# JUST ENERGY TRANSITION PLAN OF THE REPUBLIC OF SERBIA UNTIL 2030

## 1.INTRODUCTION

### 1.1.Definition of just transition

A Just Transition aims to promote an environmentally sustainable economy 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, prioritizing feedback from local authorities and civil society organizations 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 increase energy efficiency. However, activities are not limited to the energy sector, but the concept of a "just transition" includes using all the opportunities that the transition to a "green economy" will bring. 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, promoting the sustainable use of natural resources and 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 organizing educational institutions to 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, particularly in relation to the three main pillars discussed below. Therefore, appropriate measures and approaches, which we refer to as a "Just Transition", must be designed to mitigate any negative consequences:

1. Retraining: Fossil fuel-based power and heat 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. Promoting economic diversification is key to mitigating these impacts. Encouraging the development of new industries and supporting small and medium-sized enterprises 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. It is important to invest in renewable energy infrastructure, such as wind, solar and hydropower, to achieve a stable and sustainable energy supply. The deployment of financial and technical resources is essential to support the 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 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 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 foresee 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 dioxide 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 job 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 job creation in different sectors. The adoption of sustainable practices can have a positive impact on the environment, including conserving natural resources, preserving biodiversity and mitigating the harmful effects of climate change.

The main challenge in the transition to a green economy is the high capital needs at the beginning of the process, 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 recycling, as well as acquiring new skills through appropriate training. This is a process, 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 the objectives and regulatory requirements and standards of Serbia and the international community, including human rights and the Convention on the Rights of the Child. 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.

## 1.2 Public policies and regulations in the field of energy and climate

The urgent need to reduce and eventually eliminate modern society's dependence on fossil fuels is a result of the climate change crisis. As of February 2021, 197 countries have endorsed the Paris Agreement. The aim of the 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 Republic of Serbia - International Treaties", No. 4/17), the Republic of Serbia agreed to actively work towards reducing greenhouse gas emissions. This commitment was confirmed in 2020 by signing the Sofia Declaration on the Green Agenda for the Western Balkans, by which the Republic of Serbia agreed to work together with the European Union to achieve 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 Republic of Serbia, No. 145/2014, 95/2018 – additional law, 40/2021, 35/2023 – additional law, 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.
- Law on the Use of Renewable Energy Sources ("Official Gazette of the Republic of Serbia", No. 40/2021, 35/2023, 94/2024 - other law) which enables new investments in renewable energy sources (hereinafter: RES) 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 apply only to small plants and demonstration projects, in accordance with the European Union rules on state aid. 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 Regulation on the assumption of balance responsibility and the model contract on the assumption of balance responsibility ("Official Gazette of the Republic of Serbia", No. 45/23) and Regulation on the market premium and feed-in tariff ("Official Gazette of the Republic of Serbia", No. 90/24),, 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 European Bank for Reconstruction and Development (hereinafter EBRD) as well as a second auction in 2024 for 645 MW.
- The Law on Energy Efficiency and Rational Use of Energy ("Official Gazette of the Republic of Serbia", No. 40/2021) was adopted in 2021 with the aim of harmonizing 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 establishing conditions for the efficient use of energy and energy resources, energy efficiency policy; energy management system; energy efficiency policy measures (energy use in buildings, in energy activities and by end users, for energy facilities and energy services); energy labeling and requirements related to eco-design; financing, incentives and other measures in this field. Its main purpose is to create conditions for 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 Directorate for Financing and Stimulating Energy Efficiency with the aim of rationalizing and increasing financing of energy efficiency.
- The Law on Climate Change ("Official Gazette of the Republic of Serbia", 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, which is the establishment of a system for reducing greenhouse gas emissions and adapting to changing climate conditions. By adopting it, Serbia is moving towards fulfilling its obligations to the international community, namely the United Nations Framework Convention on Climate

Change and the Paris Agreement (Law on Ratification of the Paris Agreement, "Official Gazette of the Republic of Serbia - International Treaties", No. 4/17). 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 of the Republic of Serbia 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 greenhouse gas emissions by 13.2% compared to the level set in 2010, or 33.3% compared to 1990, by 2030.

- On June 1, 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 for reducing greenhouse gas emissions in the entire economy.
- Integrated National Energy and Climate Plan of the Republic of Serbia until 2030 with projections until 2050 (hereinafter referred to as the INECP), ("Official Gazette of the Republic of Serbia", No. 70/2024), Based on Article 8a) paragraph 3 of the Law on Energy ("Official Gazette of the Republic of Serbia", No. 145/14 and 95/18 - second law 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 Mission in Kosovo pursuant to Resolution 1244 of the United Nations Security Council ("Official Gazette of the Republic of Serbia", No. 62 of 19 July 2006) and Article 50 of the Law on the Planning System of the Republic of Serbia ("Official Gazette of the Republic of Serbia" No. 30/2018).
- Energy Development Strategy of the Republic of Serbia until 2040 with projections until 2050, ("Official Gazette of the Republic of Serbia" No. 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 the energy and just transition. There are two key documents that define the decarbonization process in Serbia, namely the INECP and the Energy Development Strategy.

By Decision of the Council of Ministers D/2021/14/MC-EnC, the adapted EU Regulation 2018/1999 was adopted, which prescribes the obligation to develop an Integrated National Energy and Climate Plan for all Contracting Parties. The adapted EU 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 until 2030, which 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 proviso that a more detailed analysis of the impact on employment in certain areas will be defined in the Just Energy Transition Plan of the Republic of Serbia until 2030 (hereinafter: JETP).

The Energy 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 coordination of the profession, management of energy companies, employees and the civil sector. The Energy Development Strategy considered the aspect of just transition and defined the adoption of a just transition plan as the first step in the process of establishing a just energy transition.

Considering the scope and complexity of the energy transition process in Serbia, the aspect of just transition was specifically considered and analyzed within the project Diagnostic Study of Just Transition in

Serbia, within which the JETP of the Republic of Serbia until 2030 was prepared as an operational document of the Republic of Serbia for establishing the process of just energy transition for the period until 2030.

### 1.3.Linkage of energy and climate policy objectives with the Just Energy Transition Plan of the Republic of Serbia until 2030

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

- Share of RES in gross final energy consumption of 33.6%;
- Increase in 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 no more than 9.6 Mtoe, while primary energy consumption in 2030 will be no more than 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 the goals is directly related to the social, economic and financial aspects of the future development of Serbia. The decarbonization process is leading to a reduction in the number of employees in coal and electricity production, and it is necessary to define measures and policies to prevent negative consequences.

The Energy Development Strategy establishes general priorities for energy 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 realization 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 early as possible, including legislative changes, introducing necessary changes in sectors such as education, tourism and agriculture, planning the economic development of affected municipalities/regions in an alternative manner, 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 in time.

## 2. WHY IS A JUST TRANSITION NEEDED

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 - low-quality lignite - is used in the production of electricity in thermal power plants, 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 for many years before that, the power system had made maximum efforts to provide sufficient quantities of electricity, that is, to provide sufficient quantities 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 coal use leads to reduced needs for coal, which may affect the decline in production in individual mines and the change of their status from active to reserve status. In this sense, this affects the change in the structure of the economy, i.e. the shutdown 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

operation 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. Improvement of environmental protection and quality of life in the context of climate change (and fulfillment of Serbia's international obligations in this area), as well as, very importantly, improvement of poor air quality in the affected territories.

3. Economic factors, due to the tendency of increasing energy prices, lower levelized price 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-based power plants, which leads to their low efficiency.

4. Social impacts, as the resources “locked up” 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 transition timeframe, unless the planned mitigation activities are implemented effectively and in a way that fosters social cohesion. Social impacts will therefore primarily require a well-timed set of interventions that will act as a social safety 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 that will enable a just transition for all, but especially for the socially vulnerable. This is particularly important in predominantly mining municipalities where coal is produced.

## 3. BASIS FOR DEVELOPING A JUST ENERGY TRANSITION PLAN FOR THE REPUBLIC OF SERBIA UNTIL 2030

The Just Energy Transition Plan of the Republic of Serbia until 2030 has been developed in accordance with the concept of "just transition" of the European Commission (EC), 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 on the establishment of the Just Transition Fund) and the Just Transition Platform.

The basic information on which the Just Transition Plan is based is:

- Serbia's energy sector goals for 2030 defined by INECP.

The policy and objectives of reducing greenhouse gas 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 the uncertainties of the energy sector at the international level. The INECP primarily defines the structure of electricity production, taking into account the objective of reducing greenhouse gas emissions.

- The Energy 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 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 assumes 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 UCM 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 in 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, did not have an obligation to reduce greenhouse gas emissions compared to European Union member states, until the adoption of the Intended National Contribution in 2015 (The Republic of Serbia is not part of the European Union's

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. Accordingly, this also has a significant impact on the perception of the just transition process.

- The European Union Carbon Border Adjustment Mechanism (CBAM) entered into force on 1 October 2023 as a mechanism aimed at addressing the risk of "carbon leakage" by establishing a carbon price for imports of certain goods from countries outside the European Union. The key objective of the mechanism is to level the playing field for European producers facing a carbon price for their emissions under the European Union's greenhouse gas emissions trading scheme, while encouraging the decarbonisation of industry globally.

CBAM initially covers six industrial sectors: iron and steel, cement, fertilizers, aluminum, electricity generation and hydrogen. In a transitional phase, from 1 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 incurring any financial obligations. The obligation to purchase and surrender CBAM certificates will then apply from 1 January 2026, effectively establishing a carbon price that should reflect the level of the carbon price in the EU greenhouse gas emissions trading scheme.

