

1. Name of the project
„Provision of sustainable transport connectivity by building sections of Line 3 of the Sofia metro“
2. Description of the project /objectives, main activities/
<p>The project Provision of sustainable transport connectivity by building sections of Line 3 of Sofia metro includes two sections of ecological public transport in separate lots:</p> <ul style="list-style-type: none"> • Lot 1 - section MS "Hadzhi Dimitar"- "Levski" RD with a length of 3km and 3 metro stations; • Lot 2 -section Shipka str. - Geo Milev quarter -Slatina RD - Arena Armeets Hall/Tech Park Sofia - Tsarigradsko Shose blvd. with a length of 6 km and 6 metro stations. <p>The population of Sofia - the capital of Republic of Bulgaria - the residents, together with those temporary living there, exceeds 1,6 million of people. The transport and ecological situation in the city is extremely difficult and complex. Large traffic jams by personal and public vehicles are formed every day. On the one hand, it leads to low travel speeds, on the other hand it leads to deteriorating ecological and transport situation in the city and the its suburbs. For this reason, despite various measures to reduce air pollution, on some days pollution in some areas significantly exceeds sanitary norms. Practice and experience in other countries show that one of the most effective measures is the development of underground high-speed mass metro transport. In the context of the green deal, the metro in Sofia is one of the largest green infrastructure projects in the Republic of Bulgaria.</p> <p>Through funding of the OPTTI 2014-2020 the first two sections of Line 3 of the metro were built in the period 2016-2020, equipped with new control and safety systems manufactured and installed by Siemens and a new model of trains by the same company. Given the complex geological conditions and the weak soils along the route of the central section, the construction of the tunnels was carried out by a German tunnel boring machine with counter-pressure in the face.</p> <p>In order to achieve the planned large environmental, transport and social effects of this line, the other two sections of Line 3 should be completed, defined as the following two lots of this project:</p> <p>Lot 1 – section MS "Hadzhi Dimitar"- "Levski" RD</p> <p>The section is 3 km long, has 3 metro stations and passes throgh Hadzhi Dimitar quarter, Hadzhi Dimitar Production Zone, Suhata reka and Levski quarter. The total number of people living and working in the above parts of the city is about 90 thousand. For the most</p>

part, the route is located under the southern lane of Vladimir Vazov Blvd. or parallel to it.

The construction of the section includes reconstruction of the affected engineering infrastructure, construction of the structures of the metro stations and tunnels - incl. excavation works, strengthening of the excavations by massive reinforced concrete walls added to the structures of the facilities, construction of the internal reinforced concrete structures of the metro stations and the station facilities, installation of rails and contact network, power substations and external connections for power supply of the route from the city's power stations, power networks, control systems, safety and communications /6 systems/, architectural works in the metro stations - finishing works in the office premises for installation of the equipment of the control and functioning systems of the metro and representative parts of the stations - entrances, underpasses, entrance concourses and platform sections, restoration of the terrain and the surrounding space after the completion of the construction and single, complex tests and commissioning.

Construction of the metro stations is planned to be carried out according to the so-called semi-open /Top Down/ method - two of the stations - and according to the cut-and-cover method - the metro station in Levski quarter. The tunnels along most of the route will be built according to the New Austrian tunneling method, and in the section between the first and the second metro station in Levski quarter – according to the cut-and-cover method.

The systems for dispatch control, train safety (Communications-based train control CBTC) and operation (electrical with substations, ventilation, communications, etc.) are fully compatible with those of the first stage of the line built in the period 2016-2020. In order to increase the passenger safety all platforms at the stations are separated from the trains by transparent opening platform screen doors with a height of 1.6 m.

Lot 2 - section “Shipka str. - Geo Milev quarter -Slatina RD - Arena Armeets Hall/Tech Park Sofia - Tsarigradsko Shose blvd.”

This section is 6 km long, has 6 metro stations and passes through densely built-up quarters - Geo Milev, Slatina, Hristo Smirnenski, Arena Armeets Hall which has a capacity of 18 thousand people and the new Tech Park Sofia which has a promising number of jobs of over 40 thousand people, Poligona and Mladost quarters.

