

## 2.2 KOŠICE REGION

### 2.2.1 Assessing the economic, social and territorial impact of the transition to a climate-neutral Union economy by 2050

The most represented sectors of the economy in KSK are industry, transport, wholesale and retail trade and public administration services. The largest share of the economically active population is employed in industry, which accounted for 23.4% of employment in 2019 (average for the region), and on average accounts for up to 45% of total employment in the focus districts. Industry is a major component of the local economy, accounting for 28.2% of the region's gross value added in 2018, of which manufacturing (industrial production) accounted for 27% followed by trade, transport and accommodation services with 18.8%.

The main industries in KSK are energy, metallurgy, mechanical engineering, chemical, electrical engineering and food processing. Metallurgy accounts for more than half of the region's industrial production. In recent years, economic activity in the information and communication technology sector has also increased significantly, creating business opportunities and jobs with higher added value. The main producer of CO<sub>2</sub> emissions in the region, U.S. Steel Košice, accounts for approximately 28% of regional gross value added, one of the highest shares in the country. This also confirms that metallurgy/industry is a major economic activity in the region.

The most affected areas within the KSC are the districts where the key GHG emitters are located - **Košice I - IV, Košice - surroundings and Michalovce district**. In Košice I - IV districts the impact of transformation on employment has been confirmed, in Michalovce district there is a significant potential for land reclamation and its new use.

The main economic entities in KSK that will be affected by the transition to climate neutrality are U.S. Steel Košice, Slovenské elektrárne and Tepláreň Košice. At the same time, U.S. Steel Košice is a key entity that will make a major contribution to the 2030 energy and climate targets through the implementation of technological change in the steel industry. Other potentially affected companies include other major GHG emitters - CRH (cement production), Carmeuse (lime production). Further information on the impact of the transformation on the activities of these companies is provided in Annex 2.

#### **Transformative industries**

No declining sectors of the economy have been identified in the KSC. Transforming sectors will face challenges related to the transition to a climate-neutral economy. Specifically, in particular, in relation to the introduction of technological changes in production processes and changes in the required skills and education of employees. The transformation will be directly linked to the potential for reducing greenhouse gas emissions in the steel industry, in electricity and heat generation, in the cement industry, as well as to the change in the fuel base of the Vojany power plant.

**U. S. Steel Košice** is one of the key economic entities that will be most affected by the transition to climate neutrality. The company is the largest producer of CO<sub>2</sub> in Slovakia, but also one of the largest employers with a key position within the regional as well as the national economy. The

company is a member of the United States Steel Corporation, which in April 2021 expanded its transformational commitment to sustainability by setting an ambitious goal of zero net carbon emissions by 2050. The Košice steel plant has the greatest potential to reduce greenhouse gas emissions of any key ETS business in the country. The main planned investment by U.S. Steel Košice is related to a change in the production process, replacing two blast furnaces with electric arc furnaces, including continuous steel casting and rolling technology. These investments can bring more than 62% reduction of CO<sub>2</sub> emissions compared to the current level, i.e. a reduction of approximately 5.4 million tonnes of CO<sub>2</sub> compared to the reference period. The Company has adopted the intention to implement key technological changes during 2022-2024, including with financial support from the Modernization Fund and POO resources. Further emission reductions are anticipated for investments in an electric blower for the blast furnace, optimization of transport routes and HBI pellets for the blast furnace, and by optimizing steam and hot water consumption across the Company's divisional plants. These additional investments will enable further emission reductions, up to a level of approximately 6.2 million tonnes of CO<sub>2</sub>, representing an overall reduction of 71% compared to the reference period. These investment plans are scheduled to be implemented between 2022 and 2025. The above-mentioned investments by U.S. Steel Košice are essential for the transformation of the region. If the company did not take steps to reduce its greenhouse gas emissions, it would probably be forced to close its business activities in Slovakia by 2050, as it would not be able to secure its economic activity in relation to the purchase of emission allowances.

**Slovenské elektrárne**, the company operating Elektrárň Vojany, is phasing out coal combustion in power generation and switching to the use of alternative fuel (solid secondary fuel) and is looking for other alternative green solutions for power generation, thus contributing to the reduction of CO emissions<sub>2</sub>. At the same time, in connection with the transformation of the sector, the company plans to use the brownfields created by the end of fossil fuel combustion for the installation of RES and, as a follow-up, the installation of an electrolyzer for the production of pure hydrogen from RES.

**Tepláreň Košice** supplies heat to households in the city of Košice. It uses combined heat and power (CHP) technology to produce electricity and heat. The company is planning several projects that will further reduce its carbon footprint. The most significant is the use of a geothermal heating source with several other projects such as the renewal of the heat distribution network to reduce losses and the phasing out of coal.

Other potentially affected businesses include other major GHG emitters - **CRH** (cement manufacturer), **Carmeuse** (lime manufacturer). Table 9 shows key indicators of decarbonisation potential and transformation impacts at the level of the districts most affected by the transformation. As shown in Table 9, more than 1 580 jobs will be lost in KSK as a result of the transformation. The region's potential to reduce CO<sub>2</sub> emissions is approximately 6.2 million tonnes per year.

Table 1 Main indicators of decarbonisation potential and transformation impacts at district level in KSK

Period	Potential CO emissions reductions <sub>2</sub> , % EU ETS (2030 compared to 2020)	Impact on employment, N↓	Depopulation, % ≥	Sectors with investment potential	Share of SMEs in employment
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Košice I - IV	- 6,2 (-71 %)	- 963	Medium	Medium	76 %
Košice-surroundings	- 0,01 (- 2,3 %)	- 618	Low	Medium	74 %
Michalovce	0 (0 %)	-	Medium	Medium	69 %

## 2.2.2 Development needs and 2030 targets to achieve a climate-neutral Union economy by 2050

The PST reflects the development needs of the KSK region, it is based on pillars, which are further divided into measures and activities. The proposed activities are in line with a number of horizontal principles of the transformation to a climate-neutral economy, such as transparency and participation, environmental protection and ensuring long-term sustainability.

### *THE NEEDS AND CHALLENGES OF THE REGION TO ADDRESS THE TRANSITION CHALLENGES*

#### Economic:

- Significant job losses as a result of technological change in the steel industry.
- SME activity in the region is below the national average. SMEs registered in KSK accounted for 10.2% of all active SMEs in Slovakia. It will therefore be necessary to support the development of SMEs in the region.
- The level of the entrepreneurial activity rate in 2019 reached 16.2%, which is the lowest of all regions in the Slovak Republic. However, a rapidly growing trend of small and micro enterprises can be observed, especially in the IT and R&D&I sectors.
- The region has a strong base for the expansion of innovation activities, for example strong technical research institutions. Further development, as in other regions, is hampered by a relatively weak institutional framework and insufficient support for R&D&I initiatives.
- Employment in the region in R&D&I is steadily increasing. The region has a good base for R&D&I provided by local universities and their research and technology centres.

#### Environmental:

- Key impacts of the transition to climate neutrality that can be expected in the region include the need for revitalisation and reuse of power plant sites, including the need to revitalise environmentally contaminated sites in accordance with the polluter pays principle.
- For the region, the end of the use of coal in the Košice heating plant represents an opportunity to exploit the geothermal resource. Geothermal energy has significant potential in Košice due to the geographical location of the city and the presence of geothermal waters in the Košice basin, which is confirmed by several boreholes.
- Due to its high dependence on GHG-intensive industries, the region is heavily polluted environmentally.

- The potential for increasing the energy efficiency of public buildings in the Košice and Michalovce districts is very significant, given that in the past there were insufficient conditions to support this area.

