

IDENTIFICATION OF PROJECTS AND THE PLANNING PROCESS



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ABBREVIATIONS

MCA	MULTICRITERIA ANALYSIS
NPV	NET PRESENT VALUE
TEN-T	TRANS-EUROPEAN TRANSPORT NETWORK
CBA	COST BENEFIT ANALYSIS
GDP	GROSS DOMESTIC PRODUCT
VAT	VALUE ADDED TAX
EU	EUROPEAN UNION
CEF	CONNECTING EUROPE FACILITY
IFI	INTERNATIONAL FINANCIAL INSTITUTIONS
NF	NATIONAL FUNDS
EIA	ENVIRONMENT IMPACT ASSESSMENT
OPRG	OPERATIONAL PROGRAMME REGIONS IN GROWTH
OPT	OPERATIONAL PROGRAMME TRANSPORT 2007-2013
OPTTI	OPERATIONAL PROGRAMME TRANSPORT AND TRANSPORT INFRASTRUCTURE 2014-2020
PPP	PUBLIC PRIVATE PARTNERSHIP

I. METHODOLOGY OF PROJECT IDENTIFICATION

1.1 OBJECTIVE AND STAGES

The aim of Activity 9 - *Identification of projects and the planning process* is to identify projects justified in terms of the objectives and measures of the Integrated Transport Strategy for the period until 2030.

The process of identifying projects for implementation under the Integrated Transport Strategy for the period until 2030 includes the following steps (Figure 1):

- Review and analysis of the projects set out in the strategy documents and programmes;
- Preparation of complete initial list of projects;
- Initial assessment and prioritization of projects from the complete list;
- Prepare a list of proposed projects (with prioritization), which are appropriate and realistic for implementation during the period until 2030;
- Prepare scenarios for the development of the transport system during the period until 2030;
- Evaluating and selecting the scenario for the development of the transport system during the period until 2030.

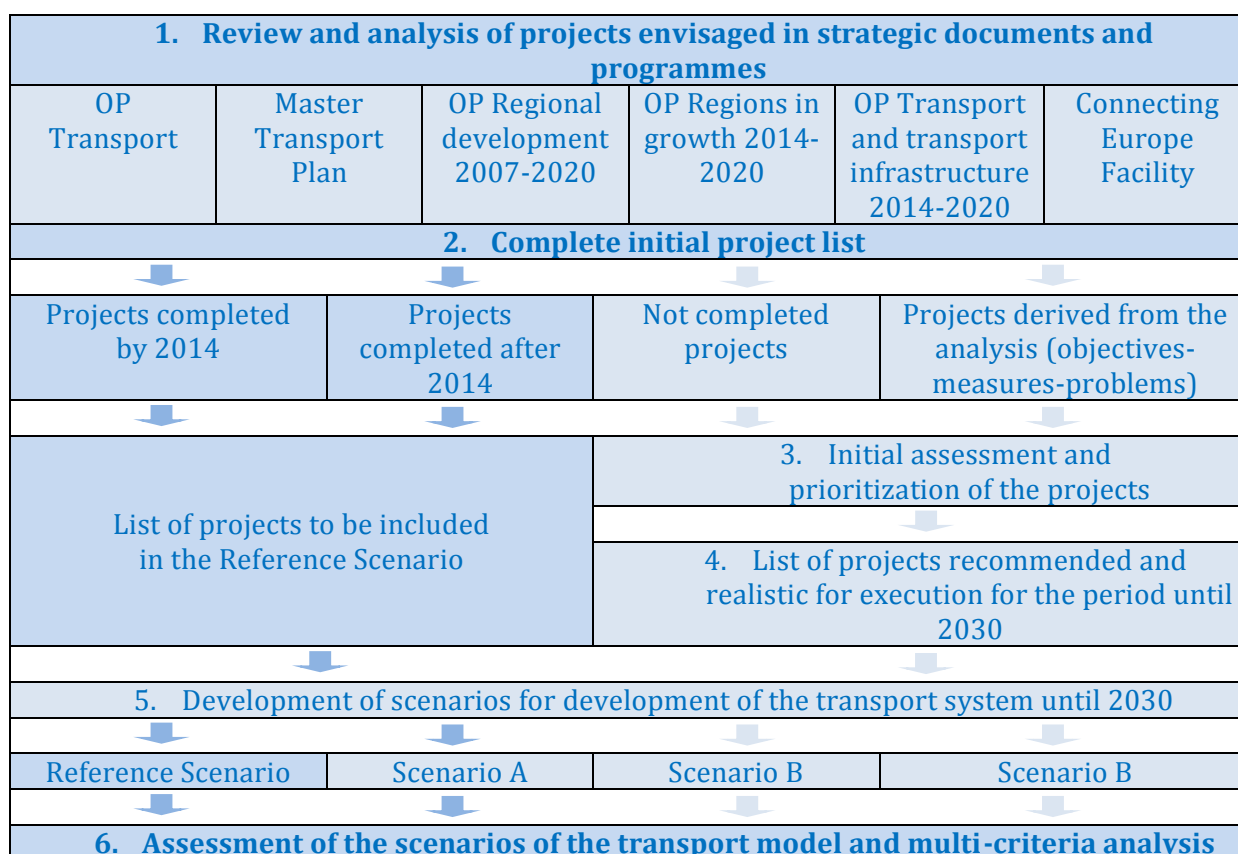


Figure 1-1 Process for identification of projects and scenarios for the development of the integrated transport system

1.2 COMPLETE INITIAL LIST OF PROJECTS

The preparation of complete initial list of projects is the first step in the process of project identification, which are appropriate for implementation during the programming period 2014 - 2020, and the indicative projects for the period beyond 2020 under the Strategy.

The complete list includes:

- Projects, planned for implementation in the strategic documents, but which have not been realized:
 - unrealized projects to be implemented during the programming period 2007 - 2013;
 - projects for which the preparation or execution has already began;
- New project proposals arising from the analysis of the transport sector and aimed at achieving the objectives and measures of the Integrated Transport Strategy for the period until 2030.

The complete list includes projects related to the development of railway, road, water and intermodal transport.

A review and analysis of the projects envisaged in the following documents and programs was done for the preparation of the initial list of projects:

- Master Transport Plan of Bulgaria;
- Operational Programme Transport (2007 - 2013);
- Operational Programme Regional Development 2007-2013
- Operational Programme Transport and Transport Infrastructure 2014 - 2020;
- Operational Programme Regions in Growth 2014-2020;
- The Connecting Europe Facility.

Implemented projects are divided into projects completed by 2014, inclusive, which is the base year for the development of the transport model and projects that have been completed after 2014, with the aim being that the second group will be included in the definition of the reference scenario for the development of the transport system.

Projects that are in the preparation phase, the implementation phase or that are not completed, are included the complete list of projects.

In the complete initial list are included new proposals resulting from the analysis of the transport sector and aimed at achieving the objectives and measures of the Integrated Transport Strategy for the period until 2030.

1.3 INITIAL ASSESSMENT OF PROJECTS

Projects of the complete list undergo initial assessment and grouping of the projects of the complete list to include these in scenarios for the development of the transport system.

During the initial assessment of the projects of the complete list are grouped and arranged by the following criteria:

- **Period of implementation:**
 - Projects from the previous programming period completed after the base year 2014;
 - Projects planned for implementation under OPTTI 2014 - 2020 and CEF; These projects could be completed by 2023. The programming period ends in 2020, but the payments follow the principle of reimbursement of eligible costs. They can be completed by 2022 (period T + 2) and in exceptional cases - until 2023.
 - Projects planned for implementation under national funding and/or government loans from IFI by 2022;
 - Projects planned for implementation after 2022.

- **Project maturity degree:**
 - Available conceptual design;
 - Finished technical design;
 - Finished EIA report;
 - Completed land acquisition;
 - Kilometers of TEN-T network.

- **Connection of the project with the TEN-T network:**
 - core TEN-T network;
 - comprehensive TEN-T network;
 - connections with the TEN-T network.

- **Provided funding:**
 - under OPTTI 2014 – 2020;
 - under CEM;
 - under OPRG 2014 – 2020.

- **Funding structure:**
 - VAT of investments is also financed as a deductible expense;
 - The beneficiary does not participate in the financing of the project;
 - The beneficiary participates with minimal project financing.

- **Reduction of external effects of transport activity:**
 - Development of intermodal transport;
 - Priority development of railway transport;
 - Construction of bypass roads around towns.

Based on the assessment projects are divided in three groups:

- **Projects planned for implementation under OPTTI 2014 – 2020 and CEM;**
- **Projects planned for implementation under national funding and/or government loans from IFI by 2022;**
- **Indicative projects for implementation after 2022 by 2030.**

The first group includes projects that can be defined as "realistic and mature" and there are identified potential funding sources.

The criteria for classifying a project as a realistic and mature are the following¹:

- There has been a feasibility study performed (including options analysis and conceptual design);
- It is justified from a socio-economic point from the point of view of the CBA;
- They have been completed, or are at an advanced stage of EIA (environment impact assessment) and of other assessments (e.g. habitats and Water Framework Directive (WFD)) are perfectly finished or at least in a sufficiently advanced (i.e. consultations with the community and other authorities completed) and it is expected to receive permit to construct with no outstanding issues in regard to the environment;
- State aid issues are being clarified;
- There is a detailed timetable for implementation, detailing the procurement procedures, licensing procedures, coordination procedures, acquisition procedures, etc.

