Improving economic outcomes, through:

- Increasing access to labour markets and enterprises, considering actions (infrastructures and intangible interventions) aiming at:
 - \circ $\;$ Improved capacity and skills for innovation.
 - Upgraded professional skills for employees.
 - \circ $\;$ Improved access to transport to labour markets and enterprises.
 - Improved digital connectivity for enterprises, training and education centers.
 - Upgraded childcare facilities to support working parents.
- Improving the match between skills supply and industry skills needs through infrastructure decisions which support the affected territories, via
 - Improving industry's access to the required skills sets, such as for example, improving required local skills supply through adequate education locally, or by accessing skills supply from outside the region.
 - Creating jobs and pathways for local lower skilled populations, particularly in sectors involving technologies that create jobs, and provide young people with skills that are transferable to a great range of work (e.g., renewable energy).

B2. Improving education/training and health outcomes, through:

- **Increasing access to life-long learning,** professional and tertiary education, considering actions (infrastructures and intangible interventions) as regards to
 - Improved access for transport of the labour force and students to life-long learning, professional and tertiary education opportunities.
 - Improved access to life-long learning, professional and tertiary education through improved digital connectivity.
 - Improved life-long learning, professional and tertiary education through the provision of integrated and smart facilities as well as new and upgraded facilities to make them fit-for-purpose.
- Increasing access to health and social services, considering actions (infrastructures and intangible interventions) aimed at:
 - Improving access to transport for disadvantaged groups (the elderly, disabled, mothers, children etc), access to health and social services.
 - Improving digital access to health and social services for people living in the affected territories.
 - Improving access to health and social services through the provision of integrated and smart facilities as well as via making existing facilities fit-for-purpose.
- **C.** In terms of **regional economic diversification**, the objectives for assessing the needs for infrastructures and intangible interventions and the actions required for their intervention are focused on:
 - **Delivering greater productivity and efficiency to the affected territories,** including exploring actions that:
 - Improve enterprises operation and production efficiency (by, for instance, leveraging technological adoption and complimentary factors of production (e.g. skills), improving production/operational processes and exploring opportunities to lift efficiency value chains for supply chain industries, such as reducing the transport costs and connectivity between industries and their supply chain).
 - Promote greater productivity and efficiency by optimizing land use and facilitating enterprises collaboration and establishment.
 - Unlocking new areas of economic growth throughout the affected territories, by exploring actions that:
 - Leverage new sources of economic growth.
 - $\circ~$ Increase innovative products and services (supporting startups, exploitation and collaboration with research).
 - Deliver efficient enterprise specialization (such as the emergence of renewable energy generation or advanced manufacturing industries or the development of new product lines within the same industry or results of the research institutes).
 - Delivering better access to markets, by
 - Improving extroversion of enterprises by allowing local enterprises to compete domestically and globally by connecting them (both physically and digitally) to larger markets for:
 - import of goods and services (including raw materials, utilities, financing and capital etc.).

- their products.
- Supporting enterprises to adapt and be more resilient to energy transition, via
 - Increasing enterprises financial capacity and responsiveness to adapt and/or transform their operations to energy transition.
 - Increasing entrepreneurs and workers knowledge and skills to respond to energy transition and enabling them to stay competitive in rapidly changing global markets.
- **D.** Strengthening **Governance structures for Just Transition**. The process needs to be "owned" from the beginning by the Government and engage all possible stakeholders. In this component we propose a suitable **governance framework**, which will eventually develop a Just Transition Master Plan in consultation with all involved parties, and a stakeholder engagement strategy.
 - Progressive Development of a Legal, Institutional and Regulatory framework and Governance process (Figure 3) through which to manage the Just Transition Action Plan and the Just Transition Fund.
 - Enhanced national and regional institutional capacity for just transition process design and implementation, as well as inclusion into
 - Improved national and regional capacity for just transition process design and implementation.
 - Improved framework for transport policy.
 - Improved framework for low carbon and climate resilient transition.
 - Improved framework for entrepreneurship.
 - Improved framework for digital transition.
 - Acquisition of consensus building on just transition, that in essence means.
 - Awareness raised on just transition.
 - Involvement of stakeholders in the planning and implementation processes, through extensive public consultations at local and national level.

6. Actions

The Action Plan is a synthesis of the socio-economic analysis of the affected territories and their relative competitive advantages and conditions and provides a first outline of the development needs to address the transition challenges, the objectives and results expected through implementing the proposed intervention logic. It is further informed by just transition concept of the EBRD including the transition qualities approach and the Economic Inclusion Strategy. Therefore, the outcomes (objectives) for just transition are grouped in four main pillars (see Action Plan Annex 6 "Outline of the action plan").

- 1. Green Energy Transition and reskilling the existing workforce of the mines and thermal power plants/ heat generating plants.
- 2. Human Capital Development Education to support the green economy transition.
- 3. Diversification of the Regional Economy in the affected areas.
- 4. Also adding the governance of the whole process.