The route is entirely underground, as 5 of the metro stations are planned to be built according to the so-called semi open /Top down/ method and one station according to the cut-and-cover method. The first metro station is situated in a densely built-up part of the extremely busy intersection of Sitnyakovo blvd. and Geo Milev str., the second is at the intersection of N. Kopernik str. and Geo Milev str. with adjacent dense residential and administrative buildings. The next two metro stations are located in the largest residential area - Slatina, most of which do not have good transport links with the central part of the city. The metro station in front of Tech Park Sofia and Arena Armeets Hall is intended to serve the largest sports and concert hall in the country with a capacity of 18,000 spectators through one of its entrances, and to the newly built large Tech Park Sofia - through the other two entrances. Some of the buildings from the first phase of this Tech Park have already been built and are functioning, and currently under construction is the co called supercomputer. After the full realization of Tech Park Sofia in the coming years it is expected to provide more than 40 thousand jobs.

The last metro station of the section is located on the largest entrance-exit thoroughfare of Sofia - Tsarigradsko Shose blvd., continuing outside the city into the Trakia highway. In addition to serving the densely built-up areas with residential and administrative and commercial buildings of Mladost and Poligona quarters, this station also has an important buffer functionality for the cars entering the city. For this reason there is planned an underground park&ride facility above the facilities for changing the direction of train movement located after the station.

The construction of the section includes reconstruction of the affected engineering infrastructure, construction of the structures of the metro stations and tunnels - incl. excavation works, strengthening of the excavations by massive reinforced concrete walls added in the structures of the facilities, construction of the internal reinforced concrete structures of the metro stations and the station facilities, installation of rails and contact network, power substations and external connections for power supply of the route from the city's power stations, power networks, control systems, safety and communications /6 systems/, architectural works in the metro stations - finishing works in the office premises for installation of the equipment of the control and functioning systems of the metro and representative parts of the stations - entrances, underpasses, entrance concourses and platform sections, restoration of the terrain and the surrounding space after the completion of the construction and single, complex tests and commissioning.

There are complex engineering-geological and hydrogeological conditions along the route of Lot 2 – high level of groundwater, hydrated sands and soft clays in many places, crossing under the river Slatinska at two places, etc. Due to that, in order to safely build tunnels in these conditions and avoid adverse consequences for the massive buildings located along the route, the project for the section envisages the only applicable safe technology for tunnel construction - using a tunnel boring machine with hermetic bottom chamber and counter-pressure in the working face.

Control, safety and operation systems of Lot 2 are fully compatible with those of the First Stage of Line 3. The main part of the required rolling stock for Stage 1 and 2 of Line 3 (20 trains) is delivered by Siemens. Additional 10 trains will be delivered according to the delivery contract for Lot 1 and 2 of this project. To increase the passenger safety, all platforms at the stations are separated from the trains by transparent opening platform screen doors with a height of 1.6 m.

More than 160 thousand people live or work along the route of the section of Lot 2, with a tendency to increase. Every day more than 45,000 cars enter the Tsarigradsko Shose blvd.

Providing high environmental standards, the planned sections of the project with a total length of 9 km and 9 metrostations will provide fast and efficient service to a large number of passengers with intermodal connections to the national railway network and to the airport. Also, the buffer metro stations which have park&ride facilities at the main entrance-exit thoroughfares of the city will provide connection to the main car traffic to the capital.

In total, for both sections as part of a joint project, transport studies for passenger loads have been developed (Attachment). They show an average annual carry of about 26

million passengers. A Preliminary Economic Analysis of the Benefits was also developed for the project (Attachment).

Benefits of this project realization are as follows: :

- More than 26 million passengers carried annually;
- Reduction of harmful greenhouse gases, fine dust particles, lead aerosols, etc. in the city and the region – 1 387 tons per year, after deducting the indirect effect of the emissions for the used electricity in the metro;
- The number of cars operating in the city will be reduced by 13 202 cars per day;
- Traffic will be reduced by around 25%
- Guaranteed maximal speed of trips of 80km/h without being affected by the traffic and meteorological conditions with incomparable comfort and convenience;
- The average speed of public transport will increase more than twice,
- Due to the significantly higher speed of trips by metro in comparison to the other transport types, the residents of the city will additionally save 12 830 hours per day. This effect will increase significantly due to the impact of the reduced number of cars.