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

The introduction of domestic carbon pricing in Serbia as a strategy to mitigate the effects of the European Union’s CBAM could provide significant environmental and economic benefits, aligning the country with international climate policies and protecting its trade interests. However, it 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, together 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 essential. Regular policy reviews and adaptive governance will help fine-tune the system to achieve economic sustainability and ensure public support.

With the introduction of a carbon tax mechanism, domestic coal-based power plants will become 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 just transition aspects.

- Socio-economic analysis of regions where coal is produced and used for electricity generation.
- The aspect of security of supply is primarily due to the global escalation of geopolitical conflicts, especially the war between Russia and Ukraine, in early 2022, which has completely changed the international circumstances in the energy sector, primarily on the European continent. Due to sanctions and embargoes on the import of energy from Russia, as well as physical sabotage, the established routes for supplying Europe with natural gas and oil have been interrupted.

It is important to emphasize that the energy just 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 definition 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 JETP 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 the negative consequences of the energy transition and stimulate regional development.

# 4. SITUATION ANALYSIS

The analysis is related only to the process of closing down the Kolubara A and Morava power plants, as the oldest plants. By adopting the Decarbonization Plan of the Serbian Electric Power Company and the transition plan for individual mines within the PE UCM Resavica, by considering the consequences of CBAM and by establishing policies related to the implementation of 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 oldest thermal power plant is Kolubara A (239 MW) built in 1956, and the youngest is Kostolac B3 of 350 MW, which began operation in 2024.

The largest part of the coal reserves is located in two main coal basins: Kolubara and Kostolac, which supply thermal power plants in Serbia. These two mining basins, located in the Kolubara and Braničevo districts, together produce about 32 million tons of coal per year (75% Kolubara and 25% Kostolac). The Kolubara mining basin supplies three thermal power plants (Nikola Tesla A and B and Kolubara, a total of 12 units), and Kostolac supplies two thermal power plants (Kostolac A and B, a total of 5 units). In addition to surface mines located near the TPP, coal is also supplied from underground coal mines owned by the state-owned enterprise PE UCM Resavica, which supplies EPS' thermal power plants. PE UCM Resavica unites and maintains 9 underground coal mines (with a total annual production of 0.3 to 0.4 million tons of coal). The main coal resources of PE UCM Resavica are located in the regions of Šumadija and Western Serbia, Southern and Eastern Serbia.

The following table shows the installed capacities of EPS' thermal power plants that use coal for electricity generation (lignite).

*Table 1: Thermal power plants built in the country (source: EPS)*

| Power Plant | No. of units | Installed capacity (MW) | Year of commissioning |
|---|---|---|---|
| Nikola Tesla A | 6 | 1.765 | A1: 1970<br>A2: 1970<br>A3: 1976<br>A4: 1978<br>A5: 1979<br>A6: 1979 |
| Nikola Tesla B | 2 | 1.300 | B1: 1983<br>B2: 1985 |
| Kolubara A | 5 | 271/239 | A1: 1956<br>A2: 1957<br>A3: 1961<br>A4: 1961 (Out of order)<br>A5: 1979 |
| Morava | 1 | 125 | 1969 |
| Koistolac A | 2 | 310 | A1: 1968<br>A2: (of 210 MW): 1980 |
| Kostolac B | 3 | 697<br>350 (new) | B1: 1987<br>B2: 1991<br>B3: 2024 |

## 4.2. Underground coal mining

The share of PE UCM Resavica in coal production in the Republic of Serbia is less than 1%, which makes this company a marginal producer with high costs. The mines with the highest production are "Rembas", "Ibarski Rudnici", "Soko" and "Štavalj". Production is decreasing from year to year (the current

production volume is approximately at the level of one third of production at its peak, in 1968), while employee costs are gradually increasing. PE PEU Resavica produces 300,000 to 400,000 tons of coal per year. These are primarily lignite, brown coal and hard coal, more than half of which is transported to the Nikola Tesla A and B and Morava thermal power plants, managed by the joint-stock company Elektroprivreda Srbije (EPS). Coal production per employee at PE UCM Resavica is more than ten times lower than in similar mines in the region. Resavica also has a history of poor occupational safety conditions. These conditions put PE UCM Resavica at a disadvantage compared to national and regional competitors. The coal produced within PE UCM Resavica has a high calorific value, which significantly reduces the amount required for combustion compared to coals that are low in calories.


*Picture 1: Mine locations within the PU UCM Resavica*

As the potential closure of the PU UCM Resavica mine is not determined by the INECP or any other official act, the diagnostic report and the APPT focus on the possible impact of the closure of the Morava and Kolubara power plants on individual mines of the PU UCM Resavica and the municipality of Despotovac. There are four pits within the "Rembas" mine, the 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 are produced annually in the Rembas mine and delivered by rail to the 125 MW Morava power plant, which operates as part of EPS.

Regardless of this, or the process of implementing the energy transition, the Bogovina, Jasenovac and Aleksinac mines (which is not an active mine but its employees are engaged in performing mining work in other mines of the PE UCM Resavica) are on the verge of exhausting their coal reserves or the deposit and technical and technological factors are such that the further exploitation process represents a burden for the sustainable operations of the PE UCM Resavica.

PE UCM Resavica is not of systemic importance for the entire coal sector, although its mines may be systemically important for the economic and social environment in individual locations. Restructuring PE UCM Resavica and implementing transition processes in its mines in phases will be a complex process, with numerous challenges to ensure that the shutdown process is properly managed and that its negative impacts are minimized. Therefore, projects should definitely be considered for the listed mines to determine the possible impact on PE PEU Resavica employees, on the socio-economic development of the municipalities of Žagubica (Jasenovac mine), Boljevac (Bogovina mine), Aleksinac (Aleksinac mine), as well as on the process of just energy transition.

Social protection instruments and approaches can help mitigate the negative consequences of potential coal mine closures on the workforce and help workers in the mining sector find new productive employment. Reallocation of labour to other mines, the introduction of active labour market policies, together with income

support and support services, can help address unemployment, improve human capital, and be beneficial in many other ways. The key question is how to design and implement social protection and labour services in a way that facilitates private sector investment in economic development and job creation, without overusing public resources. At the policy level, instruments that help mitigate the problem of redundant labour should be accompanied by reforms to promote private sector development, remove obstacles to job creation, and modernize labour market policies. Finally, effective and continuous dialogue and consultation have proven to be an essential element of any adaptation strategy in the coal sector.

Coordination and cooperation between the Government of Serbia, PE UCM Resavica and local governments is crucial for designing and delivering development programs for areas affected by mine closures in order to avoid further impoverishment and population migration from those areas.

*Table 2: Resavica-Rembas coal mine*

| Coal mine | Average annual production of coal (t) | Number of employees | Municipality |
|---|---|---|---|
| Resavica-Rembas | 120.000-160.000 | 1.095 (2021)<br>1.074 (2022)[1] | Despotovac |

### 4.3. Employment in the coal production and thermal power sector

The mining sector and associated electricity generation are large employers, with EPS having a total of 15,769 employees (data from 2023), and Pro Tent 5,954 employees, whose work is related to the Kolubara and Kostolac basins. PU UCM Resavica has a total of 3,565 employees [2]. In 2023, there were a total of 16,120 employees in the Kolubara and Kostolac mines. This figure includes employees in EPS and Pro Tent. Together with the Resavica mines, the total number of employees in the coal sector is approximately 20,000, as shown in the table below:

*Table 3: Number of employees in coal mining in Serbia (Resavica, EPS (data from 2023)*

| | **Basin** | **Employees (miners)** |
|---|---|---|
| Underground coal mining | Resavica (9 mines) | 3.565 |
| Lignite mining in EPS | Kolubara | 13.593 |
| | Kostolac | 2.527 |
| **Total** | | **19.685** |

*Source: EPS and Ministry of Mining and Energy*

In the same year, EPS reported a total of 5,603 employees, including employees at Pro Tent, thermal power plants, as shown in the following table.

*Table 4: Number of employees in thermal power plants of EPS and Pro Tent (data for 2023)*

| **Therma power plant** | **Number of employees** |
|---|---|
| Nikola Tesla A | 2.033 |
| Nikola Tesla B | 1.312 |
| Kolubara | 548 |
| Kostolac A | 533 |
| Kostolac B | 891 |
| Morava | 286 |
| **Total** | **5.603** |

Therefore, the total number of employees in thermal power plants and coal mines in Serbia is 25,288.

According to the data of the Republic Statistical Office – RSO(2021), in the municipalities of Lazarevac, Obrenovac and Lajkovac, 9,367, 1,855 and 1,341 people are registered as employed in mining and electricity. From the territory of Ljig, the smallest of these four municipalities, 159 people are officially

[1] INFORMATOR-O-RADU-JP-PEU-Resavica.pdf (jppeu.rs) (Information of Business Performance)

[2] INFORMATOR-O-RADU-JP-PEU-Ресавица.pdf (jppeu.rs) Information of Business Performance)

employed. In addition to the municipalities of Lazarevac, Obrenovac, Lajkovac and Ljig, it should be noted that two other municipalities, Ub and Aranđelovac, have a total of 1,221 people employed in the EPS (in the Kolubara area, according to EPS data from 2022). Most of these workers are employed in mines.
In the case of Despotovac, the number of employees from the municipality is affected by the operation of the PE UCM Resavica mines and especially the Rembas mine. According to the Republic Statistical Office (2021), this municipality has 1,304 employees in mining and electricity, which makes up 27.14% of the total workforce. The vast majority of them are employed in the mining sector.