#### Social:

- KSK suffers from a shortage of young workers as well as workers with higher education.
- The region is facing migration and a brain drain due to a lack of in-demand skills in the region. One reason for this is the low emphasis placed on secondary vocational education, training and the tertiary education system, which has contributed to skills shortages and a mismatch between the skills on offer and those in demand. At the same time, up to 9.9% of all school leavers in KSK go abroad to study<sup>1</sup>.
- The skills mismatch in the labour market will be further exacerbated by redundancies at U. S. Steel Košice. At risk are employees with medium and low qualifications who are likely to need additional job search and retraining support.
- In terms of job opportunities for the younger generation in the new sectors of the economy, new sectors with high growth rates are emerging - professional, scientific and technical services, followed by the information and communication sector. These sectors can create attractive job opportunities for the younger generation.

### **OBJECTIVES**

The proposed long-term development of KSK and the transition to climate neutrality will focus on training new specialists and skills development, creating new opportunities in new and emerging sectors, and encouraging investment in clean energy.

The pillars of PST KSK are:



### **Economic diversification**

Pillar I of the KSK PST is aimed at supporting job creation in new sectors of the economy that will support the diversification of the local economy and reduce the region's dependence on heavy industry. It will also support the retention of existing jobs where job losses caused by decarbonisation initiatives can be avoided. In addition, support will be targeted at SMEs, start-ups and business development to increase SME activity in the region and reduce dependence on large

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<sup>1</sup> Based on Education Policy Institute data used in the analysis Brain Drain II: Beyond the Seven Mountains, available online at: <https://www.minedu.sk/data/att/21396.pdf>

enterprises. Particular attention will be paid to creating conditions for job creation on brownfield sites.

Pillar I also aims to promote interdisciplinary research and innovation and their application in practice, in particular focusing on new sectors (e.g. for hydrogen technologies, battery technologies, green technologies, energy efficiency, circular economy, energy storage and Industry 4.0 principles) and to foster R&D&I cooperation through Innovation Centres and Technology Centres. The pillar also aims to support R&D&I in enterprises.

### **Sustainable environment**

Pillar II of the KSC PST focuses on supporting clean energy projects (such as RES, energy efficiency), environmental sustainability (environmental restoration and repurposing of industrial sites) and decarbonisation (investments in GHG emission reduction and hydrogen projects).

Pillar II specifically addresses the need to respond to the phasing out of coal-fired power and heat generation in the region, where it is possible to close the resulting gap in energy production through a combination of energy efficiency interventions and the use of RES (geothermal, solar) potential. The selected energy efficiency and RES measures will focus on the most important public buildings that provide essential public services, as well as on employment opportunities. Such measures will mitigate the impact of the transition process by stabilising important public service providers and institutions, reducing the use of fossil fuels and alleviating the pressure on soaring energy costs.

In addition, the phasing out of coal will create opportunities for land reclamation and redevelopment of abandoned industrial sites in the Vojany Power Plant area. The projects will create both temporary and sustainable jobs, thus partially offsetting the loss of jobs in the transitioning emissions-intensive sectors. In addition, investments in innovative decarbonisation and hydrogen projects will create additional new jobs in new economic sectors. The region's established R&D&I base and potential in developing green technologies creates an opportunity to apply pilot solutions, for example in the field of sustainable local mobility based on zero emissions. Pillar II is of strategic importance for further diversification and modernisation of the local economy from industrial activities, increasing the attractiveness of the region and improving the quality of life.

### **Quality of life and social infrastructure**

Pillar III of the KSK PST focuses on improving the qualifications of workers for positions requiring new skills and knowledge in light of technological changes in the industry. The PST also envisages preparing young people for jobs in new and transformed sectors and improving infrastructure and facilities for formal and non-formal education purposes. It includes measures to ensure increased cooperation between educational and research institutions and businesses, with an emphasis on practical training, particularly in the fields of decarbonisation technologies, clean energy, hydrogen, energy storage, digitalisation and automation. Although retirements will cover part of the redundancies in the region, it will be necessary to match the skills of existing employees who will still be of working age to the needs of the labour market. In addition, there is a need to create job opportunities for the younger generation and to prepare the young workforce to innovate in the processes associated with the transformation of carbon-intensive industries. Last but not least, it will be necessary to provide social support for vulnerable groups threatened by the transition process.

Given the potential of the territory, skills needed in advanced technologies (e.g. for hydrogen, battery technologies) will be particularly promoted in the region, with a focus on digital innovation, the transition to a green economy, energy efficiency and a circular economy, or the skills needed for the introduction of alternative propulsion and the decarbonisation of transport infrastructure.

### ***CONTRIBUTION TO CLIMATE NEUTRALITY TARGETS***

KSK has a high potential for reducing CO<sub>2</sub> emissions in the energy and industry sectors and could make a significant contribution to national efforts to reduce emissions in the period 2020-2030. Most of these reductions can be achieved in KSK, specifically at U.S. Steel Košice. According to the latest calculations of U.S. Steel Košice, the implementation of technological solutions would reduce GHG emissions to a level of approximately 6.2 million tonnes per year by 2030 compared to 2020. In terms of the use of RES, the FST will support projects for the installation of photovoltaic panels, the production of green hydrogen and, in particular, the production of heat from geothermal energy. In the case of electricity from photovoltaics, the potential for the installation of RES with a capacity of at least 77 MW has been identified in the region. The largest contribution to RES power generation is expected to be made by geothermal, where the potential for installation is 30 MW by 2030. Energy efficiency in public buildings will also be partially supported in the region, but will have a minimal impact. Therefore, the dedicated allocation will be used through financial instruments, thus creating a leverage effect. Although the FST contribution will not be significant in terms of national targets, it will contribute to increasing energy security and reducing energy poverty within the region.

### ***EXPECTED RESULTS OF THE IMPLEMENTATION OF THE FST MEASURES***

#### **Economic diversification**

- Increased number of innovative jobs providing attractive employment opportunities, especially for the younger generation;
- Higher levels of innovation, digitisation and use of new technologies in the SME sector;
- Improving links and cooperation between research institutions, businesses and other actors in the region;
- Improved innovation infrastructure and sufficient dissemination of information among R&D&I actors;
- Higher technological and digital transformation of enterprises and innovation rates in SMEs in the region;
- Increased diversification and resilience of the economy.

#### **Sustainable environment**

- Increased deployment of RES and use of hydrogen;
- Reduced vulnerability to energy poverty by increasing the energy efficiency of public buildings;

- Revitalisation of areas affected by environmental impacts caused by coal-fired power and heat generation and their conversion to new uses;
- Increased use of sustainable zero-emission transport.

### **Quality of life and social infrastructure**

- Increased attractiveness of the sub-regions for both residents and tourists;
- Increase attractive job opportunities outside the industrial sector for the young generation as well as for employees at risk of unemployment in the process of climate transition;
- Better matching of skills with current demand for skilled staff, reducing structural unemployment by building graduate capacity with the skills needed in the future - in the context of digitalisation, hydrogen technologies or data sciences;
- Higher potential of emerging industries;
- Reduced outflow of young talent from the region.

### ***JOB CREATION***

The steel company U. S. Steel Košice will undergo a significant technological change, which will bring significant reductions in emissions CO<sub>2</sub>, as well as job cuts due to decarbonisation in the coming years. These measures will result in the loss of almost 2 000 jobs. Based on data collected by MIRRI SR through a non-binding online call for project proposals, at least 56 private sector entities have expressed interest in doing business in KSK, which will create more than 1 850 new jobs, including 7 large companies with 770 jobs. At least 40 % of the total number of newly created jobs will go to large companies, which means that jobs lost through the transformation will not be recreated without the possible support of large companies. FST support is therefore also justified for large companies in KSK.

### **2.2.3 Consistency with other national, regional or territorial strategies and plans**

#### National strategies

Consistency of the PST with the national strategic framework is assumed, in particular with regard to the three overarching themes of equitable transformation - economic diversification, environmental sustainability, quality of life and social infrastructure.