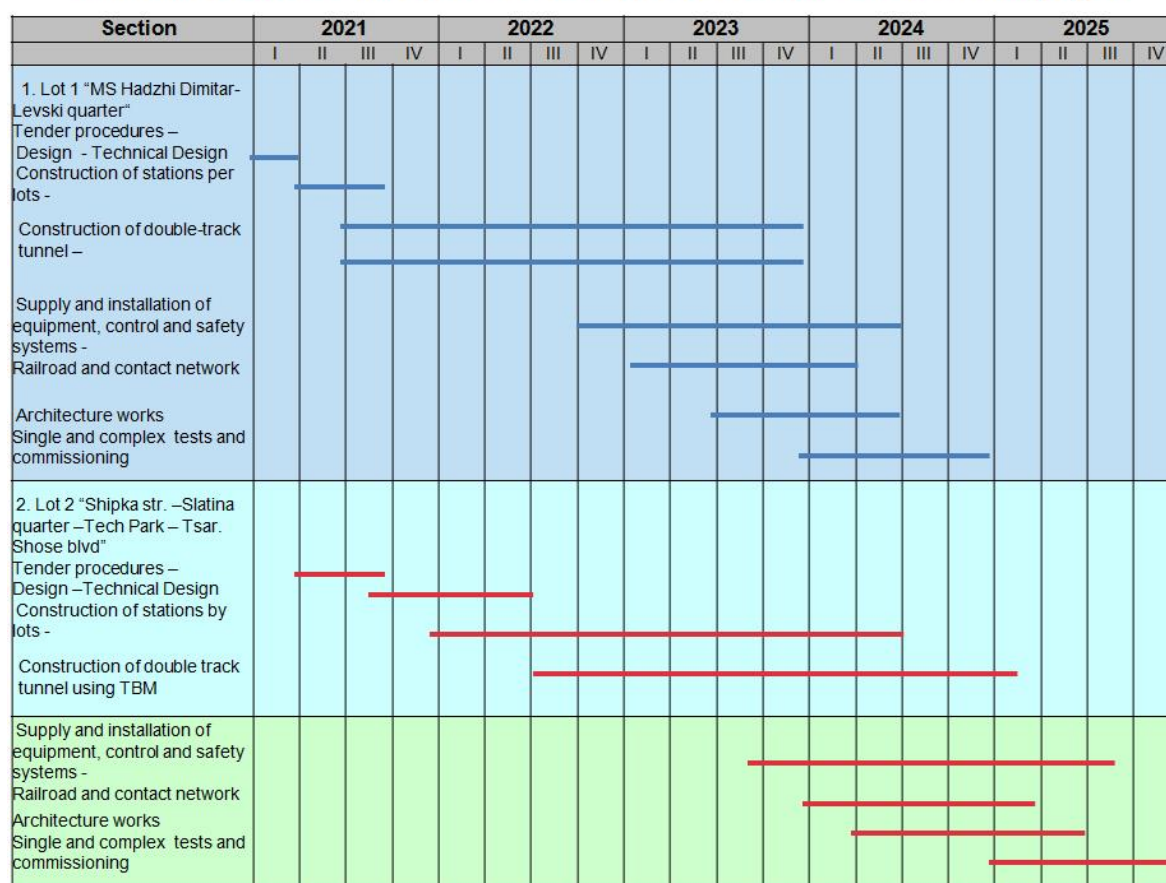
3. Beneficiary

Sofia Municipality – Metropolitan JSC

4. Time schedule for implementation of the project incl. activities, phases¹.

¹ The timetable will be relevant for setting intermediate targets under the Recovery and Sustainability Plan and is directly related to the release of tranches of financial support from the Recovery and Sustainability Fund.

Timetable of construction of the sections of Lot 1 and Lot 2 of the metro project



a. When at earliest can start the project implementation after it is approved?

Lot 1 - Preliminary design of all parts is completed, Linear Detailed Urban Plan is approved, EIA Decision is issued, the tender procedures for awarding the construction for separate positions (lots) and for Engineer-Consultant are nearing completion. Possible start of construction - second quarter of 2021.

Lot 2 - Preliminary design of all parts is completed, Linear Detailed Urban Plan and amendment of the Master Plan – procedure ongoing, EIA Decision is issued, tender procedures for awarding the construction and a Consulting Engineer will be launched in early January 2021. Possible start of construction - second half of 2021.