## 4.4. SWOT analysis of affected territories

**Kolubara Basin**

*Table 5: Strengths, weaknesses, opportunities and threats for the Kolubara Basin - illustrative example*

| | **Useful** | **Harmful** |
|---|---|---|
| **Inside** | **Strengths**<br>• Proximity to Belgrade and excellent geographical location.<br>• Most of the affected territory is located on the transport corridor XI, while Arandjelovac is located directly between Corridor X (15 minutes drive) and Corridor XI (45 minutes drive) and on the route of the planned "Karađorđe" highway that will connect these two corridors, passing by Arandjelovac<br>• The economy in all affected territories has been recording steady growth in recent years.<br>• In Obrenovac, Arandjelovac, Ljig and Ub, the local economy is already quite diversified, which means that the foundations for the transition have already been laid.<br>• The existing electricity transmission infrastructure can be attractive for investments in RES<br>• | **Weaknesses**<br>• Underdeveloped infrastructure, including business infrastructure, especially in Ljig and Lajkovac.<br>• Industrial zones in other parts of the territory also have infrastructure problems such as lack of access to the railway network, gas infrastructure and waste management.<br>• Underdeveloped waste management system and existence of illegal landfills.<br>• Youth unemployment is relatively high in Lazarevac and Lajkovac, with few job openings.<br>• Communal infrastructure is weak in some municipalities expected to be affected. In Ljig, for example, only 50% and 56% of households have access to water and sewage networks, respectively.<br>• Most of the Kolubara territory is not supported by the Regional Development Agency (RDA), which deals exclusively with that territory. |
| **Outside** | **Opportunities**<br>• There is a great potential for attracting foreign direct investment due to the excellent geographical location and the existence of a free trade zone (Obrenovac).<br>• The experience of Obrenovac could be used for the benefit of the entire territory.<br>• Attracting larger investments to this area could support the development of smaller enterprises operating according to the cluster model, especially in the case of cooperation with research institutes and universities.<br>• The rural areas of Ub and Ljig have a tradition in agricultural production (livestock and dairy production) that can be further developed and used for food production.<br>• The existence of several tourist attractions (mountains between 500 and 1,000 m above sea level, such as Rajac, Bukulja, Rudnik, etc.), which provides opportunities for attracting tourists interested in different types of tourism such as family and rural tourism, mountaineering, camping, etc.<br>• The developing innovation ecosystem in the wider Belgrade metropolitan area could potentially provide an opportunity to move towards innovative products and services in line with the Serbian RIS strategy.<br>• The upgrading and expansion of the sewage network, which is essential for local economic development and modern life. | **Threats**<br>• Strong dependence on the mining and energy sectors, especially in Lazarevac (40% of employees are related to the mining and energy sector) and Lajkovac (more than 40% are related to this sector).<br>• Depopulation could be a significant problem, especially in rural areas due to aging and emigration to Belgrade, given that there are no conditions for effective work and distance education for the economically active population and students.<br>• The territory is prone to natural disasters, as shown by the floods in 2014.<br>• The classification of one part of this territory as belonging to the territory with the highest level of regional development (due to administrative affiliation to the city of Belgrade) may hinder the necessary procedures when the energy transition begins. |

**Resavica territory**

*Table 6: Strengths, weaknesses, opportunities and threats for the Resavica territory - illustrative example*

| | Useful | Harmful |
|---|---|---|
| | **Strengths**<br>• The local natural environment would be suitable for the development of specific forms of tourism<br>• The agricultural sector (in the form of individual farms) is quite well represented, to the extent that it can be considered a potential sector for development.<br>• A state forestry company operates in Despotovac.<br>• Small businesses in Despotovac have recorded increased revenues in recent years. Although they operate mainly in retail, the increased revenues indicate some potential at the municipal level. | **Weaknesses**<br>• Local economic activity is directly or indirectly largely linked to the operation of the Rembas mine.<br>• The Despotovac industrial zone is currently not developed enough to attract large investors.<br>• The population is aging faster than the national average and faster than all other affected territories.<br>• Long-term unemployment is already high, with very few job vacancies per 100 registered unemployed. The low level of education of the female population makes employment difficult.<br>• Living conditions in the settlements are not conducive to retaining youth or the workforce in general (e.g. only 55% of houses are connected to the water supply network). |
| | **Opportunities**<br>• The Municipal Industrial Zone Kablovka in the municipality of Despotovac is not yet equipped with any facilities, which means that they can be designed and installed according to the specialized needs of each potential investor. Currently, only roads have been developed. The municipality has a total of 50 hectares at its disposal, and there are currently no companies in the zones.<br>• Given the large number of potentially affected workers, both absolutely and in relation to the total population, there is an opportunity to design and implement the plan in a more comprehensive manner, which would increase the effectiveness of the planned measures. | **Threats**<br>• There is currently no clear timeline or plan for the energy transition, which needs to be addressed in order to plan and implement targeted mitigation measures.<br>• The large number of potentially affected workers, both in absolute terms and in relation to the total population, requires more effective support from local authorities and the population for the measures to be successful. This in turn requires an appropriate approach to stakeholders and the joint creation of a detailed plan of actions to be taken, to ensure community ownership of the process. |

## 4.5. Analysis results

The Just Transition Diagnostics showed that in the event of the closure of the Kolubara and Morava power plants, 472 jobs could be indirectly affected in the Kolubara region, mainly subcontractors and companies in the EPS value chain, but which represent an acceptable percentage of total employment in this territory. Kostolac will face limited effects in the short term as a result of the implementation of the green transition. The Diagnostics analyzed the possible effects of the closure of the Kolubara and Morava power plants and the largest mine within the PE UCM Resavica, the Rembas mine, as an illustrative example. It is estimated that a total of 930 mining jobs could be directly affected in Rembas by 2030 and another 958-1,367 jobs indirectly, mainly related to the mine's subcontractors, which would have a significant potential impact on local income.

After 2030, in the energy transition process, as foreseen by the INECP, thermal power plants would operate at reduced capacity, but without accelerated closures. This would result in a significant reduction in the workforce in lignite production.

The transition to a green economy will create new full-time jobs across the country in the construction, operation and maintenance of new capacities using RES for the production of electricity and/or heat by 2030 and beyond. Key factors in determining the direct impact of a project on employment include the volume of domestic production and the time required for construction, and production as well as for operation and maintenance. Considering the plans for new RES plant construction projects in Serbia and taking into account the length of the construction cycle for each specific type of project, jobs related to the construction and production of RES power plants can be considered “permanent” at least until 2030 and beyond. Jobs related to the operation and maintenance of power plants last throughout the entire life of the power plant. The RES industry in Serbia is expected to create up to 6,105 jobs across the country by 2030, the majority of which (around 4,397) will be in the solar industry.

## 4.6. Key stakeholders in a just transition

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

*Table 7: Summary of all the most important stakeholders*

| Stakeholder | The role in just transition process |
|---|---|
| Government of the Republic of Serbia | Coordination, adoption, implementation and monitoring of policies and measures in the field of just transition. |
| Ministry of Mining and Energy | Defining, coordinating and implementing energy policy in the field of just transition |
| Ministry of Labour, Employment, Veteran and Social Policy | Participation in working groups for the purpose of coordinating, implementing and monitoring measures and activities.Implementation of just energy transition measures and policies related to retraining, creation of new jobs |
| Ministry of Education | Participation in working groups for the purpose of coordination, implementation and monitoring of measures and activities |
| Ministry of Environmental Protection | Participation in working groups for the purpose of coordination, implementation and monitoring of measures and activities |
| Ministry of Finance | Participation in working groups for the purpose of coordination, implementation and monitoring of measures and activities |
| Ministry of Economy | Participation in working groups for the purpose of coordination, implementation and monitoring of measures and activities |
| Ministry of Construction, Infrastructure and Transport | Participation in working groups for the purpose of coordination, implementation and monitoring of measures and activities |
| Energy Agency of the Republic of Serbia | Participation in working groups to support and assist in the implementation of measures and activities |
| Transmission System Operator and Market Operator (*Elektromreža Srbije Belgrade*) | Participation in working groups to support and assist in the implementation of measures and activities |
| Distribution System Operator (Elektrodistribucija Srbije l.l.c.. Belgrade) | Participation in working groups to support and assist in the implementation of measures and activities |
| Business Association “Toplane Srbije“ | Participation in working groups to support and assist in the implementation of measures and activities |

| Stakeholder | The role in just transition process |
|---|---|
| Joint Stock Company Electric Power Industry of Serbia (*EPS*) | Participation in working groups for the purpose of coordination, implementation and monitoring of measures and activities. Implementation of measures and policies for a just energy transition |
| PE UCM Resavica | Participation in working groups for the purpose of coordination, implementation and monitoring of measures and activities. Implementation of measures and policies for a just energy transition |
| Kovin Mine – joint stock | Participation in working groups for the purpose of coordination, implementation and monitoring of measures and activities. Implementation of measures and policies for a just energy transition |
| Development Agency of Serbia and regional development agencies | Participation in working groups for the purpose of coordination, implementation and monitoring of measures and activities. Implementation of measures and policies for a just energy transition |
| National Employment Service | Participation in working groups for the purpose of coordination, implementation and monitoring of measures and activities. Implementation of measures and policies for a just energy transition |
| Local self-government units | Coordination, implementation and reporting on measures and policies for implementing the just energy transition process at the local level. |
| Serbian Chamber of Commerce | Participation in working groups to support and assist in the implementation of measures and activities. |
| Standing Conference of Cities and Municipalities | Учешће у радним групама у циљу подршке и помоћи у спровођењу мера и активности |
| Representatives of civil society organizations | Учешће у радним групама у циљу подршке и помоћи у спровођењу мера и активности |
| Union of Employers | Учешће у радним групама у циљу подршке и помоћи у спровођењу мера и активности |

## 5. ANALYSIS OF GOALS

The objectives of the plan are derived in line with the EC Just Transition Concept, which encompasses the social, demographic, economic, health and environmental dimensions of the transition towards a climate-neutral economy, and which is expressed through the regulatory framework[3] (EC 2021/1056 establishing the Just Transition Fund) and the Just Transition Platform[4]. It is further based on the ILO's "Guidelines for a Just Transition towards Sustainable Economies and Societies for All[5]" and the Action Plan for the Implementation of the Sofia Agreement on the Green Agenda for the Western Balkans 2021-2030[6].