¹ Jaspers Guidance Note, Methodological support to the Preparation of National and Regional Transport Plans and the related Ex-Ante-Conditionality to the 2014-2020 Programming Period

II. SCENARIO FOR DEVELOPMENT OF THE TRANSPORT SYSTEM

2.1 METHODOLOGY FOR SCENARIO DEFINITION

When developing scenarios, there was compliance with the objectives and technical requirements, specified in Regulation (EU) No. 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of trans-European transport network and repealing Decision No. 661/2010/EC in regard to the completion of the core and comprehensive TEN-T network in the time horizon from 2030 to 2050 on the territory of the Republic of Bulgaria, as well as the connectivity of nodes (ports, airports, border crossing points to neighboring countries; railway - road terminals) with the core and comprehensive network in compliance with the national concept of spatial development for the period 2013 - 2025.

Based on the criteria for grouping and sorting, a reference scenario and three scenarios of development (implementation of projects) have been defined.

REFERENCE SCENARIO

The reference scenario only includes projects that are being implemented at the moment and must be completed. These projects are justified and their implementation has started during the previous programming period. Nothing in addition to the completion of these projects is not envisaged to change in the transport system.

The three scenarios with development are Scenario A, Scenario B and Scenario C.

SCENARIO A

This scenario includes all mature projects (with available conceptual design; finished technical design; finished EIA report; ongoing or completed land acquisition; the project forms part of the core TEN-T network) that have ensured funding under OPTTI 2014 – 2020, OPRG 2014 – 2020 or CEF for this programming period. This group of projects is envisaged for completion during the programming period or at the latest until 2023 for the projects under OPTTI 2014 – 2020 and OPRG 2014 – 2020. The programming period ends in 2020, but the payments follow the principle of reimbursement of eligible costs. They can be completed by 31.12.2023 (period T + 3) for the projects under OPTTI 2014 – 2020 and OPRG 2014 – 2020. CEF projects currently have a payment period until 31.12.2020 but it is possible that at a later stage the extension thereof will be allowed, as an exception.

For the subsequent period there are projects included and planned for implementation under national funding and/or government loans from IFI by 2022 as well as projects planned for implementation after 2022 until 2030 for which the financing structure is a problem. These are mainly projects for which VAT on investments is recognized as an expense and the beneficiary does not participate in financing the project.

Here we have mainly projects which are realized on the core TEN-T network. These are projects that are on the comprehensive TEN-T network or form links to the TEN-T network are planned for the last period for implementation of the scenario, namely from 2022 to 2030.

This scenario also includes all projects included in the reference scenario.

This scenario would be most effective from a financial point of view.

SCENARIO B

This scenario includes all mature projects (with available conceptual design; finished technical design; finished EIA report; ongoing or completed land acquisition; the project forms part of the core TEN-T network) that have ensured funding under OPTTI 2014 – 2020, OPRG 2014 – 2020 or CEF for this programming period. This group of projects is envisaged for completion during the programming period or at the latest until 2023 for the projects under OPTTI 2014 – 2020 and OPRG 2014 – 2020. The programming period ends in 2020, but the payments follow the principle of reimbursement of eligible costs. They can be completed by 31.12.2023 (period T + 3) for the projects under OPTTI 2014 – 2020 and OPRG 2014 – 2020. CEF projects currently have a payment period until 31.12.2020 but it is possible that at a later stage the extension thereof will be allowed, as an exception.

For the subsequent period there are projects included and planned for implementation under national funding and/or government loans from IFI by 2022 as well as projects planned for implementation after 2022 until 2030 for which the greater importance is reducing external effects of transport activity. These are projects related to the development of intermodal transport, the priority development of railway transport and construction of bypass roads around the towns. In these projects typically benefits associated with reducing air pollution, reducing the impact on climate change and improving safety (reduced accidents, fatalities and injured after car accidents) are maximum. On the other hand, these are projects for which VAT on investments is not recognized as an expense and the beneficiary participates in financing the project. In the selection of such projects priority may be given to those with minimal participation of beneficiaries in the financing.

Here we have mainly projects which are realized on the core TEN-T network. These are projects that are on the comprehensive TEN-T network or form links to the TEN-T network are planned for the last period for implementation of the scenario, namely from 2022 to 2030.

The number of railway projects is increased, but some of them are located in the most recent period for implementation of the scenario (2022 - 2030).

This scenario also includes all projects included in the reference scenario.

This scenario would be the most efficient in economic terms and would have the greatest impact from an environmental perspective.

SCENARIO C

This scenario includes all projects forming part of the reference scenario.

This scenario includes all mature projects (with available conceptual design; finished technical design; finished EIA report; ongoing or completed land acquisition; the project forms part of the core TEN-T network) that have ensured funding under OPTTI 2014 – 2020, OPRG 2014 – 2020 or CEF for this programming period.

The scenario includes also all projects included in Scenario A and in Scenario C.

In addition, it includes projects located on the comprehensive TEN-T network and form links to the TEN-T network. These projects are planned for the last period for implementation of the scenario - from 2022 to 2030. This scenario includes all analyzed and adopted as a possible for realization projects. We can say that this is the scenario requiring maximum investments.

2.2 REFERENCE SCENARIO

Table 2-1 Reference scenario

<i>Reference scenario</i>							
№	Phase	Programme	Projects	Period of implementation		Value (w/o VAT) - BGN	TEN-T
				From	To		
PROJECTS FROM THE PREVIOUS PROGRAMME PERIOD COMPLETED AFTER THE 2014 BASE YEAR							
<i>Railway transport</i>							
1	Phase Construction works	OPT 2007 - 2013	Modernization of the Septemvri – Plovdiv railway section - part of the Trans-European Railway Network	2014	31.3.2017	269 050 032	TEN-T 1
2	Phase Construction works	OPT 2007 - 2013	Reconstruction and electrification of the Plovdiv – Svilengrad railway line on corridors IV and IX, Phase 2: Parvomai-Svilengrad section	2014	31.12.2016	358 643 170	TEN-T 1
3	Phase Construction works	OPT 2007 - 2013	Rehabilitation of railway infrastructure in sections of the Plovdiv - Burgas railway line, Phase 1	2014	31.12.2016	385 624 679	TEN-T 1
4	Phase Construction works	OPT 2007 - 2013	Construction of intermodal terminal in the South-Central Planning Region in Bulgaria – Plovdiv	2014	2017	12 316 771	TEN-T 1
<i>Road transport</i>							
5	Phase Completed	OPT 2007 - 2013	Struma Motorway Lot 2 (Dupnitsa - Blagoevgrad)	2014	2015	358 722 000	TEN-T 1
6	Phase Completed	OPT 2007 - 2013	Struma Motorway Lot 4 (Sandanski - Kulata BCCP)	2014	2015	67 176 000	TEN-T 1
7	Phase Completed	OPT 2007 - 2013	By-pass road of the town of Montana - Road I-1 (E79)	2014	2015	46 572 618	TEN-T 1
8	Phase Completed	OPT 2007 - 2013	Sofia Northern Speed Road	2014	2016	240 956 836	TEN-T 1
9	Phase Completed	OPT 2007 - 2013	Martisa Motorway Lot 1 - Orizovo-Dimitrovgrad section	2014	2015	133 129 678	TEN-T 1
10	Phase Completed	OPT 2007 - 2013	Martisa Motorway Lot 2 - section "Dimitrovgrad-Harmanli"	2014	2015	122 137 000	TEN-T 1
OPTTI 2014 - 2020; CEF							
<i>Railway transport</i>							

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11	Phase Construction works	OPTTI 2014 - 2020	Modernization of the Septemvri – Plovdiv railway section: part of the Trans-European Railway Network - construction of four road overpasses	19.8.2016	2017	19 998 000	TEN-T 1
12	Phase Construction works	OPTTI 2014 - 2020	Rehabilitation of railway infrastructure in sections of the Plovdiv - Burgas railway line – rehabilitation, repairs and modernization of power substation Burgas, Karnobat and Yambol	13.8.2015	2017	17 782 623	TEN-T 1

The budget for the reference scenario is shown on Fig. 2-1, Fig. 2-2 and in Table 2-2. It is presented by financing sources, by years and as total expenses for each current year (cumulative).