5. Indicative financial resource as per activities, incl. sources of funding (State Budget, European funding, private funding, MFI).

Lot 1 - indicative cost - BGN 217.5 million /from the Recovery and Sustainability Instrument/. The indicative cost is a result of conducted procedures for awarding the construction under the Public Procurement Act.

Lot 2 - indicative cost - BGN 545.4 million /from the Reconstruction and Sustainability Instrument - BGN 142.4 million and national co-financing - BGN 403 million/. The indicative cost is a result of historical data from conducted procedures for awarding the construction under the Public Procurement Act for construction of metro sections and metro stations.

	Investment per activities	Cost
	Lot 1 – “MS Hadzhi Dimitar – Levski quarter”	217 465 416
1	<i>Construction-Installation works and equipment for Lot 1</i>	<i>216 185 416</i>
2	<i>Engineer-Consultant Lot 1</i>	<i>1 280 000</i>
	Lot 2- “Shipka str.- Geo Milev quarter – Slatina quarter – Arena Armeets/Tech Park Sofia – Tsarigradsko Shose blvd.”	545 400 000
4	<i>Construction-Installation works and equipment for Lot 2</i>	<i>540 000 000</i>
5	<i>Engineer-Consultant Lot 2</i>	<i>5 400 000</i>
7	Total	762 865 416

Budget formation is presented in Attachment 1 to the Application Form.

a. Indicatively allocate the financial resource according to the type of cost:

- Construction of infrastructure (construction and installation works) – 70%
- Physical capital (purchase of machinery and equipment) - 28 %
- Human capital (skills advancing, development, retraining...) -% - *costs are part of equipment supply contracts*
- Labor (salaries, consulting services and project management) - 2%
- Technology (costs for acquisition of intangible fixed assets - patents, software...) -% - *costs are part of the contracts for supply of equipment*

6. Indicators

6.1 Result Indicators

- **New metro lines – 9 km**
- **New metro stations – 9**

New metro lines – 9 km

- Initial value - 0 [year 2021]
- Intermediate value – 3 km [year 2024]
- Final value – 9 km [year 2025]

New metro stations – 9

- Initial value -0 [year 2021]
- Intermediate value – 3 stations [year 2024]
- Final value – 9 stations [year 2025]

Intermediate value (2024) corresponds to the expected completion and commissioning of Lot 1 with a length of 3 km and 3 metro stations

Final value (2025) corresponds to the expectation that both sections of the project Lot 1 with a length of 3 km and 3 metro stations and Lot 2 with a length of 6 km and 6 metro stations - will be completed and put into operation in 2025

6.2 Effect Indicators
Number of passengers carried annually – 26,366 million passengers per year
<p><u>Number of passengers annually</u></p> <ul style="list-style-type: none"> - Initial value – 0- 2021 [year] - Intermediate value – 10,4 million passengers per year - 2025 [year] - Final value – 18,4 million passengers per year – 30.06.2026 [year] <p>Intermediate value (2025) corresponds to the estimated number of passengers under Lot 1 for one full year after the commissioning of the section</p> <p>The final value (30.06.2026) corresponds to the forecasted number of passengers under Lot 1 and Lot 2 for one full year after the commissioning of both sections.</p> <p>Estimated number of passengers under Lot 1 and Lot 2 for one full year in operation amounts to 26,366 million passengers carried.</p> <p>After the commissioning of the sections, the data on the number of transported passengers under Lot 1 and Lot 2 will be published two times yearly on the website of Metropolitan EAD.</p>
7 Does the implementation of the project require a procedure under the Public Procurement Act?
Yes. Implementation of the project envisages 4 procedures under the PPA for awarding with contracts
<i>7.1 If a procedure under the Public Procurement Act is required, what part of the activities and financial resources will be the subject of the public procurement?</i>
<p>Lot 1 requires procedures for awarding the contracts of construction and of Consulting-Engineer. Based on the volume, complexity and specificity of the different types of works and in order not to restrict competition, the procedures for awarding the construction are divided into Lots as follows: 3 Lots for metro stations and adjacent tunnels /with different construction methods and in different parts/ and railways, and one lot for management, safety and operation systems for the whole route. There is planned one procedure for awarding the contract for Consulting Engineer for the entire metro section. Subject of the public procurement for construction and Engineer-Consultant service represents 100% of the cost of the section.</p> <p>Lot 2, according to the PPA, requires conduction of procedures for awarding with contracts. According to the specifics of the individual sections and facilities and in order to provide an opportunity for more participants, the procedure is divided into Lots as follows: three lots for metro stations and railways in the adjacent tunnels; one lot for construction of the tunnel under the Shield Method using a tunnel boring machine for the whole 6 km section and one lot for control, safety and operation systems of the section. There is planned one procedure for awarding the contract for Consulting Engineer for the entire section of Lot 2. Subject of the public procurement for construction and Engineer-Consultant represents 100% of the cost of the section.</p>