### A. Transition to green economy

The concept of a green economy refocuses attention on the economy, investment, capital and infrastructure, employment, skills and positive social and environmental outcomes. It is implemented through the following frameworks:

- Policy development, technical support and knowledge resulting in policy tools and guidelines
- Financing mechanisms and new business models.
- Institutional training (including organising educational institutions to integrate green economy concepts into sustainable autonomous curricula) and capacity building.

### A1. Reforms and investments in the electricity and district heating sectors with the aim of (*missing text*)

- Reducing GHG emissions in the energy sector and district heating by phasing out coal use in

[3] Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition Fund https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1056
[4] https://ec.europa.eu/regional_policy/en/funding/jtf/just-transition-platform/
[5] wcms_826060.pdf (ilo.org)
[6] Action Plan for the Implementation of the Sofia Agreement for the Western Balkans 2021-2030. The EBRD's concept that a functioning market economy should be more than a combination of markets; it should be competitive, inclusive, well-governed, environmentally sustainable, resilient and integrated.

accordance with the INEKP and the Energy Development Strategy, which aims to completely phase it out by 2050. There are several alternative options for decommissioning TPPs, which are presented in Table below.

*Table 8: Alternatives for closing/repurposing TPPs*

| | |
|---|---|
| **Third party refits for new application outside the energy sector** | Sell to construction companies / investors for offices / industrial site / warehouse and logistics / retail center / data center / recreation facilities (e.g. event venue, golf course, horse, car or motorcycle racing) |
| | Grant funds to local communities to convert them into common areas / conference buildings / municipal buildings / cultural centers |
| | Sell IPP grid permits to those interested in RES / photovoltaic systems near the plant / mine |
| | Convert into a renewable energy education and research center |
| | Convert into agroforestry property or urban agricultural site |
| | Convert into urban green space / community park |
| | Convert into eco-tourism site |
| **Adaptation for new application within EPS, but outside the energy sector** | Sell a storage building |
| | Convert into a waste management facility |
| | Convert into an industrial hub for green manufacturing |
| **Basic reconstruction** | Convert into land - sell IPP permits to those interested in investing to RES/PV systems |
| **Reconstruction** | Fully restore exploited land to its previous state (as required by law) |
| **Applications related to the energy sector** | Convert to CCGT CHP on natural gas for district heating, potentially in combination with CCS |
| | Develop grid storage facilities (at decommissioned TPP sites) |
| | Preserve (as a strategic reserve) |

- Increasing the share of renewable energy sources (RES) in total final energy consumption, through:

1. Construction of renewable sources (especially wind, photovoltaic and hydroelectric power plants) and energy storage systems.
2. Strengthening and digitalization of electricity grids to enable the integration of a large number of RES at all voltage levels.
3. Increased electrification in the industrial, transport and space heating sectors.

- Rehabilitation of mining land and mine rehabilitation. There are several alternative options for rehabilitated mining land as presented in Table 9 below.

*Table 9: Alternatives for rehabilitated mining land*

| | |
|---|---|
| **Usage of RES** | Install photovoltaic parks |
| | Install wind farms |
| | Use rehabilitated land to grow energy crops |
| **Third party refits for new application outside the energy sector** | Sell land to an investor for an ecotourism park / amusement park / commercial / industrial / residential center |
| | Convert into arable land / nature reserve with lakes and aquaculture |
| | Sell to an investor for a cargo airport / hospital complex / university or other educational institution |
| | Convert into military land / depot |
| | Afforest to obtain CO2 certificates |
| rehabilitation and recultivation of the area | Fully restore exploited land to its previous state (as required by law) |
| **Adaptation for new application within EPS, but outside the energy sector** | Convert into a waste management facility (e.g. landfill) |

- Empowering prosumers, through regulatory reforms (e.g. simplifying licensing and ownership/leasing issues related to net metering), promoting the concept of energy communities, energy market reforms (competition and pluralism in all market phases) and pricing reforms. Such reforms will contribute to increasing the security of energy supply and ensure financial stability and efficient operation of energy markets.
- As regards district heating, promoting a centralised district heating plant based on the "waste to energy" principle for district heating in affected territories, promoting "heating from renewable sources" using solar thermal power plants with centralised feed pumps and seasonal energy storage.

**A2. Increasing the climate "neutrality" of urban areas with the aim of:**

- Promoting investments in the renovation of the existing building stock, for their energy-efficient upgrade.

- Developing and implementing a new Action Plan to combat energy poverty, thereby avoiding uncontrolled use of biomass
- Introducing renewable sources of heating and cooling, using waste heat in urban areas and promoting rooftop heat collectors for hot water.
- In the field of urban planning, improving the urban ecosystem through reforming the urban policy framework and promoting sustainable urban transport infrastructure.

**A3. Sustainable use of resources, resilience to climate change and environmental protection through a circular economy.**

- Actions that contribute to the reduction of waste generation and efficient waste management, in line with the principles of the waste hierarchy and the circular economy (development of recycling and eco-industrial parks); application of sustainable waste-to-energy technology.
- Protection of water resources, construction of infrastructure for water management and wastewater treatment and introduction of reforms that promote the efficient and sustainable use of water resources.

**B.** Regarding **human capital development**, activities are focused on:

**B1. Improving economic results** through:

- **Increasing access to labour markets and enterprises**, taking into account activities (infrastructural and non-material interventions) aimed at:
  1. Improving capacity and skills for innovation.
  2. Upskilling of employees.
  3. Improved transport access to labour market institutions and enterprises.
  4. Improved digital connectivity for enterprises, training and education centres.
  5. Improved childcare facilities to support working parents.

- **Improving the match between skills supply and demand for industrial** skills through infrastructure decisions that support affected territories, by**:**
  1. Improving industry access to the required skill sets, such as, for example, improving the supply of needed local skills through adequate local education or the availability of skills offered outside the region.
  2. Creating jobs and pathways for local people with lower qualifications, especially in sectors that involve job-creating technologies and provide young people with skills that are transferable to a wide range of jobs (e.g. renewable energy).

**B2. Improving education/training outcomes** through**:**

- **Improved access to lifelong learning**, vocational training and tertiary education, taking into account activities (infrastructural and non-material interventions) aimed at:
  1. Improved access to transport for workers and students to places offering opportunities for lifelong learning, vocational training and tertiary education.
  2. Improved access to lifelong learning, vocational training and tertiary education through improved digital connectivity.
  3. Improved lifelong learning, vocational training and tertiary education through the provision of integrated and smart buildings, as well as new and improved buildings to adapt to specific purposes.

- **Improved access to health and social services**, considering activities (infrastructural and non-material interventions) aimed at:
  1. Improving access to transport for disadvantaged groups (elderly people, people with disabilities, mothers, children, etc.), access to health and social services.
  2. Improving digital access to health and social services for people living in affected territories.
  3. Improving access to health and social services through the provision of integrated and smart buildings, as well as through the adaptation of existing buildings to their purpose.

**C. Regarding regional economic diversification, the objectives for assessing the needs for infrastructure and intangible interventions and the activities required for their implementation are focused on:**

• **Ensuring greater productivity and efficiency in affected territories**, including examining activities that:

1. Improve enterprise performance and production efficiency (for example, through the adoption of technologies and complementary factors of production (e.g. skills), improving production/operational processes and examining opportunities to increase the efficiency of value chains for supply chain industries, such as reducing transport costs and connecting industries and their supply chains).
2. Promote greater productivity and efficiency by optimizing land use and facilitating the establishment of enterprises and their cooperation.

• **Opening up new areas of economic growth** throughout the affected territory, exploring activities that:

1. Exploit new sources of economic growth.
2. Increase the supply of innovative products and services (by supporting start-ups, exploitation and collabouration through research).
3. Implement effective specialization of enterprises (such as renewable energy production or advanced manufacturing industries, development of new product lines within the same industry or the results of research institutes).

• **Facilitating easier market access** by

1. Improving the openness of enterprises by enabling local enterprises to compete locally and by connecting them (both physically and digitally) to larger markets with the aim of:
2. Importing goods and services (including raw materials, utilities, financing and capital, etc.).
3. Selling their products.

• **Supporting businesses to adapt** and be more resilient to the energy transition, by:

1. Improving their financial capacity and ability to adapt and/or transform their activities in line with the energy transition.
2. Improving the knowledge and skills of entrepreneurs and workers so that they can respond to the energy transition and remain competitive in a changing global market.