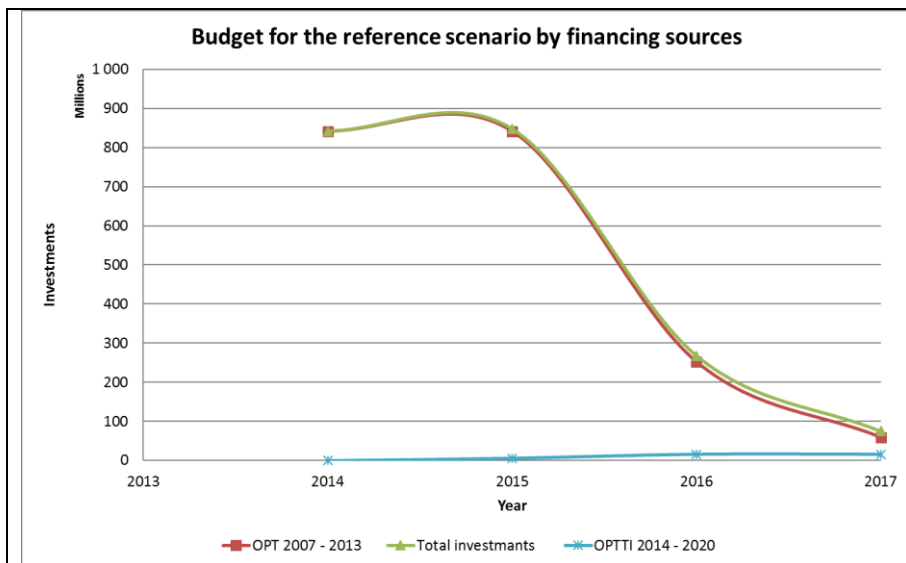


Figure 2-1 Budget for the reference scenario by financing sources

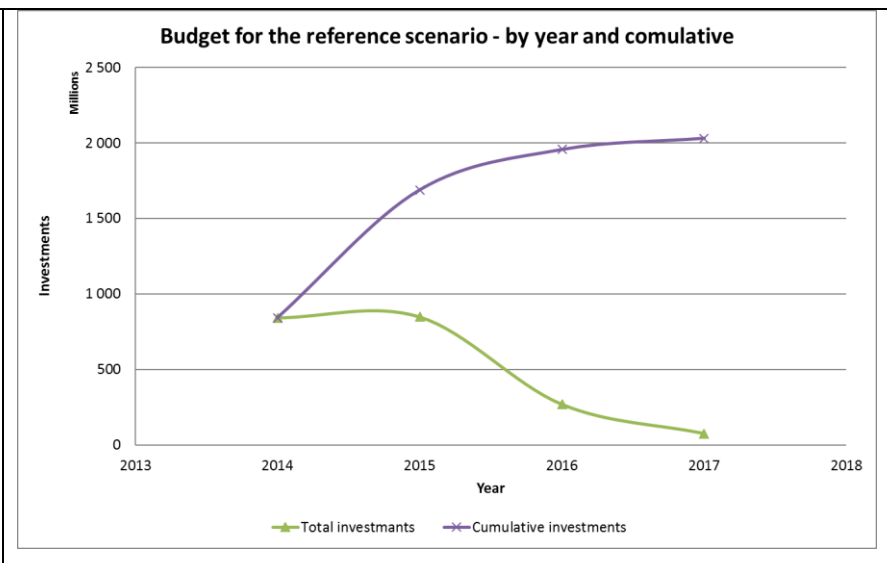


Figure 2-2 Budget for the reference scenario

Table 2-2 Budget for the reference scenario in BGN

	2014	2015	2016	2017
OPT 2007 - 2013	841 872 304	841 872 304	252 017 101	58 567 074
OPTTI 2014 - 2020	0	5 927 541	15 926 541	15 926 541
Total investments	841 872 304	847 799 845	267 943 642	74 493 615
Cumulative investments	841 872 304	1 689 672 150	1 957 615 792	2 032 109 407

2.3 SCENARIO A

Table 2-3 Scenario A

SCENARIO A							
№	PHASE	PROGRAMME	PROJECTS	PERIOD OF IMPLEMENTATION		VALUE (W/O VAT) - BGN	TEN-T
				FROM	TO		
PROJECTS FROM THE PREVIOUS PROGRAMME PERIOD COMPLETED AFTER THE 2014 BASE YEAR							
RAILWAY TRANSPORT							
1	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	MODERNIZATION OF THE SEPTEMVRI – PLOVDIV RAILWAY SECTION - PART OF THE TRANS-EUROPEAN RAILWAY NETWORK	2014	31.3.2017	269 050 032	TEN-T 1
2	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	RECONSTRUCTION AND ELECTRIFICATION OF THE PLOVDIV –SVILENGRAD RAILWAY LINE ON CORRIDORS IV AND IX, PHASE 2: PARVOMAI-SVILENGRAD SECTION	2014	31.12.2016	358 643 170	TEN-T 1
3	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	REHABILITATION OF RAILWAY INFRASTRUCTURE IN SECTIONS OF THE PLOVDIV - BURGAS RAILWAY LINE, PHASE 1	2014	31.12.2016	385 624 679	TEN-T 1
4	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	CONSTRUCTION OF INTERMODAL TERMINAL IN THE SOUTH CENTRAL PLANNING REGION IN BULGARIA - PLOVDIV	2014	2017	12 316 771	TEN-T 1
ROAD TRANSPORT							
5	PHASE COMPLETED	OPT 2007 - 2013	STRUMA MOTORWAY LOT 2 (DUPNITSA - BLAGOEVGRAD)	2014	2015	358 722 000	TEN-T 1
6	PHASE COMPLETED	OPT 2007 - 2013	STRUMA MOTORWAY LOT 4 (SANDANSKI - KULATA BCCP)	2014	2015	67 176 000	TEN-T 1
7	PHASE COMPLETED	OPT 2007 - 2013	BY-PASS ROAD OF THE TOWN OF MONTANA - ROAD I-1 (E79)	2014	2015	46 572 618	TEN-T 1
8	PHASE COMPLETED	OPT 2007 - 2013	SOFIA NORTHERN SPEED ROAD	2014	2016	240 956 836	TEN-T 1
9	PHASE COMPLETED	OPT 2007 - 2013	MARTISA MOTORWAY LOT 1 - ORIZOVO-DIMITROVGRAD SECTION	2014	2015	133 129 678	TEN-T 1
10	PHASE COMPLETED	OPT 2007 - 2013	MARTISA MOTORWAY LOT 2 - SECTION "DIMITROVGRAD-HARMANLI	2014	2015	122 137 000	TEN-T 1
OPTTI 2014 - 2020; CEF							
RAILWAY TRANSPORT							

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11	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	MODERNIZATION OF THE SEPTEMVRI – PLOVDIV RAILWAY SECTION: PART OF THE TRANS-EUROPEAN RAILWAY NETWORK - CONSTRUCTION OF FOUR ROAD OVERPASSES	19.8.2016	2017	19 998 000	TEN-T 1
12	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	REHABILITATION OF RAILWAY INFRASTRUCTURE IN SECTIONS OF THE PLOVDIV - BURGAS RAILWAY LINE – REHABILITATION, REPAIRS AND MODERNIZATION OF POWER SUBSTATION BURGAS, KARNOBAT AND YAMBOL	13.8.2015	2017	17 782 623	TEN-T 1
13	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	REHABILITATION OF THE PLOVDIV – BURGAS RAILWAY SECTION, PHASE 2. THE PROJECT INCLUDES ALSO IMPLEMENTATION OF ETCS FOR THE WHOLE RAILWAY LINE FROM PLOVDIV TO BURGAS WITH TOTAL LENGTH OF 293 KM.	2016	2022	675 092 693	TEN-T 1
14	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	MODERNIZATION OF THE SOFIA-PLOVDIV RAILWAY LINE IN THE SECTIONS OF ELIN PELIN - KOSTENETS	2016	2023	959 236 416	TEN-T 1
15	PHASE DESIGN AND CONSTRUCTION WORKS	CEF	MODERNIZATION OF RAILWAY SECTION SOFIA – ELIN PELIN	2015	2020	132 966 320	TEN-T 1
16	PHASE CONSTRUCTION WORKS	CEF	MODERNIZATION OF RAILWAY SECTION KOSTENETS - SEPTEMVRI	2016	2022	348 641 613	TEN-T 1
17	PHASE CONSTRUCTION WORKS	CEF	DEVELOPMENT OF THE SOFIA RAILWAY JUNCTION: THE RAILWAY SECTION SOFIA - VOLUYAK	2016	2020	203 819 092	TEN-T 1
18	PHASE CONSTRUCTION WORKS	CEF	DEVELOPMENT OF THE PLOVDIV RAILWAY JUNCTION	2017	2020	224 870 977	TEN-T 1
19	PHASE IMPLEMENTATION	OPTTI 2014 - 2020	DESIGN AND IMPLEMENTATION OF MANAGEMENT AND CONTROL SYSTEMS IN RAILWAY TRANSPORT	2017	2021	107 200 000	TEN-T 2
20	PHASE PREPARATION AND CONSTRUCTION WORKS	OPTTI 2014 - 2020	RECONSTRUCTION OF KEY STATION COMPLEXES FOR THE DIRECTIONS WHERE RAILWAY INFRASTRUCTURE PROJECTS ARE IMPLEMENTED	2017	2020	26 000 000	TEN-T 1
RAILWAY AND INTERMODAL TRANSPORT							
21	PHASE IMPLEMENTATION	NF OR LOANS FROM IFI, PPP	CONSTRUCTION OF INTERMODAL TERMINAL IN THE NORTHERN CENTRAL PLANNING REGION IN BULGARIA - RUSE	2018	2020	43 055 008	TEN-T 1
METROPOLITEN							
22	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	SOFIA METRO EXPANSION PROJECT: LINE 3, PHASE I – VLADIMIR VAZOV BLVD. – CSP – JITNITSA STREET SECTION	19.01.2016	31.12.2020	1 017 219 360	(NATIONAL SIGNIFICANCE)