7.2 If a procedure under the Public Procurement Act is required, what is the indicative schedule for its implementation?

Lot 1: Tender procedure was conducted in 2020. The result was announced in December 2020 and in the second half of January the ranked bidders should submit documents for signing contracts. Expected signing of the contracts - February-March 2021.

Lot 2: Announcement for launching of the tender procedure for awarding the contract for construction is planned for January. The estimated completion date is the summer of 2021. In February is planned the announcement of the procedure for awarding the Consulting Engineer contract for the entire section of Lot 2 with an estimated completion date of the second half of 2021. Expected signing of the contracts - second half of 2021.

As part of a joint project there were developed transport studies and Preliminary economic analysis of the benefits for both lots. The estimated costs and construction schedule are specified in this application form. As general indicators in the description part of the two lots are indicated the forecasted passengers loads and the main benefits according to the Preliminary economic analysis of the benefits.

8 Demarcation and complementarity.

8.1 If similar projects have been implemented (regardless of their source of funding), describe how this project builds on/complements what has been achieved with previous projects

In the period 2016-2020 with funds from OPTTI 2014-2020 was built the first stage of Line 3 - Stage 1 MS "H. Dimitar" - MS "Krasno Selo" with a length of 8 km and 8 metro stations.

Lot 1 of this project is a continuation of Line 3 in the eastern direction, as the section of this lot is connected to Stage 1 of the line northeast of MS "Hadji Dimitar" with 100% compatibility of dimensions, rails and systems for control, safety and operation. For this purpose, eastwards of the Hadji Dimitar station there is planned a possibility for working shaft for the construction of the first section of Lot 1 without affecting the operation of the existing section of Stage 1 of Line 3. Thus, this lot provides a connection to the eastern quarters of the city with its central and western part through the constructed Stages 1 and 2 of Line 3 - Krasno Selo, Ovcha Kupel and Gorna Banya, as in Gorna Banya there is a joint railway stop with the suburban railway line in the direction of Sofia - Pernik. The connection of Stage 1 with Metro Line 1 at MS Orlov Most and Line 2 at MS NDK provides connection of these quarters with the other two metro lines, and through them with the rest of the city, the central railway station and the airport. With the construction of Lot 2, the section of Lot 1 will have a fast and convenient transport connection with Geo Milev, Slatina and Tsarigradsko Shose blvd..

Lot 2 of this project is a continuation of Line 3 from Shipka Street through Geo Milev and Slatina quarters, Arena Armeets Hall/Tech Park Sofia next to Tsarigradsko Shose blvd. During the construction of Stage 1 of Line 3 at the place of its connection with this section there was constructed a large trapezoidal shaft for starting a branch at this place, in order to build the section of Lot 2 without stopping the traffic in the existing line. The section of Lot 2 is a natural continuation of Line 3 in the eastern direction and in addition to fast and efficient transport service of the adjacent areas, it provides a connection of the section with the city center, Krasno Selo, Ovcha Kupel and Gorna Banya quarters to the west, as well with the suburban railway through the joint station with the Sofia – Pernik railway line. With the construction of Lot 1 of this project, the adjacent sections of Lot 2 will have a fast and convenient transport connection with Hadji Dimitar, Suhata Reka and Levski quarters. The connection of Stage 1 of Line 3 with Line 1 at MS Orlov Most and with Line 2 at MS NDK provides connection of the adjacent districts of Lot 2 with the other two metro lines, and through them with the rest of the city, the central railway station. and the airport.