**D.** Strengthening **Governance structures for just transition.** This process should be under the control of the Government from the beginning and involve all potential stakeholders. In this area, we propose an appropriate **governance framework**, from which a comprehensive just transition plan will eventually be developed in cooperation with all stakeholders, and with a stakeholder engagement strategy:

• Progressive development of the **legal, institutional and regulatory framework and governance process** through which the PPET and the just transition financing mechanisms will be managed.

• **Improved national and regional institutional capacities for and implementation of the just transition process, as well as engagement in:**

1. Improving national and regional capacities for shaping and implementing the just transition process.
2. Improving the transport policy framework.
3. Improving the framework for a low-carbon and climate-resilient transition.
4. Improving the framework for entrepreneurship.
5. Improving the framework for the digital transition.

• **Building consensus on a just transition, which essentially means**:

1. Raising awareness of a just transition.
2. Involving stakeholders in the planning and implementation processes, through extensive public consultations at local and national levels.

## 6. ACTIVITIES

The JETP is a synthesis of the socio-economic analysis of the affected territories and their relative competitive advantages and conditions, and offers a first overview of the development needs to address the

transition challenges, objectives and expected results through the implementation of the proposed intervention logic. It is further based on the EBRD's Just Transition concept, including the Quality Transition Approach and the Economic Inclusion Strategy. Therefore, the outcomes (objectives) of the Just Transition are grouped into four main pillars (see JETP, Annex 6 "JETP Framework"):

1. Green energy transition and retraining of the existing workforce of mines and thermal power plants/heating plants.
2. Human capital development – education to support the transition to a green economy.
3. Diversification of the local economy in the affected areas.
4. It also includes the management of the entire process.

Activities are divided into the following groups:

**Group A: Immediate Mitigation Actions**

These actions are necessary to mitigate the impacts of the planned reduction in coal-based electricity generation. They should be prioritized to enable the transition.

**Group B: Future Just Transition Actions**

These less urgent actions will make the energy transition more just in the future, beyond 2030. Although they are not a priority at this time, they are nevertheless crucial to ensure fairness and equity when the transition to cleaner energy sources is fully implemented. In the following analysis, they are labeled as preparatory actions.

Within these two groups, the activities are further divided into national and local, in order to distinguish those that will be implemented throughout Serbia and those that will be implemented only in areas affected by the effects of the known or expected reduction of coal-based mining activities and electricity generation.

Any of the local actions could be implemented in the directly affected territories before 2030 as a pilot project.

While these groups facilitate goal setting and planning, all activities should be considered within a single integrated framework. This approach represents complementarity and synergy for a just transition across different time frames.

The following principles apply to decision-making based on assessments of necessary infrastructure and interventions:

- Decisions on investment in public infrastructure will be aligned with policies and strategies set by the Government, such as the INEKP, the Energy Development Strategy of the Republic of Serbia until 2040 with projections until 2050, local economic plans, and in particular with important time milestones.
- Infrastructure can effectively address some social inclusion issues, and targeted non-material interventions are also proposed. All activities are prioritized based on the impact of the transition on the directly and indirectly affected population.
- Fitness for purpose, accessibility and affordability were key factors in the assessment process for selecting activities.
- Individuals, businesses and the community must have the capacity, ability and willingness to access/support the infrastructure and any interventions.
- Flexibility to respond to the complex and changing nature of the impacts of the transition as planned.
- Infrastructure investments should leverage the comparative advantages of businesses operating in the region and support those that need to transform their operations to meet their potential for future growth.

A key requirement of the methodology is the identification of opportunities and obstacles related to local economic and social development and necessary considering the impact of the transition on a climate-neutral economy, as well as on the economic growth of enterprises with potential for growth in the near future.

Based on the above approach, the decision to include specific activities in the JETP was also made based on the following factors:

- Geographical location of the affected areas and proximity to the wider Belgrade market where trade in goods and services is possible.

- Resources available in the affected areas.
- Existence of economic activities within the affected areas or in the wider Belgrade area of particular interest to the affected areas.
- Access of the affected areas to critical or supporting infrastructure and services necessary for economic inclusion and market development.
- Skills profile, demographic characteristics and income of the population of the affected areas.
- Internal connectivity of the affected areas, their connectivity with the municipalities involved, or external connectivity with other areas (various means of transport, such as railways, motorways, roads, buses, as well as telecommunications infrastructure), and in particular with the wider Belgrade area.
- Social factors of the affected areas (i.e. networks and connections, social and cultural strengths and weaknesses).

A comparative analysis of territorial strengths and weaknesses that could influence the achievement of a just transition includes the following regional elements, at the local level:

- Geographic location in relation to the proximity of major economic centres, transit centres for goods and transfer hubs for the population.

- Geomorphological features.

- Local historical or other special features, such as tourist attractions and cultural heritage.

- Transport modes and digital connectivity.

- Tertiary education and integrated lifelong learning facilities.

- Social and primary health care institutions and services aimed mainly at the most affected population, i.e. the elderly, children and families.

- Digitalisation of public services.

- Local water and sanitation network.

- Demographic characteristics and poverty levels.

- Sectoral industrial areas, including the following aspects:

1. Research activity, incubation and innovation clusters.

2. Industrial and free trade zones.

3. Development of main economic activities, taking into account economic activities that are declining or transforming due to the transition, and addressing the problems of growth, dependence on EPS / Resavica and state-owned enterprises, internationalization and exports, financing and investment.

4. Organizations that provide support to businesses and employees at the local level.

5. Overall competitiveness problems, such as enterprise digitalization, state aid and competition issues, banking sector resilience, intellectual property protection, and integrity and corruption control.

The proposed activities are set out in the tables below, which also show the objectives that each of them serves.

## 6.1. Plan - short-term activities at the national level (Group A)

Table 10: Plan - short-term activities at the national level

| | Subject of activity | Timeframe | Responsible stakeholder | Cost estimate | Source of funding | Area | Target group | Key performance index | Impact and priority |
|---|---|---|---|---|---|---|---|---|---|
| | **National** | | | | | | | | |
| 1. | Setting up and operationalizing just transition governance in Serbia | 12 months | Serbian Government - Project Management - Ministry of Mining and Energy | N/A | N/A | National | Ministry of Labour, Employment, Veterans and Social Policy, Ministry of Environmental Protection, Ministry of Mining and Energy, Ministry of Education, Ministry of Economy, Ministry of Construction, Transport and Infrastructure, Ministry of Finance, Ministry of Agriculture, Forestry and Water Management, Ministry of Interior, Local Authorities, EPS | Preparation of the Inter-Ministerial Government Committee (IMGC), the Just Transition Unit within the Ministry of Mining and Energy, and ad hoc working groups | The driving force of the national just transition strategy must be the commitment of the Government of Serbia.<br><br>Priority: high during the transition mitigation period, as planned. |

## 6.2. Plan - Preparatory activities at the national level (Group B)

Table 11: Plan - Preparatory activities at the national level

| | Subject of activity | Timeframe | Responsible stakeholder | Cost estimate | Source of funding | Area | Target group | Key performance index (KPI) | Impact and priority |
|---|---|---|---|---|---|---|---|---|---|
| | **National** | | | | | | | | |
| 2. | Establish just transition financing mechanisms and governance systems | 12 months | Serbian Government – Project Management – Ministry of Mining and Energy | 350 thousand EUR | International donors, the Budget of the Republic and other sources in accordance with the law. | National | All ministries and government bodies involved in the just transition. | Agreements defining mechanisms for financing just transition, Government decisions establishing a management body, Government decisions defining the governance system | Possibility to finance just transition activities through an agreed mechanism<br><br>Priority: High |
| 3. | Update legislation to include appropriate governance and monitoring mechanisms and adopt and implement the PPET | 12 months | Ministry of Mining and Energy | 150 thousand EUR Legal aid cost | International donors | National | Government of Serbia | Adoption of all necessary legal and bylaws Promulgated primary and bylaws | Just transition is initiated and included in the legal framework<br><br>Priority: High during preparation for decarbonization |
| 4. | Mainstream just transition into national strategies | 36 months | Ministry of Mining and Energy | 180 thousand EUR | International donors, the Budget of the Republic and other sources in accordance with the law. | National | Ministry of Labour, Employment, Veterans and Social Policy, of Environmental Protection, Ministry of Mining and Energy, Ministry of Education, Ministry of Economy | Number of proposals related to just transition in existing and new strategic documents and laws/ Ministry of Mining and Energy | There is an integrated response to the challenges posed by a just transition across a range of national strategies<br><br>Priority: High during preparation for decarbonisation |
| 5. | Targeted awareness-raising activities for all stakeholders/target groups identified in the Stakeholder Engagement Plan | Until 2030 | Ministry of Mining and Energy, Serbian Chamber of Commerce | 450 thousand EUR per year for the first three years, 150 thousand euros per year thereafter (1.65 million euros by 2030) | International donors, the Budget of the Republic and other sources in accordance with the law. | National with a focus on affected territories | National authorities, local and regional bodies, EPS, PE UCM Resavica, workers in the coal-based energy value chain, general public | Communication materials created specifically for each stakeholder | Serbian government more easily and proactively manages the impacts of the green energy transition<br><br>Priority: High during preparation for decarbonization |
| 6. | National Strategic Plan for Green Skills | 12 months | Ministry of Education | 200 thousand EUR | International donors, the Budget of the Republic and other sources in | National | Ministry of Education, Ministry of Labour, Employment, Veterans and Social Policy, | • Education and training programs for scientists and young people not in employment, education or | Population groups and key stakeholders will support the Government of Serbia's |

| | Subject of activity | Timeframe | Responsible stakeholder | Cost estimate | Source of funding | Area | Target group | Key performance index (KPI) | Impact and priority |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | accordance with the law. | | Ministry of Environmental Protection, Ministry of Mining and Energy | training (NEET) with a focus on cutting-edge technologies<br>• Competence center for green skills<br>• Upgrading of technical schools/vocational training centers in line with market needs (development and implementation of new curricula and programs<br>• Tailored programs for retraining and upskilling of employees in manufacturing areas in line with demand.<br>• Improving the provision of information on available and projected job needs (matching job supply and job demand)<br>Digital social network to connect the workforce with the industry ecosystem and training providers | efforts for a just transition<br><br>Priority: High during preparation for decarbonization |
| 7. | Researching alternative options and their effects on spatial planning, use and distribution of rehabilitated land, attractiveness and facilitating access for investors, participation in public-private partnership schemes and tender procedures. | 6 months | Serbian Government | 70 thousand EUR<br>Legal aid costs | The budget of the Republic and other sources in accordance with the law. | National | Government of Serbia, EPS, PE UCM Resavica, local governments to which the affected territories belong | Deciding on implementation options | Deciding on the implementation methods<br><br>Priority: Medium during preparation for decarbonization |
| Total costs of preparatory activities at the national level | | | | 2,6 million EUR | | | | | |