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23	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	SOFIA METRO EXPANSION PROJECT: LINE 3, PHASE II - JITNITSIA STREET - OVCHA KUPEL SECTION - SOFIA RING ROAD	2017	2019	160 000 000	(NATIONAL SIGNIFICANCE)
24	PHASE COMPLETED	OPTTI 2014 - 2020	EXPANSION PROJECT FOR LINE 2 OF THE SOFIA METRO, SECTION JAMES BAUCHER METRO STATION TO VITOSHA METRO STATION - PHASE 2	2014	20.7.2016	26 432 856	(NATIONAL SIGNIFICANCE)
25	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	EXPANSION OF THE SOFIA METRO LINE 3, PHASE III	2018	2022	140 000 000	(NATIONAL SIGNIFICANCE)
ROAD TRANSPORT							
26	PHASE DESIGN AND CONSTRUCTION WORKS	OPTTI 2014 - 2020	CONSTRUCTION OF THE STRUMA MOTORWAY LOT 3 - BLAGOEVGRAD - SANDANSKI PROJECT 1 - LOT 3.1 FROM BLAGOEVGRAD TO KRUPNIK, LOT 3.3 FROM KRESNA TO SANDANSKI AND THE JELEZNITSIA TUNNEL	30.12.2015	30.12.2020	739 245 318	TEN-T 1
27	PHASE DESIGN AND CONSTRUCTION WORKS	OPTTI 2014 - 2020	CONSTRUCTION OF THE STRUMA MOTORWAY LOT 3 - BLAGOEVGRAD - SANDANSKI PROJECT 2 - FOR LOT 3.2 FROM KRUPNIK TO KRESNA	2017	2022	261 158 748	TEN-T 1
28	PHASE COMPLETED	OPTTI 2014 - 2020	CONSTRUCTION OF THE KALOTINA-SOFIA MOTORWAY - PHASE 2 OF LOT 1 SOFIA RING ROAD WEST SECTION, SECTION 2 - ROAD II-18 SOFIA RING ROAD	21.10.2015	13.9.2016	115 408 769	TEN-T 1
29	PHASE PREPARATION	OPTTI 2014 - 2020	PREPARATION OF PROJECT: ROAD I-1 /E-79/ VIDIN - MONTANA - VRATSA" - SPEED ROAD	1.1.2020	31.12.2020	2 774 937	TEN-T 1
30	PHASE PREPARATION	CEF	SPEED ROAD ROUTE: RUSE - BYALA - VELIKO TARNOVO - GABROVO - HASKOVO - MARITSA MOTORWAY	1.1.2020	31.12.2020	3 139 131	TEN-T 1
31	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD II-57 STARA ZAGORA-RADNEVO (LOT 1)	1.1.2020	31.12.2020	28 755 007	TEN-T 3
32	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION KOSTINBROD - BERKOVITSA (LOT 2 ROAD II-81 KOSTINBROD - BUCHIN PROHOD AND LOT 3 ROAD II-81 BUCHIN PROHOD- BERKOVITSA)	1.1.2020	31.12.2020	27 348 581	TEN-T 3
33	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION VARNA - KARDAM (LOT 4 ROAD II-29 VARNA - DOBRICH AND LOT 5 ROAD II-29 DOBRICH - KARDAM)	1.1.2020	31.12.2020	23 506 185	TEN-T 3
34	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD II-86 PLOVDIV - ASENOVGRAD (LOT 6)	1.1.2020	31.12.2020	25 392 217	TEN-T 3

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35	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION PLEVEN - GABROVO (LOT 7 ROAD II-35 PLEVEN-LOVECH, LOT 11 ROAD II-44 SEVLIEVO - DRAGANOVTSI AND LOT 12 ROAD II-44 DRAGANOVTSI - GABROVO)	1.1.2020	31.12.2020	32 390 729	TEN-T 3
36	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION STARO ORYAHOVO - PROVADIYA (LOT 8 ROAD III-904 STARO ORYAHOVO - DOLNI CHIFLIK - GROZDYOVO AND LOT 9 ROAD III-904 GROZDYOVO - PROVADIYA)	1.1.2020	31.12.2020	18 580 438	TEN-T 3
37	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROADS WITH TOURISTIC SIGNIFICANCE (LOT 10 ROAD III-1002 VRATSA - LEDENIKA CAVE AND LOT 15 ROAD III-107-RILA - RILA MONASTERY)	1.1.2020	31.12.2020	28 974 843	TEN-T 3
38	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION TARGOVISHTE - TUTRAKAN (LOT 13 - ROAD II-49 TARGOVISHTE - RAZGRAD AND LOT 14 ROAD II-49 KUBRAT - TUTRAKAN)	1.1.2020	31.12.2020	20 710 924	TEN-T 3
MARITIME TRANSPORT							
39	PHASE EXECUTION	OPTTI 2014 - 2020	FEASIBILITY STUDIES FOR PORT COMMUNITY SYSTEM (PCS) FOR THE BULGARIAN PORTS	1.1.2020	31.12.2020	10 300 000	TEN-T 1
40	PHASE PREPARATION AND EXECUTION	CEF	PROJECT FAIRWAY DANUBE - GENERAL INFORMATION	1.7.2015	31.12.2020	45 766 000	TEN-T 1
41	PHASE PREPARATION AND EXECUTION	CEF	PROJECT PORT BULGARIA WEST - SAFE AND COMPETITIVE MULTIMODAL PORT	1.7.2017	31.12.2020	29 337 450	TEN-T 1
PROJECTS PLANNED FOR IMPLEMENTATION BY NATIONAL FINANCING AND/OR STATE LOANS FROM IFI UNTIL 2022							
RAILWAY TRANSPORT							
42	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	RESTORATION OF THE DESIGN PARAMETERS OF THE RUSE - VARNA RAILWAY LINE	2018	31.12.2022	749 082 890	TEN-T 2
43	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE KARNOBAT - SINDEL RAILWAY LINE (CONSTRUCTION OF THE LOZAREVO - PRILEP RAILWAY TUNNEL) AND OF SECTIONS OF THE LINE	2018	31.12.2022	338 400 000	TEN-T 3
ROAD TRANSPORT							
44	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	CONSTRUCTION OF THE KALOTINA-SOFIA MOTORWAY - ROAD I-8 KALOTINA - SOFIA RING ROAD	2019	2021	150 000 000	TEN-T 1

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45	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SPEED ROAD ROAD I-1 /E-79/ VIDIN – MONTANA – VRATSA" - SPEED ROAD	2018	2021	864 292 874	TEN-T 1
46	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SPEED ROAD RILA SPEED ROAD, ROUTE KIUSTENDIL - DUPNITSA - SAMOKOV – BOGORODITSA ROAD JUNCTION – TRAKIA MOTORWAY/HEMUS MOTORWAY	2019	2022	812 400 489	TEN-T 2
47	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SPEED ROAD ROUTE: RUSE – BYALA – VELIKO TARNOVO – GABROVO – HASKOVO – MARITSA MOTORWAY	2017	2022	1 497 662 821	TEN-T 1
48	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	REHABILITATION OF THE SECTION FROM THE MARITSA MOTORWAY (HASKOVO) – KARDJALI – BCCP MAKAZA	2019	2020	91 338 632	TEN-T 2
49	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	HEMUS MOTORWAY FROM YABLANITSA TO BELOKOPITOVO (SECTIONS FROM 1 TO 7) (SECTION 1 - YABLANITSA-ROAD II-35 WILL BE FINANCED UNDER OPTTI 2014-2020, IF POSSIBLE) AND BELOKOPITOVO - SHUMEN	2017	2022	2 658 152 061	(NATIONAL SIGNIFICANCE)
PROJECTS PLANNED FOR IMPLEMENTATION AFTER 2022							
RAILWAY TRANSPORT							
50	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE SOFIA – PERNIK RAILWAY LINE	2023	2026	400 000 000	TEN-T 1
51	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	DEVELOPMENT OF THE SOFIA RAILWAY JUNCTION (WITHOUT THE SOFIA – VOLUYAK SECTION)	2022	2027	419 625 303	TEN-T 1
ROAD TRANSPORT							
52	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	ORYAHOVO-BEKET BRIDGE /ON THE DANUBE RIVER/	2029	2034	357 012 582	TEN-T 1
53	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SILISTRA-CALARASI BRIDGE /ON THE DANUBE RIVER/	2030	2034	267 759 437	TEN-T 1
54	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	NIKOPOL-TURNU-MAGURELE BRIDGE /ON THE DANUBE RIVER/	2029	2033	357 012 582	TEN-T 1
55	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SECOND BRIDGE AT RUSE / ON THE DANUBE RIVER/	2029	2033	267 759 437	TEN-T 1

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Table 2-4 Budget for scenario A in BGN

	2 014	2 015	2 016	2 017	2 018	2 019	2 020
OPT 2007 - 2013	841 872 304	841 872 304	252 017 101	58 567 074	0	0	0
OPTTI 2014 - 2020	8 810 952	161 027 800	406 604 120	789 006 997	831 196 331	831 196 331	525 966 427
OPRG 2014 - 2020	0	0	0	0	0	0	205 658 925
CEF	0	14 275 983	65 168 124	191 267 767	258 729 060	258 729 060	120 183 019
NF, PPP and IFI loans	0	0	0	692 635 814	1 184 242 920	1 476 228 637	1 476 228 637
Total investment	850 683 256	1 017 176 087	723 789 344	1 731 477 652	2 274 168 310	2 566 154 028	2 328 037 008
Cumulative investment	850 683 256	1 867 859 344	2 591 648 688	4 323 126 340	6 597 294 650	9 163 448 678	11 491 485 686
Total investment - only OP	850 683 256	1 017 176 087	723 789 344	1 038 841 838	1 089 925 391	1 089 925 391	851 808 371
Cumulative investment	850 683 256	1 867 859 344	2 591 648 688	3 630 490 526	4 720 415 917	5 810 341 307	6 662 149 678
	2 021	2 022	2 023	2 024	2 025	2 026	2 027
OPT 2007 - 2013	0	0	0	0	0	0	0
OPTTI 2014 - 2020	332 322 970	203 755 972	47 961 821	0	0	0	0
OPRG 2014 - 2020	0	0	0	0	0	0	0
CEF	62 755 490	17 432 081	0	0	0	0	0
NF, PPP and IFI loans	1 411 184 567	1 005 826 731	163 925 061	223 925 061	250 701 004	154 047 997	72 085 467
Total investment	1 806 263 027	1 227 014 783	211 886 881	223 925 061	250 701 004	154 047 997	72 085 467
Cumulative investment	13 297 748 713	14 524 763 496	14 736 650 377	14 960 575 438	15 211 276 442	15 365 324 439	15 437 409 906
Total investment - only OP	395 078 460	221 188 052	47 961 821				
Cumulative investment	7 057 228 138	7 278 416 191	7 326 378 012				
	2 028	2 029	2 030	2 031	2 032	2 033	2 034
OPT 2007 - 2013	0	0	0	0	0	0	0
OPTTI 2014 - 2020	0	0	0	0	0	0	0
OPRG 2014 - 2020	0	0	0	0	0	0	0
CEF	0	0	0	0	0	0	0
NF, PPP and IFI loans	30 122 937	161 027 550	214 579 437	214 579 437	214 579 437	214 579 437	113 053 984
Total investment	30 122 937	161 027 550	214 579 437	214 579 437	214 579 437	214 579 437	113 053 984
Cumulative investment	15 467 532 843	15 628 560 393	15 843 139 830	16 057 719 268	16 272 298 705	16 486 878 142	16 599 932 126
Total investment - only OP							
Cumulative investment							

The budget for Scenario A is shown on Fig. 2-3, Fig. 2-4, Fig. 2-5, Fig. 2-6, Fig. 2-7 and in Table 2-4. It is presented by financing sources, by years and as total expenses for each current year (cumulative). It also shows a budget including only of the financing from the operational programmes and CEF (Fig. 2-5, Fig. 2-6). Fig.2-7 of the budget is shown as investments divided into periods.