In this way, the two lots upgrade the Stages 1 and 2 of Line 3 built in the period 2016-2020/21. Lot 1 and Lot 2 greatly contribute to the realization of the projected benefits of the whole third metro line - of transport, environmental and social nature. The lots provide efficient transport services of the adjacent areas by the most ecological and fast public transport, as well as they provide fast and convenient connections with all major residential areas with the central part of the city, between them and with the national railway network and the airport.

8.2 If similar projects are envisaged under the Partnership Agreement programs, centrally managed EU instruments or the Fair Transition Fund, outline the demarcation with this project.

No other similar projects are foreseen under the Partnership Agreement or the centrally managed instruments of the EU or the Fair Transition Fund. The first two stages of Line 3 have been built under the OPTTI 2014-2020. In order to achieve the envisaged significant transport, environmental and social benefits from these two stages and from the entire Line 3, it is necessary to complete Lot 1 and Lot 2 from Stage 3 provided in this project. The two lots of this project will almost double the public benefits of the line and will significantly increase the transport, environmental and social impact of the metro for the whole city.

9 Does the project directly contribute to the implementation of any of the Council Specific Recommendations addressed to Bulgaria in the framework of the European Semester in the period 2017-2020? Please describe.

The project directly contributes to the implementation of Recommendation No. 3 of the COUNCIL RECOMMENDATION ST 8173/20 - COM (2020) 502 final, on the National Reform Program of Bulgaria for 2020 and containing the Council opinion on the Convergence Programme of Bulgaria for 2020. which reads as follows:

3. Streamline and speed up procedures for providing effective support to SMEs and the self-employed, while also ensuring that they have continuous access to finance and flexible payment terms. Give priority to ready-to-implement public investment projects and stimulate private investment to accelerate economic recovery. To focus investment on environmental and digital transition, in particular on the clean and efficient production and use of energy and resources, environmental infrastructure and sustainable transport, contributing to the gradual decarbonisation of the economy, including in the coal regions.

The implementation of the project will continue the phased extension of the Sofia metro, as an efficient, environmentally friendly and sustainable transport system that will provide fast, safe and convenient transport services in the direction of the busiest passenger flows in the city. The construction of these two sections of Line 3 will continue the phased implementation of the scheme for development of the metro lines set in the General Master Plan (GMP) of Sofia and will provide a direct and convenient transport connection in the direction of the busiest passenger flows in the city.

Due to the connection between the three lines, not only fast and ecological transport will be provided between the largest residential complexes in the city in the directions with the highest passenger flow, but also will be provided the possibility for integrated operation of the metro, automobile, railway systems and air transport, which directly leads to even more effective development of the priority of intermodality in passenger transport. The implementation of these two sections of Line 3 will lead to increase in the trips on the existing

metro lines and will increase the efficiency of the entire metro network. Attractiveness of public transport will increase, which will lead to a reduction in car traffic due to the transfer of passengers from car to the metro. As a result of the reduced traffic, the harmful emissions from the cars will be reduced and the air quality in the city will be improved, the traffic accidents and incidents and the levels of noise and vibrations in the urban environment will also be reduced. With the optimization of the public transport and the reduction of car traffic, there will be implemented the measures related to the strategy for low-carbon development of urban areas and mitigation of the effects on climate change.

10 Does the project contribute to the implementation of a reform in a given sector? Please describe.

The project will contribute to the development of fast public transport, which will help to improve living conditions in the city by ensuring the fast travel of large groups of people, reducing traffic in the city and, as a result, reducing also the congestion on the busy street network and pollution of the air above it. It will help in ensuring a reform of the public transport by providing fast and environmentally friendly travel to large groups of people on the city's main transport routes. This coincides with the strategy of the state and the Sofia Municipality for the introduction of ecological modes of transport and the decarbonisation of the economy as a whole in the context of the green deal.

Through the off-road underground location of the project sections, this will help reform the public transport of the country's largest city by increasing the share of environmentally friendly transport, reducing surface vehicles and related air pollution, and reducing the travel time of public transport and significantly improving the living conditions in the city.

The project will provide fast intermodal connections with different types of urban, regional suburban, national rail and air transport through the most powerful transport in the city. Direct connections with 3 railway stations, one of which is newly built on Line 3, will provide fast connections of passengers to the different areas of the city, both with regional trains as well as those from long-distance routes of the national railway network.