## 6.3. Plan – short-term activities at the local level (Group A)

Table 12: Plan – short-term activities at the local level

| | Subject of activity | Timeframe | Responsible stakeholder | Cost estimate | Source of funding | Area | Target group | Key performance index | Impact and priority |
|---|---|---|---|---|---|---|---|---|---|
| | **Territorial** | | | | | | | | |
| 8. | "Development of an Analysis of the structure of employees (potential redundancies) and employment needs in the local labour market" (with the possibility of considering possible special measures for children from affected families).; | 12 months (after adoption of the Decarbonization Plan of the "Elektroprivreda Srbije" and the transition plan for individual mines within the PE UCM Resavica, which contains the necessary parameters for the preparation of the Analysis)". | Ministry of Mining and Energy, Ministry of Labour, Employment, Veterans and Social Policy, National Employment Service, Chamber of Commerce of Serbia, Employers' Union of Serbia, local self-government units, EPS; | It is not possible to provide a cost estimate, given that it is determined by the scope and dynamics of the reduction, or rather the abandonment, of coal-based energy production, as determined by the EPS Plan; | International financial institutions, international donors, in combination with the budget of the Republic and other sources in accordance with the law. for other active labour market measures. | Regional and local level, in accordance with the Decarbonization Plan of the „Elektroprivreda Srbije" and the transition plan for individual mines within the PE UCM Resavica; | Employees of EPS ad and PE UCM Resavica, potential redundancies in the field of coal-based energy production and local employers who express a need for employment; | Analysis Done | Current data and information are available that represent the starting point for defining the measures in item 10.<br><br>High priority |
| 9. | Research on measures for the reintegration of redundant employees into the labour market (based on the findings of the Analysis from item 9); | 24 months (after adoption of the Decarbonization Plan of the "Elektroprivreda Srbije" and the transition plan for individual mines within the PE UCM Resavica, which contains the necessary parameters for the preparation of the Analysis)" | Ministry of Mining and Energy, Ministry of Labour, Employment, Veterans and Social Policy, Ministry of Education, National Employment Service, social partners;, Chamber of Commerce | It is not possible to provide a cost estimate, as it is conditioned by the findings of the Analysis from poitemint 9 | International donors, the Budget of the Republic and other sources in accordance with the law. | Regional and local level, in accordance with the Decarbonization Plan of the "Elektroprivreda Srbije" and the transition plan for individual mines within the PE UCM Resavica; | Employees of EPS ad and PU UCM Resavica, potential redundancies in the field of coal-based energy production and local employers who express a need for employment | Number of redundant employees from the EPS system whose employability was improved, employment with another employer or starting their own business was supported; | Prevention of passivization in the labour market, long-term unemployment and dependence on the social welfare system through timely and sustainable reintegration into the labour market |
| 10. | | 24 months | EPS / PE UCM Resavica | N/A (no additional costs anticipated) | Own funds of EPS / PE UCM Resavica | Territorially, at the local level, in all affected territories | Employees at EPS / PE UCM Resavica | Redeployment plans for each unit of EPS and PE UCM Resavica undergoing green transition / | Continuous electricity generation<br><br>Locally maintained jobs |

| | Subject of activity | Timeframe | Responsible stakeholder | Cost estimate | Source of funding | Area | Target group | Key performance index | Impact and priority |
|---|---|---|---|---|---|---|---|---|---|
| | Plans for the reallocation of workers within companies in the coal-based power generation value chain | | | | | | | EPS and PE UCMResavica<br><br>Number of redeployed workers with retraining and advanced training / EPS and PE UCM Resavica<br><br>Number of redeployed workers without retraining and advanced training / EPS and PE UCM Resavica | Ensured territorial cohesion<br><br>Priority: High during the mitigation of the transition according to plan |
| 11. | Master plan for coal mines to potentially repurpose their operations to create new jobs and consider the impact on local economies, education and demographics | 18 months | PE UCM Resavica, EPS | 150 thousand EUR (PE UCM Resavica), EPS | International financial institutions, international donors | Territorially, for affected territories | PE UCM Resavica | Plans for implementing decarbonization in accordance with the INECP Paris Agreement / mine closure and land remediation | Decarbonization of the energy sector<br><br>TPP and mining workforce<br><br>Priority: High during the transition mitigation plan |
| Total costs of short-term activities at the local level (by the end of 2030) | | | | 150 thousand EUR | | | | | |

## 6.4. Plan – Preparatory activities at the local level (Group B)

Table 13: Plan – Preparatory activities at the local level

| | Subject of activity | Timeframe | Responsible stakeholder | Cost estimate | Source of funding | Area | Target group | KPI | Impact and priority |
|---|---|---|---|---|---|---|---|---|---|
| | **Територијални** | | | | | | | | |
| 12. | Local development plans and attracting direct investments | 12 months | Municipalities / Regional Development Agencies / Development Partners | 560 thousand EUR | Local government budget / international donors | Territorially at the municipal level, with priority given to the municipalities of Lazarevac, Kostolac, Požarevac, Despotovac and Obrenovac | Local governments | Number of activities within the three pillars identified within each plan / Local governments<br><br>Number of consultations with local stakeholders for the development of the Local Development Plan / Municipalities | Planning for future investments and activities at the local level is in line with the needs of a just transition and local economic and social cohesion<br>Priority: High during preparations for decarbonization |
| 13. | Program for encouraging entrepreneurship and self-employment | 36 months | Ministry of Economy, Ministry of Mining and Energy | 12 million EUR for entrepreneurs and SMEs Additional 50 thousand EUR for planning | International donors, the Budget of the Republic and other sources in accordance with the law. / International financial institutions | Territorially, for all affected territories | Former employees in the coal-based economy value chain | Funding available to entrepreneurs / Ministry of Economy | Diversification of the local economy and job creation in affected territories<br><br>Priority: High during preparations for decarbonization |
| 14. | Improvement of economic infrastructure in existing industrial parks | 60 months | Local Governments | 60 million EUR, and additional 70 thousand EUR for planning | International donors, the Budget of the Republic and other sources in accordance with the law. / International financial institutions | Territorially, for all affected territories | Municipal industrial parks | Up to five supported industrial parks / Local governments | Diversification of the local economy and attraction of new business units<br>Priority: High during preparations for decarbonization |
| Total costs of preparatory activities at the local level (until 2030) | | | | 72.830,00 million EUR | | | | | |

| | Subject of activity | Timeframe | Responsible stakeholder | Cost estimate | Source of funding | Area | Target group | KPI | Impact and priority |
|---|---|---|---|---|---|---|---|---|---|
| **Total costs of all activities until 2030 (Group A and Group B, at national and local levels))** | | | | **75.430,00 million EUR** | | | | | |

## 6.5. Dynamics of activity

Table 14: Time dynamics of activity

| Subject of activity | Start date | End date |
|---|---|---|
| Establish and operationalize just transition governance in Serbia | 1/9/2025 | 28/2/2026 |
| Establish just transition financing mechanisms with a governance system | 1/9/2025 | 31/12/2026 |
| Update legislation to include appropriate governance mechanisms and monitoring framework and adopt and implement JETP | 1/9/2025 | 31/8/2026 |
| Mainstream just transition into national strategies | 1/9/2025 | 31/12/2027 |
| Targeted awareness-raising activities directed at all stakeholders/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 |
| Exploration of alternative options and their impacts in terms of spatial planning, use and distribution of rehabilitated land, attracting and facilitating access to investors, participation in public-private partnership schemes and tender procedures | 1/9/2025 | 30/6/2026 |
| Development of an Analysis of the structure of employees (potential redundancies) and employment needs in the local labour market" (with the possibility of considering possible special measures for children from affected families) | 01/01/2027 | 01/01/2029 |
| Research on measures for the reintegration of redundant employees into the labour market, based on the findings of the Analysis of the structure of employees (potential redundancies) and employment needs in the local labour market | 01/01/2028 | 01/01/2030 |
| Redeployment plan for workers in companies in the coal-based power generation value chain | 1/9/2025 | 31/3/2027 |
| Master plan for coal mines with the aim of potentially repurposing their activities to create new jobs and considering the impact on the local economy, education and demographics | 1/9/2025 | 30/6/2027 |
| Local development plans and attracting direct investment and investments | 1/1/2026 | 31/12/2026 |
| Incentive program for entrepreneurship and self-employment | 1/1/2027 | 31/12/2029 |
| Improvement of business infrastructure in existing industrial parks | 1/1/2026 | 31/12/2030 |