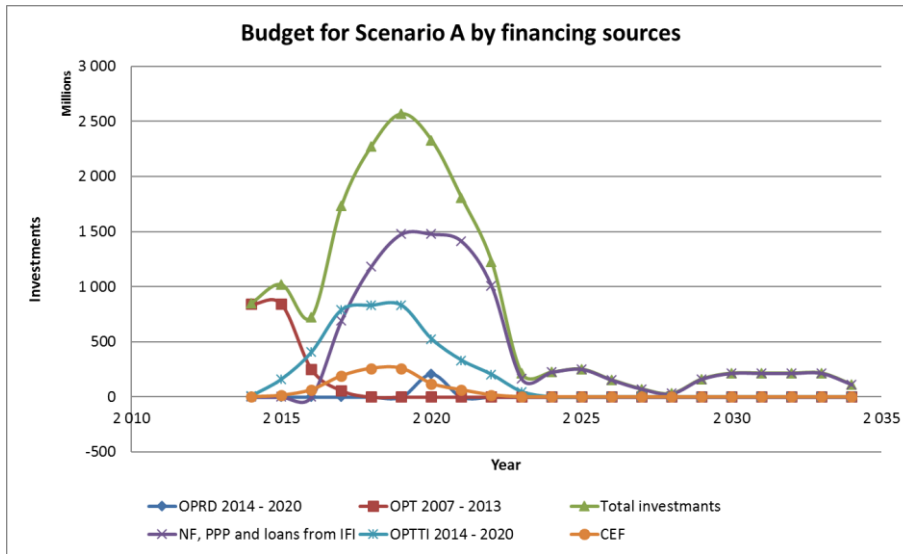


Figure 2-3 Budget for Scenario A by financing sources

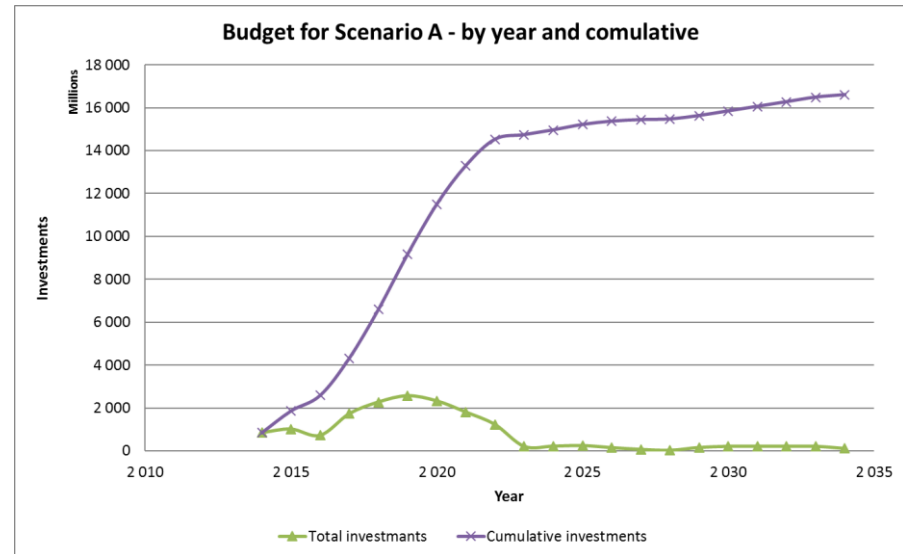


Figure 2-4 Budget for Scenario A

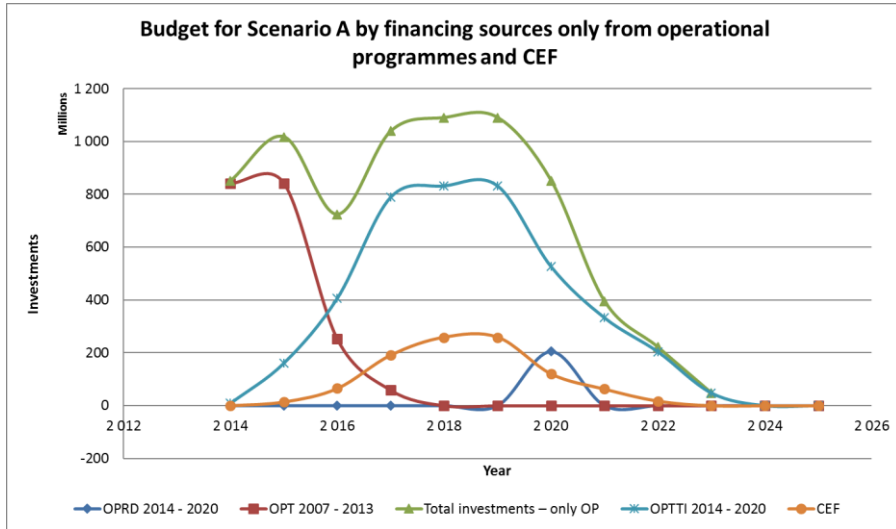


Figure 2-5 Budget for Scenario A by financing sources only from operational programmes and CEF