The national strategic framework on climate change consists of national development strategies and reform plans, energy and climate change strategies and other strategies that address climate change. Key development strategies and reform plans include the Economic Policy Strategy 2030 and the NDP 2020. The main national strategies for decarbonisation and climate neutrality are INEKP supported by the NUS SR. Other strategies and plans that outline actions relevant to achieving climate neutrality include the 2030 Environmental Strategy and documents outlining reforms and priorities for funding from the Recovery and Resilience Facility - NIRP and the POO. A detailed analysis of the NSRF is provided in the Transformation towards Climate Neutrality Report

(Deliverable 3). Last but not least, consistency with RIS3 2021+ and the National Hydrogen Strategy of the Slovak Republic is also reflected.

All three priority themes are addressed in a number of national documents that emphasise a comprehensive approach to the future sustainable development of Slovakia. This consistency should be maintained during further updates of national regulations and plans. Table 10 provides an overview of the consistency of the proposed PST measures with these strategies.

**Table 2 Consistency of the PST with the national strategy documents and with the proposed actions**

National strategies		PST
National development strategies and reform plans	<b>Economic policy strategy to 2030</b>	
	<b>NRP 2020</b>	
Energy and climate strategies	<b>INEKP</b>	
	<b>NUS SR</b>	
Relevant strategies with climate action	<b>Envirostrategy 2030</b>	
	<b>NIRP</b>	
	<b>POO</b>	
Relevant sectoral strategies	<b>EN RIS3 2021+</b>	
	<b>National Hydrogen Strategy of the Slovak Republic</b>	

### Regional strategies and plans

The main strategic document of the KSC is the Programme of Economic and Social Development / Integrated Territorial Strategy of the Košice Region for the years 2021 - 2027 (PHRSR KSC 2021 - 2027). The region has developed a Low Carbon Strategy for the organisations under the KSK's constituent powers up to 2030 with a view to 2050, a Hydrogen Strategy for the KSK and a Regional Innovation Strategy for the KSK. A detailed analysis of the regional strategic framework is provided in the document Report on the process of transformation towards climate neutrality (Deliverable 3).

Table 11 provides an overview of the consistency of the proposed PST measures with these strategies.

Table 3 Consistency of the PST with regional strategic documents and proposed measures in KSK

PST measures	PHRSR KSK 2021- 2027	KSK Low Carbon Strategy	Hydrogen Strategy for the Košice Region	Regional innovation strategy
<b>Pillar I Economic diversification</b>				
<i>Action 1.1 Support the creation of new sustainable jobs</i>				
<i>Measure 1.2 Promotion of entrepreneurship, development of small and medium-sized enterprises</i>				
<i>Measure 1.3 Support for research, development and innovation</i>				
<b>Pillar II Sustainable environment</b>				
<i>Measure 2.1 Promoting clean energy, circular economy and decarbonisation of industry</i>				
<i>Measure 2.2 Promoting sustainable local transport</i>				
<i>Measure 2.3 Revitalisation and reconversion of industrial areas</i>				
<b>Pillar III Quality of life and social infrastructure</b>				
<i>Measure 3.1 Support for education, training, skills and retraining</i>				
<i>Measure 3.2 Improving social care for vulnerable groups</i>				

### 2.3.4 Types of planned operations

The priority areas proposed for each region relate to the economic, environmental and social impacts of the transition to a climate-neutral economy. However, all the actions identified for the regions relate to the three overarching themes mentioned above, which contribute to the FST's specific objective of economic diversification, environmental sustainability and quality of life, and social infrastructure.

The vision of the KSK transformation is the long-term development of the region as a response to the challenges and impacts of the transformation. Based on the analysis of the impacts of the transformation and the specific needs of the regions, and based on consultations with the Regional Thematic Commission and stakeholders, the vision for the transition to a climate-neutral economy in KSK has been defined as follows:

*The region will train new professionals and create opportunities in new emerging sectors focused on new technologies, research and digitisation.*

*The region will also focus on promoting clean energy, innovation in decarbonisation and promoting energy efficiency.*

The vision for the region's transformation has been developed based on three key transformation themes that focus on the region's individual needs and justify the need for specific intervention from the FST:

### **1. New opportunities in new sectors of the economy**

A decline in employment in one sector of the economy needs to be offset by the development of new job opportunities in emerging sectors of the economy that have the potential to become engines of future economic growth. Fast-growing sectors of the economy, such as IT and professional services, will create attractive new jobs for all levels of education, including opportunities for a highly skilled workforce in high value-added sectors. This will encourage and incentivise the younger generation to stay in the region rather than seek employment opportunities elsewhere.

### **2. Clean energy**

The region has potential in clean energy, including improving the energy efficiency of buildings, exploiting geothermal potential for district heating as a substitute for coal and other fossil fuel energy production, potential in RES (solar energy) and potential for new technologies (hydrogen, energy storage). Given the potential in the field of R&D&I, the region has the potential to exploit new technologies (hydrogen, batteries, etc.) also in the field of alternative zero-emission mobility.

Measures and investments in clean energy and technologies will contribute to mitigating the impacts of the transition by creating new R&D&I jobs, including the use of research in enterprises.

Clean energy and energy efficiency interventions will contribute to the reduction of electricity and heat production from coal at the Vojany Power Plant and the Košice Heating Plant, thus contributing to the reduction of the carbon footprint in the region.

### **3. New specialisations/skills**

The region is expected to experience job impacts, but it is not anticipated that the region will face a phase-out of all GHG-intensive industry. Instead, job losses are expected to result from technological changes in the steel industry due to planned investments by U.S. Steel Košice.

As a result, there will be a need for job search assistance and retraining for jobseekers, especially those with a secondary vocational education. In addition, it will be essential to develop new skills for younger generations to find employment in new, emerging and transforming sectors of the economy.

It will also be necessary to promote new skills and training in certain areas to support the fast-growing sectors of the economy, as well as to address the problems of structural unemployment, where the skills required do not match the current supply of human capital.

The KSK PST is divided into 3 main pillars, which are further subdivided into measures and activities:

	Priority		
	High	Medium	Low
<b>Pillar I -Economic diversification</b>			
<b>Action 1.1 Support the creation of new sustainable jobs</b>			
<i>Related activities:</i>			
<i>creating and retaining higher value-added jobs in R&amp;D&amp;I and green innovation</i>			
<i>creating new jobs for the younger generation in new sectors of the fast-growing economy, in emerging and transforming industries</i>			
<i>support for the creation of new and the development of existing activities in social entrepreneurship</i>			
<b>Measure 1.2 Promotion of entrepreneurship, development of small and medium-sized enterprises</b>			
<i>Related activities:</i>			
<i>productive investment in SMEs, including micro-enterprises and start-ups, leading to economic diversification, modernisation and reconversion</i>			
<i>the development of SMEs' innovation activities</i>			
<i>digitisation, including analysis of procedures, processes and subsequent investment support for the application of digital solutions</i>			
<i>support for the creation of new companies, including through business incubators, co-working centres, technology centres and hubs</i>			
<b>Measure 1.3 Support for research, development and innovation</b>			
<i>Related activities:</i>			