The actions are divided into following groups:

Group A: Immediate Actions to mitigate impact

These actions are necessary to mitigate the impact of the planned reduction in carbon-based electricity production. They should be prioritised to ensure a smooth transition.

Group B: Future Actions for a Just Transition

These less pressing actions will make the future, post 2030, energy transition more just. Although they are not immediate priorities, they are crucial for ensuring fairness and equity when the full transition to cleaner energy sources is implemented. These are marled as Preparatory Actions in the analysis which follows.

Within these two groups, the Actions have been further separated into **National** and **Local** actions, to separate those actions which are to be delivered throughout Serbia and those actions to be delivered only in the areas affected by the effects of the known or expected reduction in mining and carbon-based electricity production.

Any one of the territorial actions could be implemented in the immediately affected territories before 2030 as a **pilot project.** In particular, a pilot project is an initiative of an experimental nature designed to test the feasibility of an action and its usefulness and lasts not more than two years with EU funding⁷. Following an evaluation of the effectiveness and impact of the action, similar actions can then be rolled out after 2030 to other territories expected to be affected by the future transition which Serbia's commitments will necessitate.

Even though these groups facilitate targeting and planning, all actions should be considered under a single integrated framework. This approach presents complementarities and synergies for the Just Transition across different timelines.

Within the these groups of actions, the following principles are used to drive decisions under the assessment for infrastructures and interventions needed:

- Public infrastructure investment decisions will be aligned with the policies and strategies set by the Government such as NECP, draft Energy Sector Strategy, regional economic plans, especially the major time milestones.
- Some social inclusion problems can be effectively addressed by infrastructure, while targeted intangible interventions are also proposed. All actions are prioritized based on just transition impacts on the directly affected population and indirectly affected population.
- Fit-for-purpose, accessibility and affordability have been key variables in the assessment process for the selection of the actions.
- Individuals, enterprises and the community must have the capacity, capability and willingness to access/support the infrastructures and any interventions.
- Flexibility to meet the complex and changing nature of the impacts due to transition over the time schedule.
- Infrastructure investments should leverage the comparative advantages of enterprises operating in the territories and support those that are required to transform their activities so that they may fulfil their potential to grow in the future.

⁷ <u>Pilot Projects and Preparatory Actions (PPPAs) - Search for Programs - EuroAccess - Fördermittelsuche der EuroVienna EUconsulting & -management GmbH (euro-access.eu)</u>

A key requirement of the methodology is the identification of the opportunities and barriers which are related to and required for the economic and social development of the territories in light of the impacts of the transition to a climate neutral economy, including the economic growth of the enterprises having the potential for growth in the near future.

Based on the above approach, the decision to include specific actions in the action plan has also considered the following factors:

- The affected territories' geographical location and proximity to the Belgrade metropolitan market where goods and services can be traded.
- The resources that are available to the affected territories.
- The existence of economic activities within the affected territories or in the Belgrade metropolitan area with special interest to the affected territories.
- The affected territories access to critical or enabling infrastructure and services for economic inclusion and market development.
- The skills profile, the demographics and the income situation of the population living within the affected territories.
- The connectivity the affected territories have internally, among the involved municipalities and externally with other regions (via various modes of transport, such as railway, motorways, roads, bus service; and telecommunications infrastructure) and especially with the Belgrade metropolitan area.
- The social factors of the affected territories (i.e., networks and connections, social and cultural strengths and weaknesses).

The comparative analysis of the territorial advantages and disadvantages that would influence the achievement of a just transition includes the following regional elements, at local level:

- Geographic location addressing proximity to main economic centers, to transit centers for goods and to transfer hubs for people.
- Geomorphology characteristics.
- Local historical or revealed special characteristics, such as touristic attractions and cultural heritage.
- Transportation modes and digital connectivity.
- Tertiary education and life-long learning integrated facilities.
- Social and primary health care infrastructures and services targeting mainly the mostly affected population, i.e. elders, children and families.
- Digitalization of public services.
- Local utility networks for water and waste.
- Demographics and poverty level.
- Sectoral industrial fields, including aspects on the following:
 - ✓ Research activity, incubators and innovation clusters.
 - ✓ Industrial and free trade zones.
 - ✓ Development of the main fields of business taking into account the declining and transforming economic activities due to transition, and addressing issues on growth, dependence on EPS / PE PEU Resavica and state-owned enterprises (SOEs), Internationalization and exports, financing and investments.

- ✓ Organizations Supporting Enterprises and Employees at local level.
- ✓ Overall competitiveness issues such as digitalization of enterprises, State Aid and competition issues, banking sector resilience, Intellectual property protection, and integrity and control of corruption.

The actions proposed are outlined in the tables below, which indicate the objectives each action serves to support.