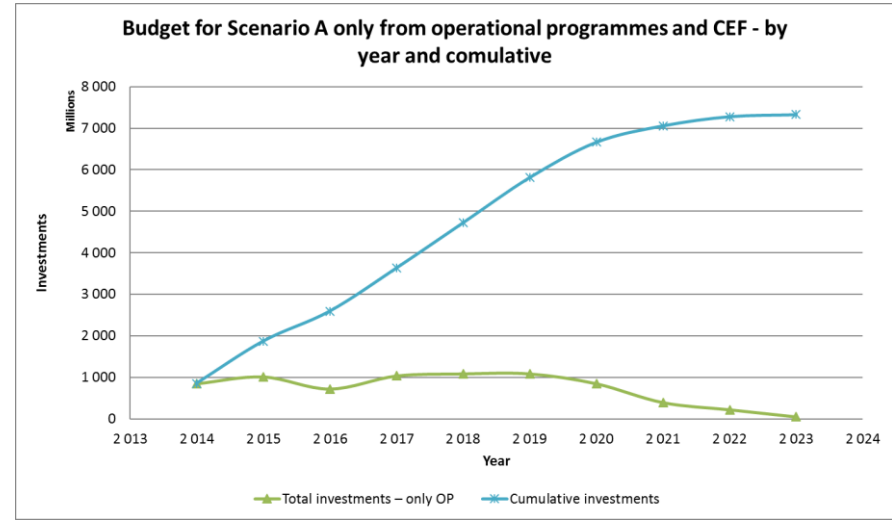


Figure 2-6 Budget for Scenario A only from operational programmes and CEF

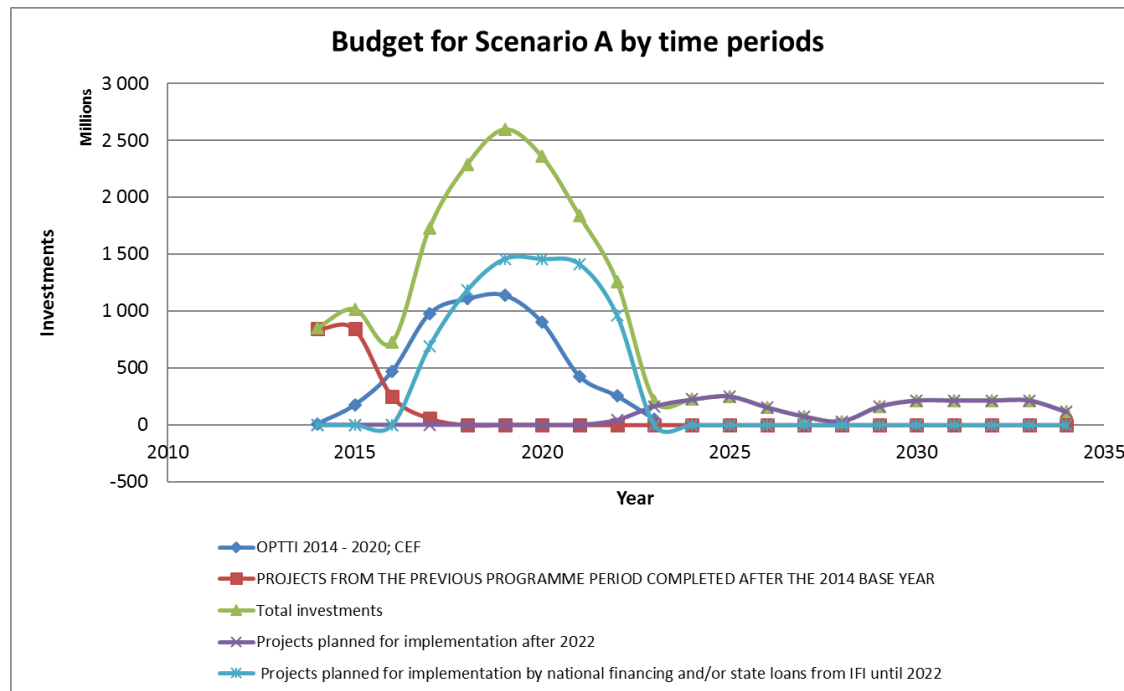


Figure 2-7 Budget for Scenario A by time periods

2.4 SCENARIO B

Table 2-5 Scenario B

SCENARIO B							
№	PHASE	PROGRAMME	PROJECTS	PERIOD OF IMPLEMENTATION		VALUE (W/O VAT) - BGN	TEN-T
				FROM	TO		
PROJECTS FROM THE PREVIOUS PROGRAMME PERIOD COMPLETED AFTER THE 2014 BASE YEAR							
<i>RAILWAY RANSPORT</i>							
1	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	MODERNIZATION OF THE SEPTEMVRI – PLOVDIV RAILWAY SECTION - PART OF THE TRANS-EUROPEAN RAILWAY NETWORK	2014	31.3.2017	269 050 032	TEN-T 1
2	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	RECONSTRUCTION AND ELECTRIFICATION OF THE PLOVDIV –SVILENGRAD RAILWAY LINE ON CORRIDORS IV AND IX, PHASE 2: PARVOMAI-SVILENGRAD SECTION	2014	31.12.2016	358 643 170	TEN-T 1
3	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	REHABILITATION OF RAILWAY INFRASTRUCTURE IN SECTIONS OF THE PLOVDIV - BURGAS RAILWAY LINE, PHASE 1	2014	31.12.2016	385 624 679	TEN-T 1
4	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	CONSTRUCTION OF INTERMODAL TERMINAL IN THE SOUTH CENTRAL PLANNING REGION IN BULGARIA – PLOVDIV	2014	2017	12 316 771	TEN-T 1
<i>ROAD TRANSPORT</i>							
5	PHASE COMPLETED	OPT 2007 - 2013	STRUMA MOTORWAY LOT 2 (DUPNITSA - BLAGOEVGRAD)	2014	2015	358 722 000	TEN-T 1
6	PHASE COMPLETED	OPT 2007 - 2013	STRUMA MOTORWAY LOT 4 (SANDANSKI - KULATA BCCP)	2014	2015	67 176 000	TEN-T 1
7	PHASE COMPLETED	OPT 2007 - 2013	BY-PASS ROAD OF THE TOWN OF MONTANA - ROAD I-1 (E79)	2014	2015	46 572 618	TEN-T 1
8	PHASE COMPLETED	OPT 2007 - 2013	SOFIA NORTHERN SPEED ROAD	2014	2016	240 956 836	TEN-T 1
9	PHASE COMPLETED	OPT 2007 - 2013	MARTISA MOTORWAY LOT 1 - ORIZOVO-DIMITROVGRAD SECTION	2014	2015	133 129 678	TEN-T 1
10	PHASE COMPLETED	OPT 2007 - 2013	MARTISA MOTORWAY LOT 2 - SECTION "DIMITROVGRAD-HARMANLI	2014	2015	122 137 000	TEN-T 1
OPTTI 2014 - 2020; CEF							
<i>RAILWAY RANSPORT</i>							
11	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	MODERNIZATION OF THE SEPTEMVRI – PLOVDIV RAILWAY SECTION: PART OF THE TRANS-EUROPEAN RAILWAY NETWORK - CONSTRUCTION OF FOUR ROAD OVERPASSES	19.8.2016	2017	19 998 000	TEN-T 1

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12	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	REHABILITATION OF RAILWAY INFRASTRUCTURE IN SECTIONS OF THE PLOVDIV - BURGAS RAILWAY LINE – REHABILITATION, REPAIRS AND MODERNIZATION OF POWER SUBSTATION BURGAS, KARNOBAT AND YAMBOL	13.8.2015	2017	17 782 623	TEN-T 1
13	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	REHABILITATION OF THE PLOVDIV – BURGAS RAILWAY SECTION, PHASE 2. THE PROJECT INCLUDES ALSO IMPLEMENTATION OF ETCS FOR THE WHOLE RAILWAY LINE FROM PLOVDIV TO BURGAS WITH TOTAL LENGTH OF 293 KM.	2016	2022	675 092 693	TEN-T 1
14	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	MODERNIZATION OF THE SOFIA-PLOVDIV RAILWAY LINE IN THE SECTIONS OF ELIN PELIN - KOSTENETS	2016	2023	959 236 416	TEN-T 1
15	PHASE DESIGN AND CONSTRUCTION WORKS	CEF	MODERNIZATION OF RAILWAY SECTION SOFIA – ELIN PELIN	2015	2020	132 966 320	TEN-T 1
16	PHASE CONSTRUCTION WORKS	CEF	MODERNIZATION OF RAILWAY SECTION KOSTENETS - SEPTEMVRI	2016	2022	348 641 613	TEN-T 1
17	PHASE CONSTRUCTION WORKS	CEF	DEVELOPMENT OF THE SOFIA RAILWAY JUNCTION: THE RAILWAY SECTION SOFIA - VOLUYAK	2016	2020	203 819 092	TEN-T 1
18	PHASE CONSTRUCTION WORKS	CEF	DEVELOPMENT OF THE PLOVDIV RAILWAY JUNCTION	2017	2020	224 870 977	TEN-T 1
19	PHASE PREPARATION AND CONSTRUCTION WORKS	OPTTI 2014 - 2020	RECONSTRUCTION OF KEY STATION COMPLEXES FOR THE DIRECTIONS WHERE RAILWAY INFRASTRUCTURE PROJECTS ARE IMPLEMENTED	2017	2020	26 000 000	TEN-T 1
20	PHASE IMPLEMENTATION	OPTTI 2014 - 2020	DESIGN AND IMPLEMENTATION OF MANAGEMENT AND CONTROL SYSTEMS IN RAILWAY TRANSPORT	2017	2021	107 200 000	TEN-T 2
21	PHASE PREPARATION	OPTTI 2014 - 2020	TECHNICAL ASSISTANCE FOR THE MODERNIZATION OF THE RAILWAY LINE SOFIA - PERNIK - RADOMIR - GUESHEVO - THE BORDER WITH MACEDONIA	2016	2018	26 099 225	TEN-T 1
22	PHASE PREPARATION	OPTTI 2014 - 2020	TECHNICAL ASSISTANCE FOR THE PREPARATION OF PROJECT MODERNIZATION OF RAILWAY LINE SOFIA - BORDER WITH THE REPUBLIC OF SERBIA	2016	2018	3 600 000	TEN-T 1

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23	PHASE PREPARATION	OPTTI 2014 - 2020	TECHNICAL ASSISTANCE FOR SURVEY OF THE RUSE - TURKISH BORDER RAILWAY DIRECTION	2017	2019	3 000 000	TEN-T 1
24	PHASE IMPLEMENTATION	OPTTI 2014 - 2020	ANALYSIS AND UPDATE OF THE STRATEGY FOR INTEGRATION OF THE BULGARIAN RAILWAY INFRASTRUCTURE IN THE EUROPEAN INTERMODAL TRANSPORT NETWORK	2018	2019	1 050 000	(NATIONAL SIGNIFICANCE)
RAILWAY AND INTERMODAL TRANSPORT							
25	PHASE IMPLEMENTATION	NF OR LOANS FROM IFI, PPP	CONSTRUCTION OF INTERMODAL TERMINAL IN THE NORTHERN CENTRAL PLANNING REGION IN BULGARIA - RUSE	2018	2020	43 055 008	TEN-T 1
METROPOLITEN							
26	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	SOFIA METRO EXPANSION PROJECT: LINE 3, PHASE I - VLADIMIR VAZOV BLVD. - CSP - JITNITSA STREET SECTION	19.01.2016	31.12.2020	1 017 219 360	(NATIONAL SIGNIFICANCE)
27	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	SOFIA METRO EXPANSION PROJECT: LINE 3, PHASE II - JITNITSA STREET - OVCHA KUPEL SECTION - SOFIA RING ROAD	2017	2019	160 000 000	(NATIONAL SIGNIFICANCE)
28	PHASE COMPLETED	OPTTI 2014 - 2020	EXPANSION PROJECT FOR LINE 2 OF THE SOFIA METRO, SECTION JAMES BAUCHER METRO STATION TO VITOSHA METRO STATION - PHASE 2	2014	20.7.2016	26 432 856	(NATIONAL SIGNIFICANCE)
29	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	EXPANSION OF THE SOFIA METRO LINE 3, PHASE III	2018	2022	140 000 000	(NATIONAL SIGNIFICANCE)
ROAD TRANSPORT							
30	PHASE DESIGN AND CONSTRUCTION WORKS	OPTTI 2014 - 2020	CONSTRUCTION OF THE STRUMA MOTORWAY LOT 3 - BLAGOEVGRAD - SANDANSKI PROJECT 1 - LOT 3.1 FROM BLAGOEVGRAD TO KRUPNIK, LOT 3.3 FROM KRESNA TO SANDANSKI AND THE JELEZNITSA TUNNEL	30.12.2015	30.12.2020	739 245 318	TEN-T 1
31	PHASE DESIGN AND CONSTRUCTION WORKS	OPTTI 2014 - 2020	CONSTRUCTION OF THE STRUMA MOTORWAY LOT 3 - BLAGOEVGRAD - SANDANSKI PROJECT 2 - FOR LOT 3.2 FROM KRUPNIK TO KRESNA	2017	2022	261 158 748	TEN-T 1
32	PHASE COMPLETED	OPTTI 2014 - 2020	CONSTRUCTION OF THE KALOTINA-SOFIA MOTORWAY - PHASE 2 OF LOT 1 SOFIA RING ROAD WEST SECTION, SECTION 2 - ROAD II-18 SOFIA RING ROAD	21.10.2015	13.9.2016	115 408 769	TEN-T 1
33	PHASE PREPARATION	OPTTI 2014 - 2020	PREPARATION OF PROJECT: ROAD I-1 /E-79/ VIDIN - MONTANA - VRATSA" - SPEED ROAD	1.1.2020	31.12.2020	2 774 937	TEN-T 1