<i>support for R&amp;D&amp;I activities with a focus on the green economy</i>			
<i>support for R&amp;D&amp;I cooperation focused on new advanced / breakthrough technologies</i>			
<i>development of R&amp;D&amp;I potential in the region, introduction of innovations in the field of products, processes and services, including transfer of advanced technologies into practice</i>			
<b>Pillar II Sustainable environment</b>			
<b>Measure 2.1 Promoting clean energy, circular economy and decarbonisation of industry</b>			
<b><i>Related activities:</i></b>			
<i>innovations to support the decarbonisation of industry</i>			
<i>construction of RES and green hydrogen production facilities and their use in energy systems, including district heating and cooling, support for the deployment of intelligent energy systems, including RES storage</i>			
<i>increasing the energy efficiency of public buildings and housing, including the promotion of smart measures and innovative solutions</i>			
<i>development of energy services at regional and local level, introduction of energy and environmental management systems, including energy audits</i>			
<i>the introduction of new technologies in the field of the circular economy, including the development of new processing capacities</i>			
<b>Measure 2.2 Revitalisation and reconversion of industrial areas</b>			
<b><i>Related activities:</i></b>			
<i>repurposing and reuse of abandoned industrial sites and land restoration</i>			
<i>mapping of abandoned industrial sites in the energy sector</i>			

**Measure 2.3 Promoting sustainable local transport**

**Related activities:**

*development of infrastructure for alternative fuels, including pilot solutions*

*development and promotion of sustainable zero-emission public passenger transport and micro-mobility, applying the principles of smart mobility*

**Pillar III - Quality of life and social infrastructure**

**Measure 3.1 Support for education, training, skills and retraining**

**Related activities:**

*promoting lifelong learning and retraining of workers and jobseekers to develop skills for smart specialisation, industrial transformation and entrepreneurship*

*cooperation between SMEs and vocational secondary schools to support students' practical training and preparation for employment*

*networking, cooperation and learning activities between the academic sector and business, with an emphasis on practical learning*

*support for infrastructure and equipment for formal and non-formal education*

*career counselling and related professional advisory services for employees and jobseekers who have lost their jobs as a result of the transition*

*networking, cooperation and training activities between research institutions and enterprises, with an emphasis on practical training*

**Measure 3.2 Improving social care for vulnerable groups**

**Related activities:**

*Strengthening the capacity of social service organisations to mitigate the negative social consequences of decarbonisation processes*

*Investments in social infrastructure for care facilities for the elderly*

**Types of interventions:**

- Thematic (calls for proposals) calls for projects
- National projects
- Voucher systems - vouchers
- Financial instruments

**Financial instruments**

Productive investment in SMEs will be supported through financial instruments to maximise leverage. In addition, they will be used to finance projects aimed at improving the energy efficiency of public buildings and housing, with a focus on pilot projects due to limited allocation.

To ensure project readiness, which is essential for timely and efficient disbursement, the region envisages the use of the European Investment Bank's (EIB) technical assistance facility, ELENA, which is specifically focused on energy efficiency.

At the same time, the region will also be supported through the EIB's JASPERS technical assistance as well as through a technical assistance project under the Technical Assistance Facility under the auspices of the EC (Directorate General for Structural Reform Support). Through the use of technical assistance, the required project readiness will be achieved as well as the transfer of the necessary knowledge on the use of financial instruments in practice.

**Support for large businesses**

Productive investments in non-SMEs (large enterprises) may be supported provided that the investment has been approved under the PST on the basis of the information required under Article 11(2)(h) of the Regulation establishing the FST. Such investments are only eligible if they are necessary for the implementation of the PST and if they contribute to the transition to a climate neutral EU economy by 2050 and in parallel to the achievement of the related environmental objectives, if they are necessary for the creation of jobs in the area and if they do not lead to relocation as defined in Article 2(27) of Regulation (EU) 2021/1060.

An indicative list of investments in non-SMEs in KSC is provided in Annex 3.

**Support for investment in installations covered by the EU ETS**

KSC has the largest GHG emission reduction potential of the key EU ETS operators by 2030. Key technological changes in relation to GHG emission reductions at U.S. Steel Košice (electric arc furnaces) do not have the ambition to be supported by the FST. Table 12 shows the expected GHG emission reduction potential of other projects necessary for the transformation in terms of meeting the energy and climate targets for the key EU ETS operator in KSC.

**Table 4 Expected GHG emission reduction potential of key EU ETS operators in KSC**

Name of company	Main project area	Project name	Estimated greenhouse gas emission reductions by 2030 compared to the reference period (in million tonnes of CO <sub>2</sub> equivalent/year)	Investments in EUR million	Impact on employment	
					Number of jobs created	Number of jobs saved
<b>U. S. Steel Košice</b>	Energy efficiency	Electric Blower for Blast Furnace	-0,189	25		
<b>U. S. Steel Košice</b>	Energy efficiency	Optimization of HBI and Pellet transport routes for blast furnaces	- 0,3	15	0	7 000
<b>U. S. Steel Košice</b>	Energy efficiency	Optimisation of steam and hot water consumption within USSK divisional plants	-0,054	27		

### **Synergies and complementarity of planned operations with other relevant Union programmes**

Synergies and the elimination of duplications in the financing of operations between the ODA, the ESIF (including the FST) and other intervention frameworks, in particular EU funds, will be ensured through a mechanism for coordination and ensuring synergies. Synergies and complementarities will be assessed before the call itself is launched in the framework of the ENP funding and the ODA implementation instrument, while it will be necessary to specify synergies in the ODA call/implementation instrument itself. Further information on synergies is given in Annex 4.

### **Other pillars of the Fair Transformation Mechanism**

In addition to the FST (Pillar I of the MST), Slovakia will also be able to benefit from the financing available under Pillar II - the dedicated Fair Transformation Scheme under the InvestEU Programme and Pillar III - the Public Sector Credit Facility with the EIB. However, for the effective use of these MST pillars, it is necessary to specify the conditions for their use under the MST.

More detailed information on Pillar II and Pillar III of the MST is provided in Annex 5.

## 2.3 BANSKÁ BYSTRICA REGION

### 2.3.1 Assessing the economic, social and territorial impact of the transition to a climate-neutral Union economy by 2050

BBSK is currently one of the least economically and socially developed regions of Slovakia. The industrial structure of the region shows the limited competitiveness of the regional economy, also in comparison with other Slovak regions. The main component of local economic activity is industry, which accounted for almost 25% of the region's gross value added in 2018. On average, 40% of employees in the 3 focal districts with significant industrial enterprises (Brezno, Revúca, Rimavská Sobota) are employed in the industrial sector. The economy is therefore currently heavily dependent on the industrial segment, including climate-intensive sectors.

Metallurgy is the dominant sector in the BBSK, accounting for more than 60% of all industrial exports and is the main field of activity of the largest enterprises in the region. Although there is currently no imminent risk of job losses as a result of the transformation in the BBSK, the districts in which the large ETS facilities are located are heavily dependent on climate-intensive industries. For this reason, measures should focus on diversifying the economy to prepare for possible future change and to make local economies more resilient to any structural economic changes. The most vulnerable areas of the BBSK are the districts where the key GHG emitters are located - **Brezno** (Železiarne Podbrezová), **Revúca** (SMZ Jelšava), **Rimavská Sobota** (Calmit) and **Zvolen** (Zvolenská teplárenská).

In addition to the dependence of selected districts on GHG-intensive industry, the BBSK districts are also threatened by the transformation process that will take place in Upper Nitra. This is due to the proximity and interconnection of the districts of **Žiar nad Hronom**, **Žarnovica** and **Banská Štiavnica** with the Upper Nitra region. Due to the closure of coal mining and processing activities, the inhabitants of these districts will also lose their jobs directly or indirectly.

#### **Transformative industries**

No declining sectors of the economy have been identified in the BBSK conditions. However, the transforming sectors will face challenges related to the transition to a climate-neutral economy, especially in relation to the introduction of technological changes in production processes and the change in required skills and education of employees. More detailed information on declining and transition industries is provided in Annex 2.