# 7.GOVERNANCE

## 7.1.Just Transition Governance Structure

It is necessary **to establish an appropriate governance framework**, which will over time lead to the improvement and implementation of just transition policies in consultation with all stakeholders, as well as the following stakeholder engagement strategy:

- - Establish **an inter-ministerial government committee** to coordinate, implement and monitor all activities necessary for the implementation of policies and measures in the field of just transition. The proposed participants of this body are the Ministry of Mining and Energy, the Ministry of Finance, the Ministry of Education, the Ministry of Economy, the Ministry of Construction, Transport and Infrastructure, the Ministry of Agriculture, Forestry and Water Management and the Ministry of Labour, Employment, Veterans and Social Policy. Other ministries and agencies may be involved as needed at any time.
- Establish a **Just Transition Unit** within the Ministry of Mining and Energy, which would be responsible for proposing, coordinating and assisting in the drafting of all necessary laws and regulatory decisions, and accordingly amending existing legislation under the direct responsibility of the Ministry of Mining and Energy, as needed to implement the Just Transition Plan.
- The Just Transition Unit will also work with the Ministry of Finance, EPS, PE UCM Resavica and other relevant stakeholders to explore options for the use and allocation of land from former mines and power plant sites (including specific regulations on land zoning and urban planning). The Unit could also explore the next step in facilitating investment plans and projects in the areas of just transition. The Unit should monitor, evaluate and report to the Government's inter-ministerial committee on the implementation process and assist in removing obstacles to implementation.
- Establish **Working Groups** with the participation of ministries, municipalities and mayors, EPS and other relevant stakeholders. Working groups could be established to encourage stakeholder engagement in specific areas, including retraining, skills development for the green economy and economic diversification in affected areas. The Working Groups could be supported by the Just Transition Unit of the Ministry of Mines and Energy.
- Support provided through the **Just Transition Financing Mechanisms** focuses on the economic diversification of the territories most affected by the climate transition, as well as on the retraining and active inclusion of their employees and job seekers. Responsibility is assumed at the level of central government, local authorities and involved bodies.

## 7.2. Summary of funding needs

The European Union 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 reduce coal use and move towards a carbon-free economy.

Financing is envisaged through a mix of public investments, strategic partnerships and international financing mechanisms. The European Union Green Agenda for the Western Balkans and potential contributions from international development banks and private investors are expected to play a significant role. Serbia is actively seeking partnerships to share the financial burden and accelerate project implementation, in particular for large-scale renewable energy projects. In addition, companies with blocked accounts, which represent a significant share of the Serbian economy and could be seriously affected by the proposed reforms, should be taken into account.

Taking into account the experiences of neighboring countries, several potential investors have been identified that could provide financing and support in the implementation of transition projects in the near and near future, in the following ways:

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

| Partner | Financing type | Financial means | Area of focus | Indicative projects |
|---|---|---|---|---|
| European Union (EU) | Donations, loans | 2 billion EUR[7] | Sustainability, energy efficiency, renewable energy sources, connectivity, sustainable infrastructure | • Belshi Solar Photovoltaic Power Plant (Albania)<br>Amount of funds: 9.6 million euros (EU subsidy)<br>• Poklečani Wind Farm (Bosnia and Herzegovina)<br>Amount of funds: 43.7 million euros (EU subsidy)[8] |
| European Bank for Reconstruction and Development (EBRD) | Loans, equity investments, technical cooperation, donations | EBRD investment in sustainable infrastructure in Serbia in 2023 amounted to around 400 million EUR[9] | Renewable energy sources, energy efficiency, sustainable infrastructure, green economy | • Western Balkans Green Economy Financing Framework III: Up to 170 million EUR for green investments in Albania, Bosnia and Herzegovina, Kosovo*, Montenegro, North Macedonia and Serbia, supported by technical cooperation and incentives [10].<br>• Oslomej 1 Solar PV Power Plant<br>EBRD loan: 5.9 million EUR[11] |
| World Bank (WB) | Loans, donations | 400 million USD[12] | Climate change mitigation, energy efficiency | • Montenegro Energy Sector Decarbonization Project<br>Amount of funds: 34.3 million EUR |
| United Nations Development Programme (UNDP) | Donations, technical support | 8 million USD[13] | Sustainable development, climate resilience | • Clean Energy Financing Framework, with EU support, 149 million EUR |
| Swiss Agency for Development and Cooperation (SDC) | Donations, technical support | 500 million USD[14] | Renewable energy sources, energy efficiency | • Climate Resilience and Decarbonization under the Green Agenda for the Western Balkans (95 million EUR) |
| Open Society Foundation (OSF) | Donations | 20 million EUR[15] | Climate change, sustainable development. | • Green Economic Development Initiative:<br>361,196.39 EUR[16]<br>• Investments in the Joint Climate Partnership: 22,574.75 EUR[17] |
| United Nations Children's Fund (UNICEF) | Donations, technical support | 10 милиона долара[18] | Образовање о животној средини, одрживи развој. | • UNICEF Global Thematic Fund for Climate, Environment, Energy and Disaster Risk Reduction<br>Amount of funds: approximately 2.1 million EUR (2022-2023)<br>Main areas: system strengthening (45% of costs), advocacy and raising awareness on climate issues.[19] |

[7] 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)

[8] Economic & Investment Plan for the Western Balkans 2023

[9] https://www.EBRD.com/where-we-are/serbia/data.html

[10] Western Balkans GEFF III

[11] Endorsed Flagship Investments 2020-2024

[12] World Bank Document

[13] EU for Green Agenda in Serbia presented | United Nations Development Programme (undp.org)

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

[15] Open Society Foundations to Commit $400 million to Support Economic and Climate Prosperity - Open Society Foundations

[16] Open Society Foundations to Commit $400 милиона to Support Economic and Climate Prosperity

[17] Open Society Invests $25 милиона to Boost Global Climate Projects

[18] Spotlight Global Thematic Fund CEED.pdf.pdf (unicef.org)

[19] UNICEF - Spotlight Global Thematic Fund CEED

| Partner | Financing type | Financial means | Area of focus | Indicative projects |
|---|---|---|---|---|
| Deutsche Gesellschaft für internacionale Zusammenarbeit (GIZ) | Donations, Technical Support | 300 million EUR[20] | Sustainable Development, Climate Change, Renewable Energy. | • EU4 Energy Transition: Covenant of Mayors of the Western Balkans (total funding: 9.335 million EUR)<br>• Green Agenda: Decarbonisation of the Western Balkans Energy Sector (total funding: 3.5 million EUR) |
| European Investment Bank (EIB) | Loans, Donations | 21 billion EUR[21] | Infrastructure, Energy Efficiency, Renewable Energy | • EIB Global has allocated more than €700 million for sustainable projects in the Western Balkans, with a focus on clean and renewable energy.[22]<br>• Western Balkans Renewable Energy and Energy Efficiency Initiatives (approximately €.2 billion EUR invested in 2023) |
| KfW Development Bank | Loans, Donations | 215 million EUR[23] | Renewable Energy, Energy Efficiency | • Financing renewable energy production capacity and infrastructure development in the Western Balkans and Eastern Neighborhood (260 million EUR in guarantees) |

Note: the list of potential funding sources is not exhaustive, and there are other bilateral donors and financial institutions that should also be considered.

Table 16: Summary tables of financial needs by subject of activity

| No. | Activity | Cost estimate | Potential source of funding |
|---|---|---|---|
| **Short-term activities at the national level** | | | |
| 1. | Setting up and operationalization just transition governance in Serbia | N/A | N/A |
| **Припремне активности на националном нивоу** | | | |
| 2. | Establishing mechanisms for financing just transition, with a governance system | 350 thousand EUR | International donors, the Budget of the Republic and other sources in accordance with the law. |
| 3. | Updating legislation to include appropriate governance mechanisms and monitoring framework and adopt and implement the JETP | 150 thousand EUR | international donors |
| 4. | Integrating just transition into national strategic documents | 180 thousand EUR | International donors, the Budget of the Republic and other sources in accordance with the law. |
| 5. | Targeted awareness raising for all stakeholders/target groups mentioned in the stakeholder engagement plan | 1,65 million EUR | IPA, International donors, the Budget of the Republic and other sources in accordance with the law. |
| 6. | National Strategic Plan for Green Skills | 200 thousand EUR | International donors, the Budget of the Republic and other sources in accordance with the law. |
| 7. | Exploring alternative options and their respective impacts in terms of spatial planning, use and distribution of rehabilitated land, attracting and facilitating access to investors, participating in public-private partnership schemes and undertaking tender procedures | 70 thousand EUR | The Budget of the Republic and other sources in accordance with the law. |
| Total preparatory activities at the national level (until 2030) | | 2,6 million EUR | |
| **Short-term activities at the local level** | | | |