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34	PHASE DESIGN AND CONSTRUCTION WORKS	CEF	BY-PASS ROAD OF THE TOWN OF KARDJALI	1.1.2020	31.12.2020	109 209 329	TEN-T 2
35	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD II-57 STARA ZAGORA- RADNEVO (LOT 1)	1.1.2020	31.12.2020	28 755 007	TEN-T 3
36	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION KOSTINBROD - BERKOVITSA (LOT 2 ROAD II- 81 KOSTINBROD - BUCHIN PROHOD AND LOT 3 ROAD II-81 BUCHIN PROHOD- BERKOVITSA)	1.1.2020	31.12.2020	27 348 581	TEN-T 3
37	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION VARNA - KARDAM (LOT 4 ROAD II-29 VARNA - DOBRICH AND LOT 5 ROAD II-29 DOBRICH -KARDAM)	1.1.2020	31.12.2020	23 506 185	TEN-T 3
38	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD II-86 PLOVDIV - ASENOVGRAD (LOT 6)	1.1.2020	31.12.2020	25 392 217	TEN-T 3
39	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION PLEVEN - GABROVO (LOT 7 ROAD II-35 PLEVEN-LOVECH, LOT 11 ROAD II-44 SEVLIEVO - DRAGANOVTSI AND LOT 12 ROAD II-44 DRAGANOVTSI - GABROVO)	1.1.2020	31.12.2020	32 390 729	TEN-T 3
40	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION STARO ORYAHOVO - PROVADIYA (LOT 8 ROAD III-904 STARO ORYAHOVO - DOLNI CHIFLIK - GROZDYOVO AND LOT 9 ROAD III-904 GROZDYOVO -PROVADIYA)	1.1.2020	31.12.2020	18 580 438	TEN-T 3
41	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROADS WITH TOURISTIC SIGNIFICANCE (LOT 10 ROAD III-1002 VRATSA - LEDENIKA CAVE AND LOT 15 ROAD III-107-RILA - RILA MONASTERY)	1.1.2020	31.12.2020	28 974 843	TEN-T 3
42	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION TARGOVISHTE - TUTRAKAN (LOT 13 - ROAD II- 49 TARGOVISHTE - RAZGRAD AND LOT 14 ROAD II-49 KUBRAT - TUTRAKAN)	1.1.2020	31.12.2020	20 710 924	TEN-T 3
MARITIME TRANSPORT							
43	PHASE EXECUTION	OPTTI 2014 - 2020	FEASIBILITY STUDIES FOR PORT COMMUNITY SYSTEM (PCS) FOR THE BULGARIAN PORTS	1.1.2020	31.12.2020	10 300 000	TEN-T 1

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44	PHASE PREPARATION AND EXECUTION	CEF	PROJECT FAIRWAY DANUBE – GENERAL INFORMATION	1.7.2015	31.12.2020	45 766 000	TEN-T 1
45	PHASE PREPARATION AND EXECUTION	CEF	PROJECT PORT BULGARIA WEST – SAFE AND COMPETITIVE MULTIMODAL PORT	1.7.2017	31.12.2020	29 337 450	TEN-T 1
ROAD USE FEES							
46	PHASE EXECUTION	OPTTI 2014 - 2020	IMPLEMENTATION OF A TOLL-SYSTEM FOR ROAD USE FOR HEAVY VEHICLES	2018	2019	200 000 000	TEN-T 1
PROJECTS PLANNED FOR IMPLEMENTATION BY NATIONAL FINANCING AND/OR STATE LOANS FROM IFI UNTIL 2022							
RAILWAY RANSPORT							
47	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE VOLUYAK – DRAGOMAN RAILWAY LINE	2017	2022	258 681 037	TEN-T 1
48	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	RESTORATION OF THE DESIGN PARAMETERS OF THE RUSE – VARNA RAILWAY LINE	2018	31.12.2022	749 082 890	TEN-T 2
49	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION AND REHABILITATION OF THE MEZDRA – GORNA ORYAHOVITSA RAILWAY SECTION	2018	31.12.2022	647 663 250	TEN-T 2
50	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	RESTORATION OF THE DESIGN PARAMETERS OF THE GORNA ORYAHOVITSA - KASPICHAN RAILWAY SECTION	2018	31.12.2022	466 000 000	TEN-T 2
51	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE KARNOBAT – SINDEL RAILWAY LINE (CONSTRUCTION OF THE LOZAREVO – PRILEP RAILWAY TUNNEL) AND OF SECTIONS OF THE LINE	2018	31.12.2022	338 400 000	TEN-T 3
ROAD TRANSPORT							
52	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	PROJECT BY-PASS ROAD OF THE TOWN OF GABROVO” - SECTION 3 AND SECTION 4	2017	2018	54 380 122	TEN-T 1
53	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	PROJECT BY-PASS ROAD OF THE TOWN OF GABROVO” – STAGE CONNECTION INCLUDING TUNNEL UNDER SHIPKA /THROUGH STARA PLANINA MOUNTAIN/ (IT WILL BE FINANCED UNDER OPTTI 2014-2020, IF POSSIBLE)	2017	2019	152 554 740	TEN-T 1

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54	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	BY-PASS ROAD OF THE TOWN OF KAZANLAK	2022	2022	28 477 819	TEN-T 1
55	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	CONSTRUCTION OF SPEED BY-PASS OF THE TOWN OF BURGAS	2022	2022	30 030 348	TEN-T 1
56	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	HEMUS MOTORWAY FROM YABLANITSA TO BELOKOPITOVO (SECTIONS FROM 1 TO 7) (SECTION 1 - YABLANITSA-ROAD II-35 WILL BE FINANCED UNDER OPTTI 2014-2020, IF POSSIBLE) AND BELOKOPITOVO - SHUMEN	2017	2022	2 658 152 061	(NATIONAL SIGNIFICANCE)
MARITIME AND INTERMODAL TRANSPORT							
57	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	CONSTRUCTION OF THE VARNA INTERMODAL TERMINAL	2018	2020	520 000 000	TEN-T 2
PROJECTS PLANNED FOR IMPLEMENTATION AFTER 2022							
RAILWAY TRANSPORT							
58	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE VIDIN – SOFIA RAILWAY LINE: VIDIN – MEDKOVETS RAILWAY SECTION	2022	2027	882 730 910	TEN-T 1
59	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE SOFIA – PERNIK RAILWAY LINE	2023	2026	400 000 000	TEN-T 1
60	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE PERNIK – RADOMIR RAILWAY LINE	2023	2025	303 271 257	TEN-T 1
61	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	DEVELOPMENT OF THE SOFIA RAILWAY JUNCTION (WITHOUT THE SOFIA – VOLUYAK SECTION)	2022	2027	419 625 303	TEN-T 1
62	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE RADOMIR – GUESHEVO RAILWAY LINE	2022	2027	933 320 005	TEN-T 1
63	PHASE PREPARATION AND	NF OR LOANS FROM IFI	MODERNIZATION OF THE RAILWAY SECTIONS MEDKOVETS – RUSKA BYALA AND RUSKA BYALA – STOLNIK	2022	2034	3 644 938 638	TEN-T 1

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	CONSTRUCTION WORKS						
64	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE RUSE – GORNA ORYAHOVITSA – DIMITROVGRAD RAILWAY LINE	2022	2027	1 985 049 330	TEN-T 1
65	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE RADOMIR - KULATA RAILWAY LINE	2022	2027	1 691 154 792	TEN-T 1
ROAD TRANSPORT							
66	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	ORYAHOVO-BEKET BRIDGE /ON THE DANUBE RIVER/	2029	2034	357 012 582	TEN-T 1
67	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SILISTRA-CALARASI BRIDGE /ON THE DANUBE RIVER/	2030	2034	267 759 437	TEN-T 1
68	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	NIKOPOL-TURNU-MAGURELE BRIDGE /ON THE DANUBE RIVER/	2029	2033	357 012 582	TEN-T 1
69	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SECOND BRIDGE AT RUSE / ON THE DANUBE RIVER/	2029	2033	267 759 437	TEN-T 1
MARITIME TRANSPORT							
70	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI, PPP	CONSTRUCTION OF THE MAIN INFRASTRUCTURE OF A LOGISTIC COMPLEX AT THE VARNA-WEST TERMINAL	2033	2034	220 000 000	TEN-T 1

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Table 2-6 Budget for scenario B in BGN