The largest producers of greenhouse gases in the region are Slovalco (aluminium production), Železiarne Podbrezová (steel production), SMZ Jelšava (magnesite production), Zvolenská teplárenská (heating plant) and Calmit (lime production). All of these operators indicated that the potential for emission reductions in their operations is limited, with the exception of Železiarne Podbrezová, which plans to implement further decarbonisation measures. In addition, they do not expect significant job losses as a direct consequence of the gradual reduction of CO<sub>2</sub> emissions and production due to the transition to climate neutrality.

However, the region is exposed to the consequences of the transformation that will take place in Upper Nitra due to the regional proximity and interconnectedness of the regions. Employees of the

declining sector (coal mining) in Upper Nitra who commute from BBSK will face similar socio-economic consequences of the transformation as the inhabitants of Upper Nitra. According to HBP, as a result of the closure of coal mining, 18 employees and another 120 subcontractor employees of the mining company, who are residents of the BBSK, will lose their jobs. Specifically, these are residents of the Banská Štiavnica district (the majority of the 120 employees of the subcontractor), followed by those from the districts of Veľký Krtíš (7 employees), Žiar nad Hronom (5 employees), Žarnovica (2 employees), Brezno (2 employees), Banská Bystrica (1 employee) and Lučenec (1 employee).

In view of the above, the spill-over effect is evident and the interregional aspect of the transformation between the analysed regions is confirmed. The consequence of the closure of coal mining and processing in Upper Nitra will also directly and negatively affect employment in BBSK.

After consultation with the companies that are included in the EU ETS in the BBSK region (Železiarne Podbrezová - steelmaking, Slovalco - aluminium plant, SZM Jelšava - magnesia) it can be confirmed that none of these companies currently expects job losses as a result of the transformation processes. At the same time, however, there are different scenarios of future development taking into account several risk factors. The scenarios will depend on the change of the EU ETS, the share of free emission allocations for industries, the fluctuating electricity price and further technological progress. This will significantly affect companies that have already undergone technological upgrading to reduce CO<sub>2</sub> emissions and contribute to climate neutrality targets.

One of the hypothetical variants of development is the closure of Slovalco based in Žiar nad Hronom district, which will occur if the above factors develop in a direction where the company will not be able to bear the rising electricity prices and if its allocation of free emission allowances is significantly reduced. If this scenario materialises, 500 employees will lose their jobs and 2 500 employees in the subcontracting chain will be at risk as they will lose their sales opportunities currently tied to Slovalco.

Even more evident is the interdependence of the regions in the steel sector, which causes great inter-regional economic vulnerability. The future change in technology will also require an adjustment in the composition of raw materials used for steel production. At present, the two main Slovak steel companies use different methods in their production processes and therefore also need different materials to produce their products. This will change after decarbonisation at U.S. Steel Košice and production will need the same input materials as the steel company in the Brezno district. In a worst-case scenario, this could mean the closure of part or even the entire factory for Železiarne Podbrezová. This would result in the loss of 3 000 jobs. 10 000 subcontractors would either lose or be forced to redirect their supply contracts. As Železiarne Podbrezová is the main employer in the region, such a development would negatively affect the entire territory, deepen regional disparities in Slovakia and leave the region unprepared for the social and economic consequences of the transformation.

As a result, the economy will not diversify, which will cause a lack of opportunities to find new jobs in the region and a sharp increase in unemployment, similar to the sudden and unexpected closure of the mines in Veľký Krtíš in 2015. This large-scale transformation in the region has occurred recently without sufficient mitigation of the negative socio-economic consequences that persist in the region to this day.

Table 13 presents key indicators of decarbonisation potential and transformation impacts at the level of the districts most affected by the transformation. According to Table 13, most emitters are located in the districts of Žiar nad Hronom, Brezno and Revúca, where the production of the largest EU ETS emitters in the BBSK takes place. Although only limited job losses are expected by 2030, these districts are at risk in terms of other indicators of the transformation, such as low economic diversification, an oversupply of low-skilled jobs on the labour market, a low share of SMEs in employment, and, last but not least, a high risk of depopulation. At the same time, the districts of Žarnovica, Žiar nad Hronom and Banská Štiavnica will be affected to some extent by the effects of the transformation taking place in Upper Nitra.

**Table 5 Main indicators of decarbonisation potential and transformation impacts in Žiar nad Hronom, Brezno and Revúca districts**

Period	Potential CO <sub>2</sub> , % EU ETS (2030 compared to 2020)	Impact on employment	Depopulation	Sectors with investment potential	Share of SMEs in employment
Brezno	- 0,05 (- 5,3 %)	0	High	Medium	84 %
Žiar nad Hronom	0,00 (0 %)	10	High	Low	68 %
Revúca	- 0,02 (- 4 %)	-	High	Medium	55 %
BBSK districts (total)	-	-140 <sup>2</sup>	-	-	-

### 2.3.2 Development needs and 2030 targets to achieve a climate-neutral Union economy by 2050

The PST reflects the development needs of the BBSK region, it is based on pillars, which are further divided into measures and activities. The proposed priorities are in line with a number of horizontal principles for the transformation to a climate-neutral economy, such as transparency and participation, environmental protection and ensuring long-term sustainability.

#### **THE NEEDS AND CHALLENGES OF THE REGION TO ADDRESS THE TRANSITION CHALLENGES**

##### Economic:

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<sup>2</sup> The potential impact on jobs in the BBSK is expected to be related to the closure of coal mining in the Upper Nitra region. According to the mining company HBP, almost 140 people may lose their jobs in several districts of the BBSK as a result of the closure of mining.

- The mono-industrial nature of the local economy results in a high dependence on GHG-intensive industries. Future transformation thus threatens the local economy and the employment opportunities of the inhabitants.
- The districts concerned do not have a single strong emerging economic sector that could improve the diversification of local economies and become an engine for future growth.
- Further action on decarbonisation will require massive investment in research, new technologies and innovation, including hydrogen and CCS. GHG-intensive industries are concentrated in the districts of Žiar nad Hronom (aluminium production), Brezno (steel production) and Revúca (magnesite mining).
- Given the interconnectedness of Žiar nad Hronom, Žarnovica and Banská Štiavnica districts to the Upper Nitra region, the transformation in the mining sector will result in the loss of jobs of employees residing in the BBSK.

#### Environmental:

- The region has an energy poverty problem, which is also caused by low energy efficiency of buildings. This also raises the problem of heating with solid fuels, which causes significant air pollution.
- The region will face challenges in relation to sustainable energy and has the potential to use forests for carbon capture<sup>2</sup>.
- Given the industrial nature of the region, there is a need for reclamation and change of use of abandoned industrial sites.

#### Social:

- The region is facing adverse demographic development, migration and brain drain (up to 8.9% of all graduates from the BBSK go abroad to study<sup>3</sup>), and the effects of the region's transformation may exacerbate this aspect.
- The low emphasis on secondary vocational education, training and the tertiary education system has contributed to skills shortages and a mismatch between the skills offered and those required. Students enrolled in dual vocational education and training have some involvement in the work-based learning process. Despite the growing interest of students, participation in dual training remains a challenge, especially for SMEs, which have few or no resources to provide dual training conditions compared to large enterprises. Therefore, support measures need to be put in place to ensure a skilled workforce for SMEs.

## **OBJECTIVES**

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<sup>3</sup> Based on Education Policy Institute data used in the analysis Brain Drain II: Beyond the Seven Mountains, available online at: <https://www.minedu.sk/data/att/21396.pdf>

In light of the above findings, the proposed objectives of the transformation to a climate-neutral economy of the BBSK and the long-term development of the region are focused on the stabilisation of the economy and new opportunities for development.

- The pillars of PST BBSK are:



### **Economic diversification**

Pillar I of the BBSK PST focuses on supporting the development of new economic sectors to increase the diversification of local economies that are heavily dependent on industry. Support should include job creation in new sectors of the economy, support for start-ups, SME development and job creation for low-skilled job seekers and jobs in rural areas. In support of decarbonisation measures and with a view to the transition to a green economy, measures shall also aim at supporting R&D&I activities.