The established direct joint infrastructure connection of the metro lines with the airport provides fast and stable transport connections of the air transport passengers with the different parts of the city and with the railway stations – and through them – with the regional trains and trains from long-distance routes of the national railway network.

11 Does the project contribute to the development of any aspect of sustainable economic development? Please describe.

Through its large public transport, environmental and social benefits this project contributes to improving the living conditions in the city, and hence to improving the environment and increasing labor productivity. Faster and more convenient transport service for large groups of passengers helps to reduce the travel time by public transport, and hence to save time of the city residents, which can be used for personal needs - recreation, education or efficient production activities. Based on the fact that the city forms over 25% of the country's GDP, this will have significant economic dimensions.

Quality infrastructure will be built in terms of its safety, security, efficiency, resilience to climatic conditions, as well as the quality of services and continuity of transport flows. The introduction, deployment and promotion of the development of innovative technologies will have a direct impact on sustainable economic development through the use of supplies of materials and equipment for the site from different regions of the country.

Also, new jobs will be created during the implementation process and in the future operation of the project. In the context of this indicator, the project has an extremely important social importance in relation to the opening of more than 2600 jobs by construction companies and suppliers from various manufacturers in the country during construction. In addition, the preparation and future operation of the sites will require opening of about 400 permanent jobs.

The planned activities will not have a negative impact on the components and factors of the environment, nor will they cause damage to the habitats of species in the protected areas of the European Natura 2000 network. Greenhouse gas emissions into the atmosphere are not expected as the activities are not related to generating such.

Due to its pronounced environmental nature, the project helps in reduction of the traffic and the number of operating cars, and hence reduces the air pollution over the city. All this will have a direct impact and contribution to Europe's green transition.

12 Does the project contribute to the implementation of the goals of the National Development Programme BULGARIA 2030? Please describe.

The project directly contributes to the achievement of National Priority 5 "Clean Air and Biodiversity" under Development Axis 2 "Green and Sustainable Bulgaria" and National Priority 5 "Transport Connectivity" under Development Axis 3 "Connected and Integrated Bulgaria" of the **National Development Programme BULGARIA 2030**

With regard to National Priority 5 "Clean Air and Biodiversity", the project will contribute to the main goal of environmental policy to improve air quality and in particular to reduce the concentration of fine particulate matter (PM).

The implementation of the project contributes to the achievement of Goal 13 "Taking urgent action to combat climate change and its consequences", as well as certain aspects of Goal 8 "Stimulating stable, inclusive and sustainable economic growth, adequate and productive employment and decent labor for all" and Goal 11 "Transforming cities and towns into inclusive, safe, adaptable and sustainable places to live" under the UN Sustainable Development Goals.

The implementation of the project contributes to the implementation of the policy towards the cities, by continuing the development of the metro, as a sustainable system of public transport, aiming to ensure better and more sustainable public transport, thereby reducing the traffic of cars that are one of the main air pollutants in the city.

In this regard, in the National Priority 5 "Clean Air and Biodiversity" of the **National Development Programme BULGARIA 2030** it is clearly stated that *the construction of the metro in the capital city will continue, which will significantly ease traffic on the busiest sections of the city and will have a positive impact on air quality.*

With regard to National Priority 5 "Transport Connectivity", the project directly contributes to achieving the main goal of the policy to ensure better connectivity and accessibility of settlements in the country. The development of the metro network contributes to the improvement of the conditions for business and trade, while also contributing to the achievement of a higher level of safety in the transport system of the city. The project

contributes to the implementation of Goal 3 "Ensuring a healthy life and promoting the well-being of all at all ages" and Goal 11 "Transforming cities and towns into inclusive, safe, adaptable and sustainable places to live" of the UN Sustainable Development Goals.