6.1. Action Plan - Short term Actions at National Level (Group A)

	Action Item	Timeframe	Stakeholder responsible	Cost estimate	Sources of funding	Territory	Target Group	KPI(s)	Impact and priority
				Na	ational				
1.	Setting up and Operationalisation of the Governance of the Just Transition in Serbia	12 months	GoS – PM office – MoME	N/A	N/A	National	Ministry of Labour, Ministry of Environment, Ministry of Mining and Energy, Ministry of Education, Ministry of Economy, Ministry of Infrastructure and Spatial Planning, Ministry of Finance, Ministry of Agriculture and Food, Ministry of Interior, Local Authorities, EPS	Setting up IMGC, the JT unit within the MoME, and ad hoc Working Groups.	The driving force of a National JT Strategy must be the commitment of GoS. Priority: High during impact mitigation of transition as planned

Table 9: Action Plan – Short term Actions at the national level

6.2 Action Plan - Preparatory Actions at National Level (Group B)

	Action Item	Timeframe	Stakeholder responsible	Cost estimate	Sources of funding	Territory	Target Group	KPI(s)	Impact and priority
					National		[Agreement(s)	
2.	Establishment of the mechanisms for financing Just Transition and its management system	12 months	GoS – PM office – MoME	€350 k	Budget of Republic of Serbia and other sources of financing in accordance with the law, and international donors	National	All ministries and government bodies involved in Just Transition	for the funding of the JT, governmental decisions establishing the governing body, governmental decisions defining the management system	It will be possible to fund JT actions through an agreed mechanism Priority: High
3.	Updating Energy legislation, to include appropriate governance mechanisms and monitoring framework and adopt and implement the JT Action Plan	12 months	MoME	€ 150 k Legal fees	International Donors	National	GoS	Promulgating all necessary Primary and Secondary Legislation Primary and Secondary Legislation promulgated	JT is driven and embedded into the legal Framework of Serbia Priority: High during preparation for decarbonisation
4.	Mainstreaming of Just Transition in National Strategies	12 months	MoME	€180 k	Budget of Republic of Serbia and other sources of financing in accordance with the law/ international donors	National	Ministry of Labour, Ministry of Environment, Ministry of Mining and Energy, Ministry of Education, Ministry of Economy	Number of proposals for references to be made to the just transition in existing and new strategy documents and legislation/ MoME	There has been an integrated response to the challenges brought by the just transition across a number of national strategies Priority: High during preparation for decarbonisation
5.	Targeted awareness raising activities for all stakeholder / target groups identified in the Stakeholder Engagement Plan	Until 2030	MoME	€450 k per annum for the first three years, €150 k per annum subsequently (€1.65 million up to 2030)	IPA, international donors such as UNDP, or even Budget of Republic of Serbia and other sources of financing in accordance with the law.	National with focus in the affected territories	National authorities, local and regional actors, EPS, PE PEU Resavica, workers in the carbon-based energy production value-chain, general public	Communication materials produced targeted to each stakeholder group	The impacts of the green energy transition are more easily and proactively managed by the GoS Priority: High during preparation for decarbonisation
6.	National strategic plan	12 months	Ministry of Education	€200 k	Budget of Republic of Serbia and	National	Ministry of Education, Ministry of	Printed media, Audio-visual	The population and key stakeholder

Table 10: Action Plan - Preparatory actions at the national level

	Action Item	Timeframe	Stakeholder responsible	Cost estimate	Sources of funding	Territory	Target Group	KPI(s)	Impact and priority
	for Green Skills				other sources of financing in accordance with the law/ international donors		Labour, Ministry of Environment, Ministry of Mining and Energy	media, Web and social media,	groups will support the just transition efforts of the GoS Priority: High during preparation for decarbonisation
7.	Explore alternative options and their respective impacts with regards to spatial planning, usage and allocation of rehabilitated lands, attraction and facilitation of investors, participating in PPP schemes and undertaking tendering procedures	6 months	GoS	€ 70k Legal fees	Budget of Republic of Serbia and other sources of financing in accordance with the law	National	GoS, EPS, PE PEU Resavica, Municipalities of affected territories	Decide on an implementing options	Decision on the modalities of implementation Priority: Medium during preparation for decarbonisation
8.	Upgrading of institutional framework of Industrial and Free-trade Zones (harmonisation with EU acquis)	12 months	Ministry of Economy	€200 k	Budget of Republic of Serbia and other sources of financing in accordance with the law, international donors (IPA / EBRD)	National	Managing bodies of Industrial and Free-trade zones	Level of acceptance of proposed framework by actors and stakeholders / Ministry of Economy	Transformation of the economy to a greener model Priority: Medium during preparation for decarbonisation
F	Total cost of reparatory actions at the National Level			€2.8 million					