### **Sustainable environment**

Pillar II of the BBSK PST aims to improve the environment and mitigate negative environmental impacts in order to increase the region's attractiveness, quality of life and reduce the carbon footprint from other sectors not covered by the EU ETS, e.g. by supporting pilot projects in the field of sustainable zero-emission mobility.

Pillar II specifically addresses the challenges associated with the negative environmental impact of regional industries, while also aiming to support the progressive reduction of CO<sub>2</sub> emissions in sectors outside the EU ETS, such as buildings and transport.

The selected energy efficiency and RES measures will focus on the most important public buildings that provide essential public services, as well as on employment opportunities. Such measures will mitigate the impact of the transition process by stabilising important public service providers and institutions, reducing the use of fossil fuels and alleviating the pressure on soaring energy costs.

### **Quality of life and social infrastructure**

Pillar III of the BBSK PST aims to support the development of an education, research and innovation base that would enable the development of new skills and support new sectors of the economy that could help diversify the local economy and contribute to the creation of more attractive employment opportunities in the region in the long term. There is also a specific focus on raising environmental awareness.

Pillar III specifically addresses the issue of depopulation, the region's low attractiveness to the younger generation, jobseekers with higher education and the need to prepare the region for the future by developing new skills in the digital economy and the circular economy. Developing entrepreneurial skills, marketing skills, skills for fostering creativity, analytical skills, communication skills and skills related to strengthening the leadership skills of managers will also be essential to increase the innovative activity of SMEs in the region and to ensure an increase in interest in setting up new innovative businesses. Pillar III also focuses on supporting vulnerable groups affected by the transition to climate neutrality.

### ***CONTRIBUTION TO CLIMATE NEUTRALITY TARGETS***

In the EU ETS sector, the implementation of technological change is expected to reduce GHG intensity by around 0.07 Mt CO<sub>2</sub> per year by 2030 compared to 2020, representing a reduction of more than 7.5% in emissions in eligible districts. Increasing the energy efficiency of public buildings in the region will partly contribute to the reduction of CO<sub>2</sub> emissions, but the effect is not expected to be massive. This measure is intended mainly for the purpose of pilot projects. Therefore, the dedicated allocation will be used through financial instruments, thus creating a leverage effect.

### ***EXPECTED RESULTS OF THE IMPLEMENTATION OF THE FST PRIORITIES***

#### **Economic diversification**

- Improving the economic diversification of the local economy, especially in rural areas, leading to an improved quality of life;
- Creating new jobs in rural areas in traditional or promising sectors such as tourism, forestry or agriculture;
- Increased SME activity in the region and a higher share of SMEs in employment;
- Reduce unemployment, including structural unemployment related to the transition to climate neutrality;
- Improving links and cooperation between universities, R&D and business;
- Increase the transfer of innovative solutions and technologies to local businesses;
- Reducing the negative migration trend through the creation of higher value-added jobs in the region;

#### **Sustainable environment**

- Increased use of sustainable zero-emission transport;
- Improving the energy performance of public buildings;
- Better exploitation of the region's RES potential, leading to a reduction of the risk associated with energy poverty;
- Abandoned industrial areas prepared and used for a new purpose;
- Increased use of green technologies;

#### **Quality of life and social infrastructure**

- Reducing the depopulation trend in the region;

- Improving the education system, including vocational education and training;
- Improve the matching of the skills of the unskilled labour force to labour market needs in order to reduce structural unemployment;
- Increase the readiness and resilience of the workforce to rapid labour market changes;
- Increase digital, circulatory and financial literacy;
- Improving links and cooperation between SMEs, universities and vocational secondary schools.

## Consistency with other national, regional or territorial strategies and plans

### National strategies

Consistency of the PST with the national strategic framework is assumed, in particular with regard to the three overarching themes of equitable transformation - economic diversification, environmental sustainability, quality of life and social infrastructure.

The national strategic framework on climate change consists of national development strategies and reform plans, energy and climate change strategies and other strategies that address climate change. Key development strategies and reform plans include the Economic Policy Strategy 2030 and the NDP 2020. The main national strategies related to decarbonisation and climate neutrality are the INEKP supported by the Low Carbon Strategy of the Slovak Republic. Other strategies and plans that outline actions relevant to achieving climate neutrality include the 2030 Environment Strategy and documents outlining reforms and priorities for funding from the Recovery and Resilience Facility - NIRP and the POO. A detailed analysis of the NSRF is provided in the Transformation towards Climate Neutrality Report (Deliverable 3). Last but not least, consistency with the SK RIS3 2021+ and the National Hydrogen Strategy of the Slovak Republic is also reflected.

All three priority themes are addressed in a number of national documents that emphasise a comprehensive approach to the future sustainable development of Slovakia. This consistency should be maintained during further updates of national regulations and plans. Table 14 provides an overview of the consistency of the proposed PST measures with these strategies.

Table 6 Consistency of the PST with the national strategy documents and with the proposed actions

National strategies		PST
National development strategies and reform plans	Economic policy strategy to 2030	
	NRP 2020	
Energy and climate strategies	INEKP	
	NUS SR	

Relevant strategies with climate action	Envirostrategy 2030	
	NIRP	
	POO	
Relevant sectoral strategies	EN RIS3 2021+	
	National Hydrogen Strategy of the Slovak Republic	

### Regional strategies and plans

The main strategic document of the BBSK region is the Programme of Economic and Social Development / Integrated Territorial Strategy of the Banská Bystrica Region for the years 2023 - 2027 (PHRSR BBSK 2021 - 2027). A detailed analysis of the regional strategic framework is presented in the document Report on the process of transformation towards climate neutrality (Deliverable 3). The key priorities identified in the PST are consistent with the BBSK PHRSR 2021-2027, as illustrated in Table 15.

**Table 7 Consistency of the Economic and Social Development Programme with the proposed measures in BBSK**

PST measures	PHRSR BBSK 2021-2027
<b>Pillar I Economic diversification</b>	
<i>Action 1.1 Support the creation of new sustainable jobs</i>	
<i>Measure 1.2 Promotion of entrepreneurship, development of small and medium-sized enterprises</i>	
<i>Measure 1.3 Support for research, development and innovation</i>	
<b>Pillar II Sustainable environment</b>	
<i>Measure 2.1 Promoting clean energy, circular economy and decarbonisation of industry</i>	
<i>Measure 2.2 Promoting sustainable local transport</i>	
<i>Measure 2.3 Revitalisation and reconversion of industrial areas</i>	
<b>Pillar III Quality of life and social infrastructure</b>	
<i>Measure 3.1 Support for education, training, skills and retraining</i>	

### 2.3.4 Types of planned operations

The priority areas proposed for each region relate to the economic, environmental and social impacts of the transition to a climate-neutral economy. However, all the actions identified for the regions relate to the three overarching themes mentioned above, which contribute to the FST specific objective of economic diversification, environmental sustainability and quality of life and social infrastructure.

In the case of BBSK, the priorities are different compared to the Upper Nitra region and KSK, as a significant transformation occurred due to the closure of the coal mines in Veľký Krtíš in 2015 and the technological modernisation of the steel industry. At the same time, further decarbonisation will inevitably involve significant investments in more extensive technological modernisation and innovation of hydrogen or CCS processes. According to the analysis, a lower transformation impact has been identified in the BBSK. However, the region is struggling in a number of areas such as the local economy, depopulation, ageing population, skills shortages and low SME activity. All of these are partly the result of the recent transformation, which took place without recourse to external funding. The measures identified for the region will therefore ensure the region's resilience to any potential future impacts of the transition.