[20] giz2024-en-eu4et-western-balkans-türkiye.pdf
giz2023-en-green-agenda-decarbonisation-of-the-electricity-sector-in-the-western-balkans.pdf
[21] Energy Overview 2024 (eib.org)
[22] EIB Global to ramp up support for the green transition, digitalisation and connectivity in the Western Balkans, boosting convergence with the EU
[23] DEG has acquired 10 percent stake in Čibuk 1 wind farm in Serbia (balkangreenenergynews.com)

| No. | Activity | Cost estimate | Potential source of funding |
|---|---|---|---|
| 8. | Development of an Analysis of the structure of employees (potential redundancies) and employment needs in the local labour market" (with the possibility of considering possible special measures for children from affected families) | Data on estimated costs are not available, given that it is conditioned by the scope and dynamics of the reduction, or rather the abandonment of coal-based energy production, determined by the EPS Plan; | International financial institutions, international donors, in combination with funding for other active labour market measures. |
| 9. | Research on measures for the reintegration of redundant employees into the labour market, based on the findings of the Analysis of the structure of employees (potential redundancies) and employment needs in the local labour market"; | Data on estimated costs are not available, given that it is conditioned by the findings of the Analysis from item 8; | The budget of the Republic and other sources in accordance with the law., IPA funds, other donors |
| 10. | A plan for the reallocation of workers within companies in the coal-based energy production value chain | N/A | Own funds of EPS / PE UCM Resavica |
| 11. | A master plan for coal mines with the aim of potentially repurposing their activities to create new jobs and considering the impact on the local economy, education and demographics | 150 thousand EUR | International donors, Budget of the Republic and other sources in accordance with the law. / IFI Local government budget (mixing) PPP |
| Total for short-term activities at the local level (until the end of 2030) | | 150 thousand EUR | |
| **Preparatoryt activities at the local level** | | | |
| 12. | Local development plans and attracting direct investment and investments | 560 thousand EUR | International donors, the Budget of the Republic and other sources in accordance with the law. / international financial institutions Local government budget (mixing) |
| 13. | Program for encouraging entrepreneurship and self-employment | 12 million EUR (10 million EUR for entrepreneurs / 2 million EUR for the self-employed)<br><br>Additional 50 thousand EUR for program planning | International donors, the Budget of the Republic and other sources in accordance with the law. / international financial institutions |
| 14. | Improving economic infrastructure in existing industrial parks | 60 million EUR, and an additional 70 thousand EUR for program planning | Local government budget / international donors |
| Total costs of preparatory activities at the local level (until 2030) | | 72,830 million EUR | |
| | | | |

| No. | Activity | Cost estimate | Potential source of funding |
|---|---|---|---|
| **Total costs of all activities (Group A and Group B, at national and local level until 2030)** | | 75,430 million EUR | |

## 7.3. Key Performance Indicators (KPIs) until 2030, approach to oversight and risk mitigation

For each of the essential activities described, the intervention logic is presented in the table below, with a cumulative overview of the effects of implementing the plan:

Table 17: KPI until 2030, approach to oversight and risk mitigation

| Activities | Performance | Outcome | Impact | KPI |
|---|---|---|---|---|
| **Short-term activities at the national level** | | | | |
| Establishing and operationalization just transition governance in Serbia | Establishment of a Government Committee, a Just Transition Unit, inter-ministerial working groups, municipal councils Appointment of a National Coordinator for Just Transition | Coordinated and efficient implementation of the National Strategy for a Just Transition. Optimization and use of all available international funds, the Budget of the Republic and other sources in accordance with the law. Removal of legal and other barriers. Achieving public acceptance by involving all stakeholders | Coordinated implementation of the just transition plan, optimizing the benefits of the just transition and mitigating the consequences | Government Committee established National Coordinator for Just Transition established, Just Transition Unit established, and Municipal Councils for the Just Transition Process established |
| **Preparatory activities at the national level** | | | | |
| Establishing just transition financing mechanisms, governance systems | Designing an operational and governance model for just transition financing mechanisms<br><br>Providing funding<br><br>Drafting and adopting laws | Establishing and governing just transition financing mechanisms | It will be possible to finance just transition activities through an agreed mechanism | Just transition financing agreements, Government decisions establishing a governing body, Government decisions defining the governance system |
| Updating legislation to include appropriate governance mechanisms and monitoring framework and adopt and implement the JETP | New laws and amendments to existing laws - bylaws | Legislative and regulatory framework enabling the structure and mechanism for governing just transition | Just transition process launched and embedded in the legal framework of Serbia | Adoption of all necessary laws and bylaws |
| Integrating just transition into national strategies | Suggestions for effectively incorporating the just transition dimension into national strategies | Incorporating just transition into appropriate parts of national strategies and legislation | There is an integrated response to the challenges of a just transition in a series of national strategies<br><br>The Serbian government is managing the impacts of the transition to green energy more easily and proactively | A certain number of proposals related to just transition in existing and new strategic documents and legislation / Ministry of Mining and Energy |
| Targeted awareness raising for all stakeholders/target | Targeted information campaign, using various communication channels | The population is better informed about | Population groups and key | Communication materials were produced |

| Activities | Performance | Outcome | Impact | KPI |
|---|---|---|---|---|
| groups mentioned in the stakeholder engagement pla | | the upcoming energy transition<br><br>Key stakeholders are better informed and more supportive of a just transition | stakeholders will support the Serbian Government's efforts for a just transition | for each of the stakeholders. |
| National Strategic Plan for Green Skills | Draft national strategy | Adapting skills to become “greener” is a priority in training curricula and vocational education | "Greener" economic activities as a result of infrastructure and human capital development<br><br>Transforming the economy to a greener model | • Education and training programs for scientists and young people who are not in employment, education or training (NEET) with a focus on cutting-edge technologies<br>• Competence center for green skills<br>• Upgrading of technical schools/vocational training centers in line with market needs (development and implementation of new curricula and programs<br>• Tailored programs for retraining and upskilling of employees in production areas in line with demand.<br>• Improving the provision of information on available and projected job needs (matching job supply and job demand)<br>• Digital social network to connect the workforce with the industry ecosystem and training providers |
| Exploring alternative options and their respective impacts in terms of spatial planning, use and distribution of rehabilitated land, attracting and facilitating access to investors, participating in public-private partnership schemes and undertaking tender procedures. | Land use and transfer model developed; relevant regulations and legal changes adopted | Efficient use of land belonging to coal mines and thermal power plants supports the objectives of the JT | Decision on methods of implementation | Decision on application possibilities |
| | | | | |
| **Short-term activities at the local level** | | | | |
| "Development of an Analysis of the Structure of Employees (Potential | "Reviews of the structure of employees (potential redundancies) by characteristics important for | "Analysis made".<br>It is proposed that instead of the words: | "Current data and information on the characteristics of EPS employees | "The definition of measures for the reintegration of redundant employees |

| Activities | Performance | Outcome | Impact | KPI |
|---|---|---|---|---|
| Redundancies) and Employment Needs in the Local Labour Market"; | reintegration into the labour market have been prepared", "Reviews of employers' employment needs at the local level have been prepared"; | | (potential redundancies) relevant for reintegration into the labour market are available"; | into the labour market is based on the findings of the Analysis." |
| Research into measures for the reintegration of redundant employees into the labuor market, based on the findings of the Analysis of the Structure of Employees (potential redundancies) and employment needs in the local labour market"; | "Defined measures from the system of additional education and training and the system of support for employment and self-employment that can be used by redundant employees from the EPS system"; | "Number of redundant employees from the EPS system whose employability was improved, employment with another employer or starting their own business was supported"; | "Prevention of passivization in the labour market, long-term unemployment and dependence on the social protection system through timely and sustainable reintegration into the labour market." | "Measures for the reintegration into the labour market of redundant employees from the EPS system are available." |
| Employee reallocation plan within companies in the coal-based power generation value chain | Defined plans for workforce redistribution | Workers are redeployed, with or without retraining/upskilling | Continuous electricity production<br><br>Maintaining local jobs<br><br>Ensuring territorial cohesion | Redeployment plans developed for each unit of EPS and PE UCM Resavica in the green transition / EPS and PE Resavica<br><br>A certain number of redeployed workers with retraining and additional training / EPS and PE UCM Resavica<br><br>A certain number of redeployed workers without retraining and additional training / EPS and PE UCM Resavica |
| Master plan for coal mines with the aim of potentially repurposing their operations to create new jobs and consider the impact on the local economy, education and demographics | Plans for decommissioning/closure/remediation of land, with budget and timeframe, and plans for the development of other economic activities with the aim of creating new jobs | Enable rehabilitation and land reclamation for various purposes that will attract investment | Enabling the transformation and revival of the economy of the affected territories into green and circular economies, with fully mitigated socio-economic consequences | Concrete plans for implementing decarbonization in line with the INECP Paris Agreement / mine closure and land remediation |
| **Preparatory activities at the local level** | | | | |
| Local development plans | Local development plans with options for developing new economic activities or revitalizing existing ones. | Adapting local plans to local development needs | Planning future investments and actions at the local level is in line with the needs of a just transition and local economic and social cohesion | defined activities, number of new jobs and dynamics of local development.<br><br>Number of consultations with local stakeholders for the development of the Local Development Plan / Municipality |
| Program for encouraging entrepreneurship and self-employment | Grants and tax breaks for opening new businesses with at least 50 thousand EUR of investment for small and medium-sized enterprises and 10 thousand euros for self-employment | At least 200 businesses opened in the affected territories and continue to operate two years after the support provided | Diversification of the local economy and creation of new jobs in the affected territories | 12 million EUR are available to entrepreneurs / Ministry of Economy |

| Activities | Performance | Outcome | Impact | KPI |
|---|---|---|---|---|
| | | At least 200 self-employed persons supported | | |
| Improving economic infrastructure in existing industrial parks | Grants to local governments for improving industrial parks with an average investment of 12 million EUR | Up to five industrial parks facilitated in the affected territories | Diversification of the local economy and attraction of new investments within industrial parks | Up to five industrial parks/municipalities supported |