6.3. Action Plan – Short term actions at the local level (Group A)

Table 11: Action Plan – Short term actions at the local level

	Action Item	Timeframe	Stakeholder responsible	Cost estimate	Sources of funding	Territory	Target Group	KPI(s)	Impact and priority
		I	I		Territorial		I		
9.	Investigate short-term specific measures for specific categories of affected employees until new workplaces are available (e.g. minimum wage subsidies)	24 months duration	Ministry of Labour	€10.6 million (based on subsidised minimum wage for 800 workers from the affected areas)	IFIs, international donors, combined with funding for other active labour market measures.	Territorial, for affected territories	Former employees of EPS or PE PEU Resavica in carbon- based energy production	Monthly support payments for eligible workers / reports of funding agency	Creation of a short-term safety net for former energy- sector workers Retained income and jobs locally
10.	Analysis of needs for re- skilling / upskilling of the workforce of local businesses undergoing economic diversification / transformation	24 months duration	Ministry of Labour	€2.4 million (training costs)	Budget of Republic of Serbia and other sources of financing in accordance with the law, IPA Funds, other donors	Territorial, for both affected territories	Workforce of local enterprises within the carbon- based energy value- chain	Number of workers attending re- skilling or upskilling courses of [minimum] hours duration / reports of National Employment Service	Retained jobs locally. Ensured territorial cohesion Priority: High during impact mitigation of transition as planned
11.	Re-allocation plan for workers within companies of the carbon- based energy production value chain	24 months duration	EPS / PE PEU Resavica	N/A (no additional costs foreseen)	EPS / PE PEU Resavica own funds	Territorial, at local level in all affected territories	Employees of EPS / PE PEU Resavica	Reallocation plans produced for each unit of EPS and PEU Resavica undergoing green transition / EPS and PE PEU Resavica Number of workers reallocated with re-skilling and upskilling / EPS and PE PEU Resavica Number of workers reallocated without reskilling and upskilling / EPS and PE PEU Resavica	Continuity of electricity production Retained jobs locally Ensured territorial cohesion Priority: High during impact mitigation of transition as planned
12.	Master Plan for coal mines, with the aim of possible conversion of their activities to create new jobs	18 months	PE PEU Resavica, EPS	€ 150 k (PE PEU Resavica), EPS	IFIs, international donors	Territorial, for affected territories	PE PEU Resavica	Plans for implementation of NECP and Paris-aligned decarbonisation / mines closure and land remediation	Decarbonization of Power Sector. Workforce in TPPs and mines Priority: High during impact mitigation of

	Action Item	Timeframe	Stakeholder responsible	Cost estimate	Sources of funding	Territory	Target Group	KPI(s)	Impact and priority
									transition as
									planned
То	tal cost of short-								
ter	rm actions at the			€13.15					
1	ocal level (up to			million					
	end 2030)								

6.4. Action Plan - Preparatory Actions at the local level (Group B)

Table 12: Action Plan - Preparatory actions at the local level

	Action Item	Timefra me	Stakehol der responsib le	Cost estimat e	Sources of funding	Territory	Target Group	KPI(s)	Impact and priority
					Territoria	ıl			
1 3.	Local Developme nt Plans	12 months	Municipal ities / RDA / developm ent partners	€ 560 k	Budget of local self goverme nt / internati onal donors	Territorial at municipal level, with priority given to the municipal ities of Lazarevac , Kostolac, Pozarevac , Despotov ac and Obrenova c.	Municipal ities	Number of actions under the three pillars identified within each plan / Municipal ities Number of consultati ons with local actors for the developm ent of the Local Developm ent Plans / Municipal ities	Planning for future investment s and actions at local level is in line with the needs of a JT and local economic and social cohesion Priority: High during preparation for decarbonis ation
1 4.	Programme for providing incentives for entrepreneu rship and self- employmen t	36 months duration	Ministry of Economy	€12 M (€10 M for enterpri ses / €2 M for the self- employ ed). Plus €50k for plannin g	Budget of Republic of Serbia and other sources of financin g in accordan ce with the law, internati onal donors / IFIs	Territorial , for affected territories	Former employee s of the carbon- based economy value chain	Funding made available to entreprene urs / Ministry of Economy	Diversifica tion of the local economy and creation of workplaces in the territories Priority: High during preparation for decarbonis ation
1 5.	Improveme nt of business infrastructur	60 months	Municipal ities	€ 60 M, plus €70k for the	Budget of Republic of Serbia	Territorial , for affected territories	Municipal Industrial Parks	Up to 5 industrial parks supported	Diversifica tion of the local economy

Action Item	Timefra me	Stakehol der responsib le	Cost estimat e	Sources of funding	Territory	Target Group	KPI(s)	Impact and priority
e at existing industrial parks			plannin g	and other sources of financin g in accordan ce with the law, internati onal donors / IFIs			/ Municipal ities	and attraction of new business units Priority: High during preparation for decarbonis ation
Total cost of preparatory actions at the local level (up to 2030)			€72.68 million					
Total cost of all actions up to 2030 (Group A and Group B, National and Local level)			€88.63 million					