At the same time, however, the border districts of the BBSK adjacent to the Upper Nitra region will also be directly affected by the impacts of the transformation in the Prievidza and Partizánske districts. Due to the closure of coal mining and processing activities, coal industry employees who reside in the BBSK districts will lose their jobs.

The vision of BBSK is sustainable development as a response to the challenges and impacts of transformation. Based on the analysis of the impacts of the transition and the specific needs of the regions, and based on consultations with the Regional Thematic Commission and stakeholders, the vision for the transition to a climate-neutral economy in the BBSK has been defined as follows:

*The region's industrial areas will remain the engine of the economy during the transition, but they need to strengthen their resilience and preparedness for the transformational changes ahead.*

*BBSK needs to reduce negative environmental impacts and focus on the second pillar in its development to provide new attractive opportunities.*

The vision for the region's transformation was developed based on three key transformation themes that focus on the needs of the region and justify the need for specific intervention from the FST:

#### 1. Readiness

The BBSK analysis points to a relatively limited decarbonisation potential in the region, as a result of which the economic impact of industrial transformation is expected to be limited by 2030.

On the other hand, the analysis reveals challenges facing the region in a number of areas, such as high depopulation rates, an ageing population, a mismatch between the skills of

jobseekers and the skills required by job opportunities, environmental challenges (such as air pollution), the high dependence of local economies on emissions-intensive industries and lower SME activity.

The region is therefore highly vulnerable to the negative impacts of potential transformation that may occur after 2030. The region needs to prepare for potential future transformation now and focus on improving its preparedness and resilience to the negative impacts of transformation.

## 2. Stabilization

Another transformational issue for the region is its stabilisation. BBSK has specific problems related to unemployment of low-skilled labour, unemployment in rural areas and at the same time the region does not provide sufficient opportunities for the young generation, which leads to a higher rate of depopulation. At the same time, the transformation in Upper Nitra will also have negative impacts on employment in the neighbouring districts of the BBSK.

That is why it is necessary for the region to stabilise, otherwise it will be severely affected by the negative effects of the transition. Stabilisation in this context means promoting employment and new jobs, including for low-skilled labour market participants, while exploiting the region's existing potential in some traditional sectors as an alternative to employment in emission-intensive sectors - tourism and accommodation, forestry and agriculture.

## 3. New opportunities

The local economy in the districts where EU ETS facilities are located, as well as the districts that will be directly impacted by the Upper Nitra transformation, need to diversify and develop another pillar of their economic development. This will make the region more attractive to the younger generation by creating job opportunities in new sectors of the economy with higher added value. At the same time, the region needs to focus on improving education and skills to reduce structural unemployment and support new growth sectors in the region. The region will also focus on strengthening the industries that drive the economy by making them more resilient and sustainable. Supporting the creation of more attractive jobs with higher added value will help to address the negative migration trend.

The BBSK PST is divided into 3 main pillars, which are linked through specific measures.

	Priority		
	High	Medium	Low
<b>Pillar I - Economic diversification</b>			
<b>Action 1.1 Support the creation of new sustainable jobs</b>			
<i>Related activities:</i>			

<i>creating new jobs for the younger generation in new sectors of the fast-growing economy and in emerging and transition industries</i>			
<i>support for the creation of new and the development of existing activities in social entrepreneurship</i>			
<i>creating and retaining higher value-added jobs in R&amp;D&amp;I and green innovation</i>			
<b>Measure 1.2 Promotion of entrepreneurship, development of small and medium-sized enterprises</b>			
<b><i>Related activities:</i></b>			
<i>productive investment in SMEs, including micro-enterprises and start-ups, leading to economic diversification, modernisation and reconversion</i>			
<i>digitisation, including analysis of procedures, processes and subsequent investment support for the application of digital solutions</i>			
<i>support for the creation of new companies, including through business incubators, co-working centres, technology centres and hubs</i>			
<b>Measure 1.3 Support for research, development and innovation</b>			
<b><i>Related activities:</i></b>			
<i>promoting activities and cooperation in the field of R&amp;D&amp;I with a focus on the green economy</i>			
<i>development of R&amp;D&amp;I potential in the region, introduction of innovations in the field of products, processes and services, including transfer of advanced technologies into practice</i>			
<b>Pillar II Sustainable environment</b>			
<b>Measure 2.1 Promoting clean energy, circular economy and decarbonisation of industry</b>			
<b><i>Related activities:</i></b>			
<i>improving the energy efficiency of public buildings, including the promotion of smart measures and innovative solutions</i>			

<i>innovations to support the decarbonisation of industry</i>			
<i>construction of RES production facilities and their use in energy systems, including RES storage</i>			
<i>development of energy services at regional and local level, introduction of energy and environmental management systems, including energy audits</i>			
<i>promoting innovative waste prevention activities</i>			
<b>Measure 2.2 Revitalisation and reconversion of industrial areas</b>			
<b><i>Related activities:</i></b>			
<i>repurposing and reuse of abandoned industrial sites and land restoration</i>			
<b>Measure 2.3 Promoting sustainable local transport</b>			
<b><i>Related activities:</i></b>			
<i>modernising existing and introducing new integrated transport systems, applying intelligent mobility solutions</i>			
<i>raising public awareness to increase the attractiveness of public passenger transport and micro-mobility</i>			
<b>Pillar III - Quality of life and social infrastructure</b>			
<b>Measure 3.1 Support for education, training, skills and retraining</b>			
<b><i>Related activities:</i></b>			
<i>promoting lifelong learning and retraining of workers and jobseekers to develop skills for smart specialisation, industrial transformation and entrepreneurship</i>			

<i>cooperation between SMEs and vocational secondary schools to support students' practical training and preparation for employment</i>			
<i>networking, cooperation and learning activities between the academic sector and business, with an emphasis on practical learning</i>			
<i>career counselling and related professional advisory services for employees and jobseekers</i>			
<i>support for infrastructure and equipment for formal and non-formal education</i>			
<i>networking, cooperation, support for educational activities to raise environmental awareness, and support and advice on environmental management for municipalities and other private and public sector actors</i>			
<i>networking, cooperation and training activities between research institutions and enterprises, with an emphasis on practical training</i>			
<b>Measure 3.2 Improving social care for vulnerable groups</b>			
<b>Related activities:</b>			
<i>Strengthening the capacity of social service organisations to mitigate the negative social consequences of decarbonisation processes</i>			
<i>investment in social infrastructure for care facilities for the elderly</i>			
<b>Cross-cutting priority: Technical assistance</b>			

### **Types of interventions:**

- Thematic (calls for proposals) calls for projects
- National projects
- Voucher systems - vouchers
- Financial instruments

### **Financial instruments**

Productive investment in SMEs will be supported through financial instruments to maximise leverage. In addition, they will be used to finance projects aimed at improving the energy efficiency of public buildings, focusing on pilot projects due to limited allocation.

At the same time, the region will also be supported through the EIB's JASPERS technical assistance as well as through a technical assistance project under the Technical Assistance Facility under the auspices of the EC (Directorate General for Structural Reform Support). Through the use of technical assistance, the required project readiness will be achieved as well as the transfer of the necessary knowledge on the use of financial instruments in practice.

## Support for investment in installations covered by the EU ETS

BBSK has undergone significant GHG emission reductions in the past, yet there is still potential for further GHG emission reductions by 2030. The key economic entity based in the BBSK with the potential to eliminate CO<sub>2</sub> emissions is the company Železiarne Podbrezová (steel industry). The company is planning decarbonisation-related investments that will reduce their carbon footprint. Table 16 shows the expected GHG reduction potential of EU ETS operators in the BBSK.