The project directly contributes to achieving the goals set in Priority P7 - "Transport Connectivity" under Development Axis 3 "Connected and Integrated Bulgaria" of the **National Development Programme BULGARIA 2030**, by providing transport connectivity with fast and efficient public transport for transportation of large groups of people, connecting the rail public transport in the capital with the suburban railways. lines, and through them with the small and large settlements located in the region, the national railway. network and the airport. Through the buffer stations with parking facilities at the ends of the two sections there is provided a connection of the vehicles entering the city with a powerful high-speed public transport, which helps to reduce the number of cars entering the city. The project ensures the implementation of the goals of the National Programme for Improving the Living Conditions of the City Residents. It is planned to reduce congestion in the main directions and air pollution due to the reduction of congestion and the number of operating cars. The practice in the construction of the previous sections of the site shows that the residents of the city prefer to travel by metro instead of personal cars, in the presence of fast and convenient transport in the directions of its sections. These goals are also a priority for the Development Programme of the capital in the coming years, due to increasing the requirements for reducing harmful emissions into the air and improving living conditions in the city. This is especially important with the ever-increasing number of cars. In addition, the average speed of travel by public transport is expected to be increased mainly because of many times higher speed of travel by metro compared to ground transport. In areas where there is no fast public transport such as the metro, the average travel speeds at peak hours are extremely low - 10-12 km/h, and outside the peak - 16-18 km/h. Due to the historically formed street network with limited capacity and lack of possibilities for expansion, only the present project is able to help increasing the speed of travel by public transport, together with the reduction of traffic in the coming years. This, together with the reduction of the number of cars in operation and of the harmful emissions, helps to achieve the goals of the Development Program by reducing the harmful emissions and improving the living conditions in the city and the region.

13 Does the project contribute to the implementation of the goals and priorities set out in the Integrated National Plan in the field of Energy and Climate? If yes, please describe.

The **Integrated National Plan in the field of Energy and Climate (INPEC)** defines the main goals and measures for the implementation of national policies in the field of energy and climate, in the context of European legislation, principles and priorities for energy development. The first main objective of INPEC is

- ***stimulating low-carbon economic development.***

Item 1.2 Review of the current situation in the field of INPEC policies states the importance of taking measures in the Transport sector due to the fact that it is one of the largest emitters of greenhouse gases, recording constant growth, but largely neglected until recently in terms of its impact on climate change. In this regard, according to INPEC the main measures in

the sector are aimed at optimal balance in the use of the potential of different modes of transport and are divided into the following priority axes:

- reduction of emissions from transport;
- reduction of fuel consumption;
- diversification of transport.

Main effect of the project is to increase the number of trips by a sustainable, efficient and environmentally friendly transport such as the metro. Development of the metro network increases the overall efficiency of the transport system and public transport, which leads to a reduction in car traffic due to the transfer of passengers traveling by car to the metro. As a result of the reduced car traffic, the harmful emissions from the cars will be reduced and the quality of the atmosphere air in the city will be improved.

In regard to the above, through reduction of road traffic in the capital the project directly contributes to the achievement of the national decarbonisation targets as set out in 2.1 Decarbonization Dimension of the **Integrated National Plan in the field of Energy and Climate**.

The implementation of the project, by reducing the road traffic in the city will contribute to the implementation of the policies set out in Regulation (EU) No. 2018/842 on mandatory annual reductions of greenhouse gas emissions for Member States in the period 2021-2030, contributing to the actions in the field of climate, in implementation of the commitments under the Paris Agreement and amending Regulation (EU) No. 525/2013, sets national targets for sectors outside the ETS (building stock, agriculture, waste management and transport).

The project also contributes to the achievement of the national energy efficiency targets by 2030 set out in Item • *Increasing energy efficiency in the transport sector* in Section 3.2 Dimension of Energy Efficiency of the **Integrated National Plan in the field of Energy and Climate**.

The main measures through which Bulgaria seeks to improve energy efficiency in the sector are the following:

- a) Increasing the share of the electric public transport by
 - Improving the railway infrastructure;
 - Renewal of rolling stock of electric railway transport.

Main objectives of the policy for reducing greenhouse gas emissions in the Transport sector on the territory of Sofia Municipality are best achieved through the construction of environmentally friendly, fast and efficient off-road electric transport such as the metro. The use of electric buses in recent years has also helped to reduce greenhouse gas emissions, but they are involved in the whole ground traffic and thus they do not allow for the maximum effect achieved by off-road fast mass transport such as the metro.

The main measures by which Bulgaria seeks to improve energy efficiency in the sector include increasing the share of off-road electric public transport by expanding the existing urban railway infrastructure and providing convenient intermodal buffer connections with the national railway network, air transport and road transport entering the city.

Taking into account the priorities and measures set in INPEC, it can be concluded that the proposed project will contribute to their implementation in the field of energy efficiency of transport by providing fast and convenient ecological mass public transport.