6.5. Timing of Implementation of the Action Plan

Table 13: Timing of implementation of the Action Plan

Action Item	Start Date	End Date
Setting up and Operationalisation of the Governance of the Just Transition in Serbia	1/9/2025	28/2/2026
Establishment of the mechanisms for financing Just Transition and its management system	1/9/2025	31/12/2026
Updating Energy legislation, to include appropriate governance mechanisms and monitoring framework and adopt and implement the JT Action Plan	1/9/2025	31/8/2026
Mainstreaming of Just Transition in National Strategies	1/9/2025	31/12/2025
Targeted awareness raising activities for all stakeholder / target groups identified in the Stakeholder Engagement Plan	1/9/2025	31/12/2030
National strategic plan for Green Skills	1/1/2026	31/12/2027
Explore alternative options and their respective impacts with regards to spatial planning, usage and allocation of rehabilitated lands, attraction and facilitation of investors, participating in PPP schemes and undertaking tendering procedures	1/9/2025	30/6/2026
Upgrading of institutional framework of Industrial and Free-trade Zones	1/9/2025	31/12/2026
Investigate short-term specific measures for specific categories of affected employees until new workplaces are available	1/9//2025	31/3/2027
Analysis of needs for re-skilling / upskilling of the workforce of local businesses undergoing economic diversification / transformation	1/9/2025	31/3/2027
Re-allocation plan for workers within companies of the carbon-based energy production value chain	1/9/2025	31/3/2027
Master Plan for coal mines, with the aim of possible conversion of their activities to create new jobs	1/9/2025	30/6/2027
Local Development Plans	1/1/2026	31/12/2026
Programme for providing incentives for entrepreneurship and self-employment	1/1/2026	31/12/2028
Improvement of business infrastructure at existing industrial parks	1/1/2026	31/12/2030

7. Governance

7.1. Governance structure of Just Transition

It is proposed that a suitable **governance framework be established**, which will eventually lead to the development of a Just Transition Master Plan in consultation with all involved parties, and a stakeholder engagement strategy as follows:

• Establish an Inter-Ministerial Government Committee (GC) under the PM's office to coordinate, implement and monitor all activities required for the implementation of a Just Transition Strategy. Proposed GC participants are the Ministry of Mining and Energy, the Ministry of Finance, the Ministry of Economy, the Ministry of Construction, Transport and Infrastructure, the Ministry of Agriculture, Forestry and Water Management and the Ministry of Labor, Employment, Veterans and Social

Affairs. Other ministries and agencies to be included based on the needs at any given point in time.

• Establish a **Just Transition Unit** within the Ministry of Mining and Energy, which would be responsible for proposing, coordinating and assisting in developing all necessary legislation and regulatory decisions, and amend accordingly existing legislation within the direct remit of the MoME, as required for the implementation of the JT Action Plan.

The JT Unit will also work with Ministry of Finance, EPS, PE PEU Resavica and other relevant stakeholders to explore options for use and allocation of land from former mines and power plant sites, (including special land zoning and urban planning regulations). The Unit could also explore next steps on facilitating investment plans and projects in JT areas. The JT Unit should monitor, evaluate, and report to CG on the process of implementation and help to address barriers to implementation.

• Establish **Working Groups** with the participation of the Ministries, Municipalities and relevant Mayors, EPS, and other relevant stakeholders. The working groups could be set up to encourage stakeholder engagement in specific fields including reskilling, skills development for the green economy, and economic diversification in the affected areas. The Working Groups can be supported by the Just Transition Unit of the MoME.

7.2 Summary of financing needs

EU Initiative for coal regions in transition in the Western Balkans and Ukraine was launched in December 2020 and aims to help countries, including Serbia, and regions to move away from coal towards a carbon-neutral economy.

As the Government of the Republic of Serbia strives to ensure that all citizens have access to affordable and sustainable energy, key goals are presented in the above Actions tables (Chapter 3).

Funding is anticipated through a mix of public investments, strategic partnerships, and international financing mechanisms. The EU's Green Agenda for the Western Balkans and potential contributions from international development banks and private investors are expected to play significant roles. Serbia is actively seeking partnerships to share the financial burden and accelerate project implementation, particularly for large-scale renewable projects. In addition, companies with blocked bank accounts should also be taken into account, as they represent a significant share of the Serbian economy and could be seriously affected by the proposed reforms.

Considering the experience of the neighbouring countries several potential financiers have been identified who could secure financing and support the implementation of the transition projects in the immediate and near future, as follows:

Table 15: List of of potential donors and potential sources of funding (including loans)