**Table 8 Expected GHG emission reduction potential of key EU ETS operators in BBSK**

Name of company	Main project area	Project name	Estimated GHG emission reductions by 2030 compared to 2020 (million tonnesCO <sub>2</sub> /year)	Estimated GHG emission reductions by 2030 compared to 2020 (%)	Investments in EUR million	Impact on employment	
						Number of jobs created	Number of jobs saved
Železiarne Podbrezová a. s.	Green hydrogen production	Reduction of CO <sub>2</sub> emissions in heat treatment of pipes by hydrogen production by electrolysis	< - 0,05	< 5 %	2,4	5	0
Železiarne Podbrezová a. s.	RES	Use of renewable energy sources for electricity production			6,5	0	0

## Synergies and complementarity of planned operations with other relevant Union programmes

Synergies and the elimination of duplications in the financing of operations between the ODA, the ESIF (including the FST) and other intervention frameworks, in particular EU funds, will be ensured through a mechanism for coordination and ensuring synergies. Synergies and complementarities will be assessed before the call itself is launched in the framework of the ENP funding and the ODA implementation instrument, and it will be necessary to specify synergies in the ODA call/implementation instrument itself. Further information on synergies is given in Annex 4.

## Other pillars of the Fair Transformation Mechanism

In addition to the FST (Pillar I of the MST), Slovakia will be able to benefit from the financing available under Pillar II - the dedicated Fair Transformation Scheme under the InvestEU Programme and Pillar III - the Public Sector Credit Facility with the EIB. However, for effective use of these MST pillars, the conditions for their use under the MST need to be specified.

More detailed information on Pillar II and Pillar III of the MST is provided in Annex 5.

### **3. Control mechanisms**

#### **1.1 Partnership**

##### **Governance structure at regional level (territorial aspect):**

Thematic Working Commissions for FSTs have been established within the Partnership Councils of the proposed eligible regions, i.e. TSK, KSK and BBSK, with open participation of all stakeholders (state institutions, public sector, municipalities, NGOs and civil society representatives, representatives of declining and transition sectors, business sector, academic institutions, EC representatives, etc.). The role of the Thematic Working Commissions is to coordinate the preparation and implementation of MSTs at the local level, reflecting and advocating the region's needs, challenges and priorities.

- The Thematic Commissions were launched in December 2020;
- Meetings shall be held on a regular basis.

##### **EC involvement:**

During the PST preparation process, EC representatives were continuously invited to the meetings of the regional thematic working committees, in which they actively participated. At the same time, they were actively involved in the preparation of the PST through participation in the Steering Committee, which was set up for the implementation of the technical support for the preparation of the PST provided by the EC (DG Reform).

##### **Participatory process of PST preparation**

The analytical documents (Deliverables) prepared in cooperation with a consultant under the Technical Support Facility (DG Reform) were the basis for the preparation of the PST. Five analytical documents were produced as part of the preparation process. The preparation process and all deliverables were consulted and commented on during the preparation phase in the light of comments from relevant stakeholders at national and regional level.

At the same time, MIRRI SR organised public discussions on the specific objective of the FST in the framework of the P SK consultation.

##### **Engaging the younger generation:**

In order to ensure the participation of young people in the PST development and implementation process, workshops were organised for high school students, university students and young graduates. For high school students in particular, improving regional infrastructure, more job offers, and greater youth involvement in shaping regional life and in community projects are key. College graduates, in turn, cited affordable housing, better infrastructure (highways and expressways), an influx of new companies and new job opportunities, and the possibility of dual training as the main motivating factors. Both categories of students are currently motivated to stay in the region mainly by family and relationships, but also by the potential to improve the region.

In addition, an online survey was conducted to gain a more concrete insight into the challenges facing the young generation as a result of the transition process. More than 360 unique responses

were collected from high school students in eligible regions. The survey results showed that only 18% of students see their future in their region, while up to 40% of them plan to move away and 42% are still undecided. Young people are not very optimistic about the future of the region itself either: 37% of them think it will prosper in the next five to ten years, while 39% think it will be the same and 24% of students believe the region will decline. An attractive region to stay and live in, according to students, is one with good job opportunities, good infrastructure, a clean environment, good quality higher education opportunities, friendly people and leisure opportunities.

Another process regarding the involvement of the younger generation in the implementation phase of the PST is currently underway (cooperation with local youth organisations through an informal working group, local information seminars). Further information regarding youth involvement in the PST preparation process is provided in Annex 5.

## **1.2 Monitoring and evaluation**

MIRRI SR will be in the position of the managing authority of the P SK and will be responsible for the overall implementation of the PST.

The FST is a specific objective of the SK P and will therefore be subject to a single implementation structure and management system designed for the entire SK P. In this context, the establishment of an FST Commission within the SK P Monitoring Committee is foreseen.

The FST Commission will build on the existing Regional Thematic Working Commissions and the Inter-Ministerial Task Force that were established to prepare the PST, ensuring balanced representation of key stakeholders in monitoring the implementation of the PST. The Commission will be responsible for assessing progress in the implementation of the PST and the achievement of its objectives. The Sub-Commission may also consult, comment and propose changes to the implementation of the PST.

## **1.3 Coordination and monitoring body/bodies**

Operations financed by the ERDF (Investing for Growth and Employment Objective), ESF+, CF and FST will be implemented under one programme - P SK. The managing authority for P SK, i.e. also for the specific objective FST, is the MIRRI SR. However, the implementation of measures and projects financed by the FST (as well as Pillar II and III of the MST) will be ensured by the selected intermediate bodies, given the thematic area of focus of the project calls. Other bodies should be involved in the PST implementation process to ensure monitoring and to provide any requests for modification of the PST.

The implementation of the FST shall be integrated into the standard management system of the ESIF. The proposed structure includes the managing authority (MIRRI SR), intermediate bodies, audit authority, paying authority and monitoring committee. The role of these bodies will be described in more detail in the ESIF management system.

### **Inter-ministerial working group:**

In December 2020, MIRRI SR established an Inter-Ministerial Working Group to coordinate the preparation and implementation of the PST. Permanent members of the working group are representatives of MIRRI SR, Ministry of Economy SR, Ministry of Finance SR, Ministry of Environment SR, Ministry of Labour, Social Affairs and Family SR, Ministry of Agriculture and Rural Development SR, Ministry of Education, Science, Research and Sport SR and Ministry of Transport and Construction SR. Regularly invited guests are representatives of the Slovak Antimonopoly Office, who are closely involved in the specific issue of the provision of state aid. The task of the working group, according to its statute, is to ensure coordination of the preparation and implementation of the MST and FST with other sources of funding and to ensure consistency with national strategies in order to achieve the vision of modern, diversified, sustainable, prosperous and inclusive regions by all stakeholders at local, regional, national and European level. In particular, the remit of the Task Force includes:

- Assist, in accordance with the MST, eligible regions to identify, develop and implement projects with the potential to draw down FST support funds to kick-start a viable economic and equitable transformation while mitigating the socio-economic impacts of this transformation on the region's development;
- Support the creation of project pipelines for each eligible region in accordance with the MST and with the aim of promoting green investments, economic diversification of the territory, retraining and active inclusion of employees and jobseekers within the eligible regions;
- Comment on the prioritisation of project ideas in the project pipelines of each region, taking into account value for money, contribution to objectives and readiness of project ideas;
- coordinate activities related to the preparation of the PST in coordination with the performance of technical assistance to the EC;
- coordinate and comment on the possibilities of financing projects and measures from the FST and other financial sources (European Structural and Investment Funds (ESIF), the Modernisation Fund, the Innovation Fund, as well as other repayable forms);
- work with representatives of the business sector in the eligible regions and with representatives of local authorities and action groups.

Given the scope of the FST measures, the cooperation of other national and regional stakeholders (institutions and agencies at national level, as well as municipalities, cities and municipalities) is necessary. Stakeholders may be required to cooperate in the preparation of specific projects or calls under the FST.