Partner	Funding type	Funds	Area of focus	Indicative Projects
European Union (EU)	Grants, Loans	€2 billion ⁸	Sustainability, Energy Efficiency, Renewable Energy, Connectivity, Sustainable Infrastructure	 Belshi Solar Photovoltaic Power Plant (Albania) Amount Funded: EUR 9.6 million (EU grant) Poklečani Wind Farm (Bosnia and Herzegovina) Amount Funded: EUR 43.7 million (EU grant)⁹
European Bank for Reconstruction and Development (EBRD)	Loans, Equity Investments, Technical Cooperation Grants	EBRD investment in sustainable infrastructure in Serbia in 2023 was in the range of €400 million ¹⁰	Renewable Energy, Energy Efficiency, Sustainable Infrastructure, Green Economy	 WB Green Economy Financing Facility III: Up to EUR 170 million for green investments in Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia, supported by Technical Cooperation and incentives¹¹. Oslomej 1 Solar Photovoltaic Power Plant EBRD loan funding: EUR 5.9 million¹²
World Bank (WB)	Loans, Grants	\$400 million ¹³	Climate Change Mitigation, Energy Efficiency	• Montenegro Energy Sector Decarbonization Project Amount Funded: EUR 34.3 million
United Nations Development Programme (UNDP)	Grants, Technical Assistance	\$8 million ¹⁴	Sustainable Development, Climate Resilience	• EU-supported Clean Energy Finance Facilities EUR 149 million
U.S. Agency for International Development	Grants, Technical Assistance	\$150 million ¹⁵	Energy Efficiency, Renewable Energy	 Clean Energy Investment (EUR 2.16 million) USAID Bosnia and Herzegovina Energy Efficiency (EUR 78.5 million)
Swiss Agency for Development and Cooperation (SDC)	Grants, Technical Assistance	€500 million ¹⁶	Renewable Energy, Energy Efficiency	• Climate change resilience and decarbonization as part of the Green Agenda for the Western Balkans (EUR 95 million)
Open Society Foundations (OSF)	Grants	\$20 million ¹⁷	Climate Justice, Sustainable Development.	 Green Economic Development Initiative: €361,196,39¹⁸ Investment in Allied Climate Partners (ACP): €22,574.75¹⁹

⁸ Results of Horizon 2020 European Green Deal call: following up to the kick-off event to celebrate the 73 projects selected for funding - European Commission (europa.eu)

Overview - Instrument for Pre-accession Assistance - European Commission (europa.eu)

⁹ Economic & Investment Plan for the Western Balkans 2023

¹⁰ https://www.ebrd.com/where-we-are/serbia/data.html

¹¹ Western Balkans GEFF III

¹²Endorsed Flagship Investments 2020-2024

¹³ World Bank Document

 ¹⁴ EU for Green Agenda in Serbia presented | United Nations Development Programme (undp.org)
 ¹⁵ Energy Efficiency Law Spurs New Industry in Bosnia and Herzegovina | Bosnia and Herzegovina | News | U.S. Agency for International Development (usaid.gov)

FACT SHEET: Energy Policy Activity in Bosnia and Herzegovina | Fact Sheet | Bosnia & Herzegovina | U.S. Agency for International Development (usaid.gov)

¹⁶ Overview: Implementation of the cohesion part of the second Swiss contribution to selected EU member states (admin.ch)

¹⁷ Open Society Foundations to Commit \$400 Million to Support Economic and Climate Prosperity - Open Society Foundations

¹⁸ Open Society Foundations to Commit \$400 Million to Support Economic and Climate Prosperity

¹⁹ Open Society Invests \$25 Million to Boost Global Climate Projects

Partner	Funding type	Funds	Area of focus	Indicative Projects
United Nations International Children 's Emergency Fund) (UNICEF)	Grants, Technical Assistance	\$10 million ²⁰	Environmental Education, Sustainable Development.	• UNICEF's Global Climate, Environment, Energy, and Disaster Risk Reduction (CEED) Thematic Fund Amount Funded: Approximately €2.1 million (2022-2023) Key Focus Areas: Systems strengthening (45% of expenses), advocacy, and awareness-raising on climate issues. ²¹
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Grants, Technical Assistance	€300 million ²²	Sustainable Development, Climate Change, Renewable Energy.	 EU4 Energy Transition: Covenant of Mayors in the Western Balkans (Total Funding: EUR 9.335 million) Green Agenda: Decarbonisation of the Electricity Sector in the Western Balkans (Total Funding: EUR 3.5 million)
European Investment Bank (EIB)	Loans, Grants €21 billion ²³		Infrastructure, Energy Efficiency, Renewable Energy	 EIB Global signed over EUR 700 million for sustainable projects in the Western Balkans, focusing on clean and renewable energy.²⁴ Initiatives for renewable energy and energy efficiency in the Western Balkans (Approximately EUR 1.2 billion invested in 2023)
KfW Development Bank	Loans, Grants	€215 million ²⁵	Renewable Energy, Energy Efficiency	• Financing renewable energy generation capacities and infrastructure development in the Western Balkans and Eastern Neighbourhood (EUR 260 million in guarantees)

It should be noted that the above is not an exhaustive list, there are other bilateral donors and financial institutions that could also be considered.

Table	16:	Summary	table	of	financing	needs	by	Action	Items
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No.	Actions	Estimated costs	Potential Funding Source								
	Short term actions at the national level										
1.	Setting up and Operationalisation of the Governance of the Just Transition in Serbia	N/A	N/A								
Preparatory actions at the National Level											

²⁰ Spotlight Global Thematic Fund CEED.pdf.pdf (unicef.org)

²¹UNICEF - Spotlight Global Thematic Fund CEED

²² giz2024-en-eu4et-western-balkans-türkiye.pdf

giz2023-en-green-agenda-decarbonisation-of-the-electricity-sector-in-the-western-balkans.pdf ²³ Energy Overview 2024 (eib.org)

²⁴ EIB Global to ramp up support for the green transition, digitalisation and connectivity in the Western Balkans, boosting convergence with the EU

²⁵ DEG has acquired 10 percent stake in Čibuk 1 wind farm in Serbia (balkangreenenergynews.com)

No.	Actions	Estimated costs	Potential Funding Source		
2.	Establishment of the mechanisms for financing Just Transition and its management system	€350 k	Budget of Republic of Serbia and other sources of financing in accordance with the law/ international donors		
3.	Updating Energy legislation, to include appropriate governance mechanisms and monitoring framework and adopt and implement the JT Action Plan	€150 k	International Donors		
4.	Mainstreaming of Just Transition in National Strategies	€180 k	Budget of Republic of Serbia and other sources of financing in accordance with the law/ international donors		
5.	Targeted awareness raising activities for all stakeholder / target groups identified in the Stakeholder Engagement Plan.	€1.65 M	IPA, international donors and perhaps Budget of Republic of Serbia and other sources of financing in accordance with the law		
6.	National strategic plan for Green Skills.	€200 k	Budget of Republic of Serbia and other sources of financing in accordance with the law/ international donors		
7.	Explore alternative options and their respective impacts with regards to spatial planning, usage and allocation of rehabilitated lands, attraction and facilitation of investors, participating in PPP schemes and undertaking tendering procedures.	€70 k	Budget of Republic of Serbia and other sources of financing in accordance with the law		
8.	Upgrading of institutional framework of Industrial and Free-trade Zones (harmonisation with EU acquis).	€200 k	Budget of Republic of Serbia and other sources of financing in accordance with the law, international donors (IPA / EBRD)		
Total of	Preparatory actions at the National level (up to 2030)				
	Short-term actions at t	he local level			
9.	Short-term specific measures for specific categories of affected employees until new workplaces are available.	€10.6	IFIs, international donors, combined with funding for other active labour market measures.		
10.	Analysis of needs for re-skilling / upskilling of the workforce of local businesses undergoing economic diversification / transformation	€2.4 million	Budget of Republic of Serbia and other sources of financing in accordance with the law, IPA Funds, other donors		
11.	Re-allocation plan for workers within companies of the carbon-based energy production value chain	N/A	EPS / PE PEU Resavica own funds		
12.	Master Plan for coal mines, with the aim of possible conversion of their activities to create new jobs	€150 k	Budget of Republic of Serbia and other sources of financing in accordance with the law, International donors / IFIs Budget of local self government (blending) PPPs		
Total of short-term actions at the local level (up to end 2030) €13.15 million					
	Preparatory actions at	the local level	Budget of Dopublic of Soubi-		
13.	Local Development Plans.	€560 k	and other sources of financing in accordance with the law, international donors / IFIs Budget of local self government (blending)		

No.	Actions	Estimated costs	Potential Funding Source		
14.	Programme for providing incentives for entrepreneurship and self-employment	€12 M (€10 M for enterprises / €2 M for the self- employed). Plus €50k for the planning of the programme.	Budget of Republic of Serbia and other sources of financing in accordance with the law, international donors / IFIs		
15.	Improvement of business infrastructure at existing industrial parks.	€ 60 M, plus €70k for the planning of the programme	Budget of local self government / international donors		
Total cos	st of preparatory actions at the local level (up to 2030)	€72.68 million			
Total co and Loc	st of all actions (Group A and Group B, National al level up to 2030)	€88.63 million			

7.3 KPIs by 2030, monitoring approach, risk mitigation

For each of the core actions described above, the intervention logic is presented in the table below, to allow a cumulative view of the impacts of the action plan:

Action	Outputs	Outcomes	Impact	KPIs	
Short term Actions at the National Level					
Setting up and Operationalization the Governance of the Just Transition in Serbia	Establishment of IMSC, JTAC, Municipal Councils. Appointment of National JT Co- ordinator	Coordinated and effective implementation of National JT Strategy. Optimizing and leveraging all available national and international funds. Removing legal and other barriers. Achieving Public Acceptance by involving all stakeholders	The coordinated implementation of the JT Action Plan, optimizing benefits of JT and mitigating impacts	Setting up IMSC, Appointing the National JT Co- ordinator, establishing the JTAC and the Municipality Councils for JT process.	
	Prepara	tory Actions at the Nationa	al Level		
Establishment of the mechanisms for financing Just Transition and its management system	Design of the fund's operational and governance model. Securing of funding. Drafting and adoption of legislation.	Establishment and operation of the fund	It will be possible to fund JT actions through an agreed mechanism	Agreement(s) for the funding of the JTF, governmental decisions establishing the governing body, governmental decisions defining the management system	
Updating Energy legislation, to include appropriate governance mechanisms and monitoring framework and adopt and implement the JT Action Plan	New Laws, amendments of existing – Secondary legislation	Legislative and regulatory framework to enable JT governance structure and mechanism	JT is driven by and embedded into the legal Framework of Serbia	Promulgating all necessary Primary and Secondary Legislation Primary and Secondary Legislation promulgated	
Mainstreaming of Just Transition in National Strategies	Proposals for streamlining the just transition	Mainstreaming of just transition into relevant	There has been an integrated response to the challenges	Number of proposals for references to be made to the just	

Table 17: KPIs by 2030, monitoring approach, risk mitigation

Action	Outputs	Outcomes	Impact	KPIs	
	dimension into national strategies	parts of national strategies and legislation	brought by the just transition across a number of national strategies	transition in existing and new strategy documents and legislation / MoME	
			transition are more easily and		
			managed by the GoS		
Targeted awareness raising activities for all stakeholder / target groups identified in the Stakeholder Engagement Plan	Targeted, multi- channel information campaign	The population is better informed about the coming energy transition The key stakeholders are better informed and more supportive of the just transition	The population and key stakeholder groups will support the just transition efforts of the GoS.	Communication materials produced targeted to each stakeholder group.	
National Strategic Plan for Green Skills	Draft National Strategy	Adaptation of skills to become more green is a priority in training curricula and VET	Greener economic activities as a result of both infrastructure and human capital development Transformation of the economy to a greener model	Printed media, Audio-visual media, Web and social media.	
Explore alternative options and their respective impacts with regards to spatial planning, usage and allocation of rehabilitated lands, attraction and facilitation of investors, participating in PPP schemes and undertaking tendering procedures	Model of land use and transfer developed; relevant regulatory and legislative change adopted	Effective use of coal mine and powerplant lands to support JT objectives	Decision on the modalities of implementation	Decide on implementing options	
Upgrading of institutional framework of Industrial and Free- trade Zones (harmonization with EU acquis)	Proposals for updating and amending the existing institutional framework governing the Zones	Amendments for institutional framework are passed	Modernization of industrial and free- trade zones leading to enhanced productivity and competitiveness for established industrial units.	Level of acceptance of proposed framework by actors and stakeholders / Ministry of Economy	
Short term Actions at the Local Level					
Short-term specific measures for specific categories of affected employees until new workplaces are available	Income benefits provided to workforce	Assured standard of living for workers in the transition phase	term safety net for former energy- sector workers Retained income and jobs locally. Ensured territorial cohesion	Monthly payments for 1,500 eligible workers / reports of funding agency	
Analysis of needs for re- skilling / upskilling of the workforce of local businesses undergoing economic diversification / transformation	Training plans, Training programs, Number of workers who would attend training programs	Skills of the workforce are brought in line with needs of enterprises operating in the diversified regional economy	Retained jobs locally. Ensured territorial cohesion	Defined plans and programs for re- skilling or upskilling / reports of National Employment Service	

Action	Outputs	Outcomes	Impact	KPIs
Re-allocation plan for workers within companies of the carbon-based energy production value chain	Defined plans for reallocation of workforce	Workers are reallocated, with or without re- skilling / upskilling	Continuity of electricity production Retained jobs locally Ensured territorial cohesion	Reallocation plans produced for each unit of EPS and PE PEU Resavica undergoing green transition / EPS and PE PEU Resavica Number of workers reallocated with re- skilling and upskilling / EPS and PE PEU Resavica Number of workers reallocated without reskilling and upskilling / EPS and PE PEU Resavica
Master Plan for coal mines, with the aim of possible conversion of their activities to create new jobs	Decommissioning / closure / Land remediation Plans, budgeted and with Timeline, and plans for the development of other economic activities with the aim of creating new jobs	Allowing the rehabilitation and restoring of Land for different uses which will attract investments	Allowing the transformation and rebirth of the economy of affected territories to green and cyclical economies fully mitigating any socio-economic impact	Concrete Plans for implementation of NECP and Paris- aligned decarbonisation / mines closure and land remediation
	Prepar	atory Actions at the Local	Level	
Local Development Plans	Local Development Plans, containing options for developing new economic activities or revitalizing existing ones.	Adaptation of local planning in line with the needs of local development	Planning for future investments and actions at local level is in line with the needs of a JT and local economic and social cohesion	Defined activities, number of new jobs and dynamic of local development Number of consultations with local actors for the development of the Local Development Plans / Municipalities
Programme for providing incentives for entrepreneurship and self-employment	Grants and tax incentives provided for the creation of new enterprises of minimum €50 k investment for SMEs and €10 k for self- employment	At least 200 enterprises are created in the affected territories and operate for two years after support At least 200 self- employed individuals are supported	Diversification of the local economy and creation of workplaces in the territories	€12 M are made available to entrepreneurs / Ministry of Economy
Improvement of business infrastructure at existing industrial parks	Grants to municipalities for improvement of industrial parks with average €12 M investment	Up to five industrial parks are facilitated in the affected territories	Diversification of the local economy and attraction of new business investment within the industrial parks	Up to 5 industrial parks supported / Municipalities