	2014	2015	2016	2017	2018	2019	2020
OPT 2007 - 2013	841 872 304	841 872 304	252 017 101	58 567 074	0	0	0
OPTTI 2014 - 2020	8 810 952	161 027 800	416 503 861	799 356 739	942 581 072	933 311 331	525 966 427
OPRG 2014 - 2020	0	0	0	0	0	0	205 658 925
CEF	0	14 275 983	65 168 124	191 267 767	258 729 060	258 729 060	226 253 217
NF, PPP and loans from IFI	0	0	0	546 935 088	970 556 640	1 325 293 522	1 274 441 942
Total investment	850 683 256	1 017 176 087	733 689 086	1 596 126 668	2 171 866 773	2 517 333 913	2 232 320 511
Cumulative investment	850 683 256	1 867 859 344	2 601 548 430	4 197 675 098	6 369 541 870	8 886 875 783	11 119 196 294
Total investment - only OP	850 683 256	1 017 176 087	733 689 086	1 049 191 580	1 201 310 132	1 192 040 391	957 878 569
Cumulative investment	850 683 256	1 867 859 344	2 601 548 430	3 650 740 010	4 852 050 142	6 044 090 532	7 001 969 101
	2021	2022	2023	2024	2025	2026	2027
OPT 2007 - 2013	0	0	0	0	0	0	0
OPTTI 2014 - 2020	332 322 970	203 755 972	47 961 821	0	0	0	0
OPRG 2014 - 2020	0	0	0	0	0	0	0
CEF	62 755 490	17 432 081	0	0	0	0	0
NF, PPP and loans from IFI	1 081 733 855	1 887 008 331	1 520 121 040	1 686 265 980	1 713 041 924	1 479 916 851	894 681 368
Total investment	1 476 812 315	2 108 196 384	1 568 082 861	1 686 265 980	1 713 041 924	1 479 916 851	894 681 368
Cumulative investment	12 596 008 609	14 704 204 993	16 272 287 853	17 958 553 833	19 671 595 757	21 151 512 608	22 046 193 976
Total investment - only OP	395 078 460	221 188 052	47 961 821				
Cumulative investment	7 397 047 562	7 618 235 614	7 666 197 435				
	2028	2029	2030	2031	2032	2033	2034
OPT 2007 - 2013	0	0	0	0	0	0	0
OPTTI 2014 - 2020	0	0	0	0	0	0	0
OPRG 2014 - 2020	0	0	0	0	0	0	0
CEF	0	0	0	0	0	0	0
NF, PPP and loans from IFI	391 766 425	522 671 039	487 949 835	487 949 835	487 949 835	597 949 835	496 424 382
Total investment	391 766 425	522 671 039	487 949 835	487 949 835	487 949 835	597 949 835	496 424 382
Cumulative investment	22 437 960 401	22 960 631 440	23 448 581 275	23 936 531 111	24 424 480 946	25 022 430 781	25 518 855 163
Total investment - only OP							
Cumulative investment							

The budget for Scenario B is shown on Fig. 2-8, Fig. 2-9, Fig. 2-10, Fig. 2-11, Fig. 2-12 and in Table 2-6. It is presented by financing sources, by years and as total expenses for each current year (cumulative). It also shows a budget including only of the financing from the operational programmes and CEF (Fig. 2-10, Fig. 2-11). Fig.2-12 of the budget is shown as investments divided into periods.

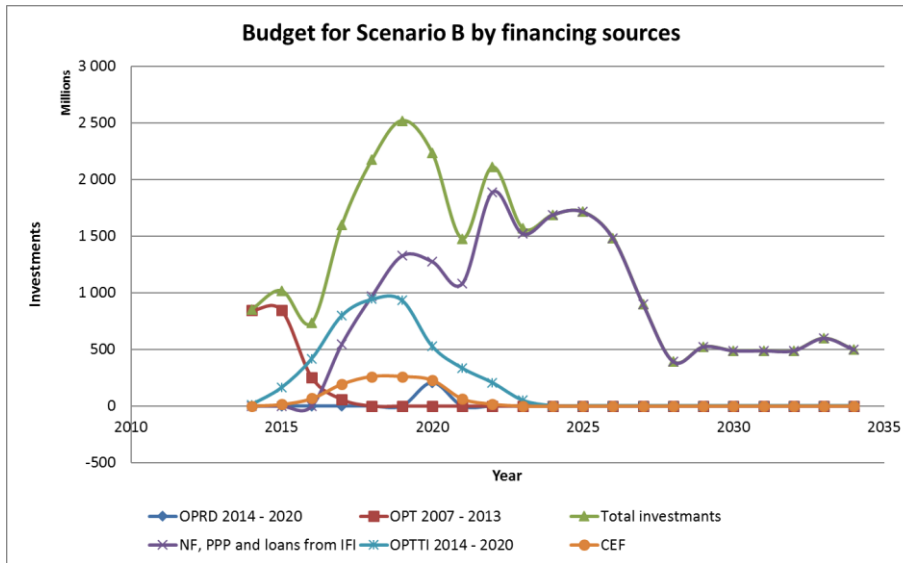


Figure 2-8 Budget for Scenario B by financing sources

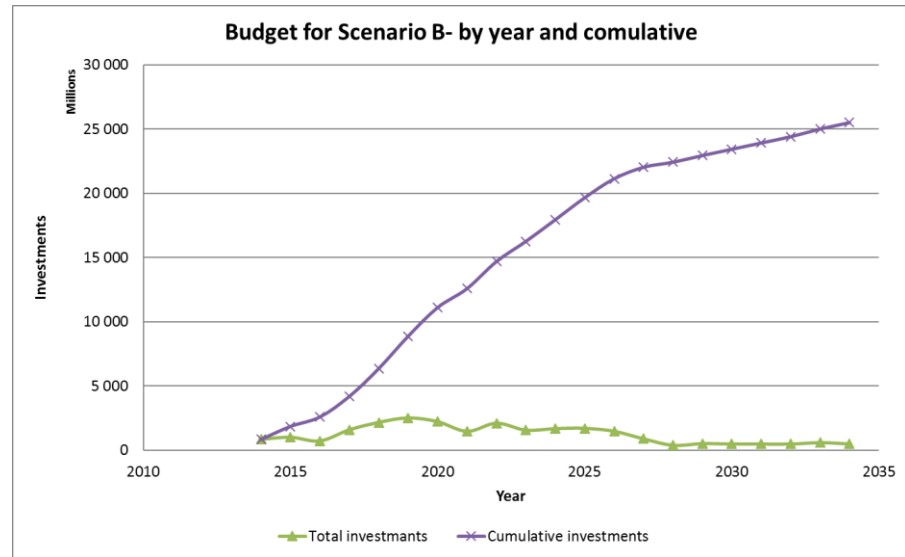


Figure 2-9 Budget for Scenario B

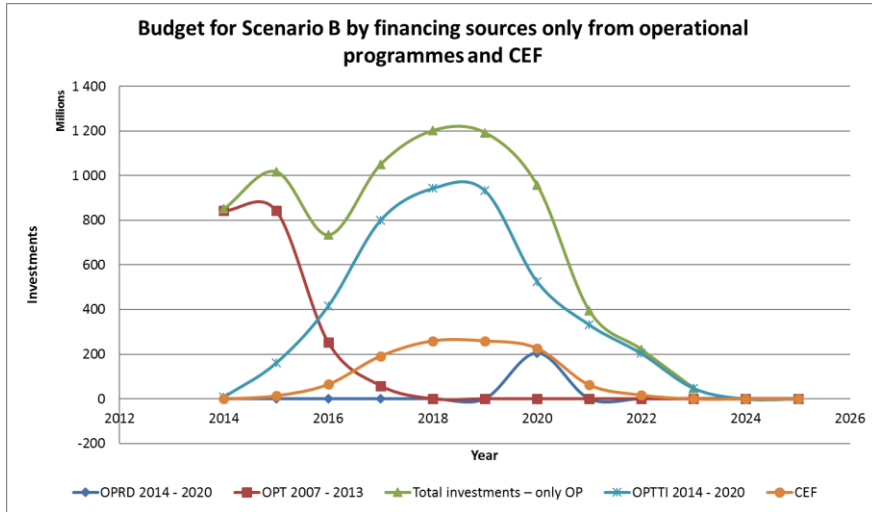


Figure 2-10 Budget for Scenario B by financing sources only from operational programmes and CEF

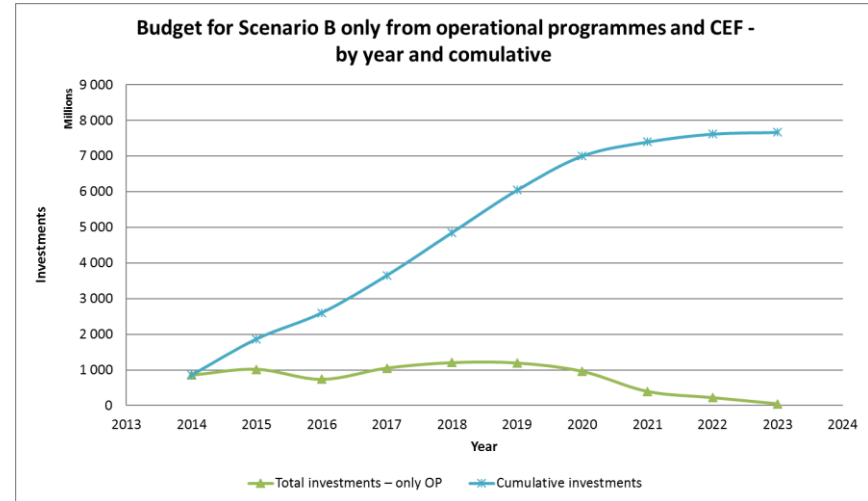


Figure 2-11 Budget for Scenario B only from operational programmes and CEF

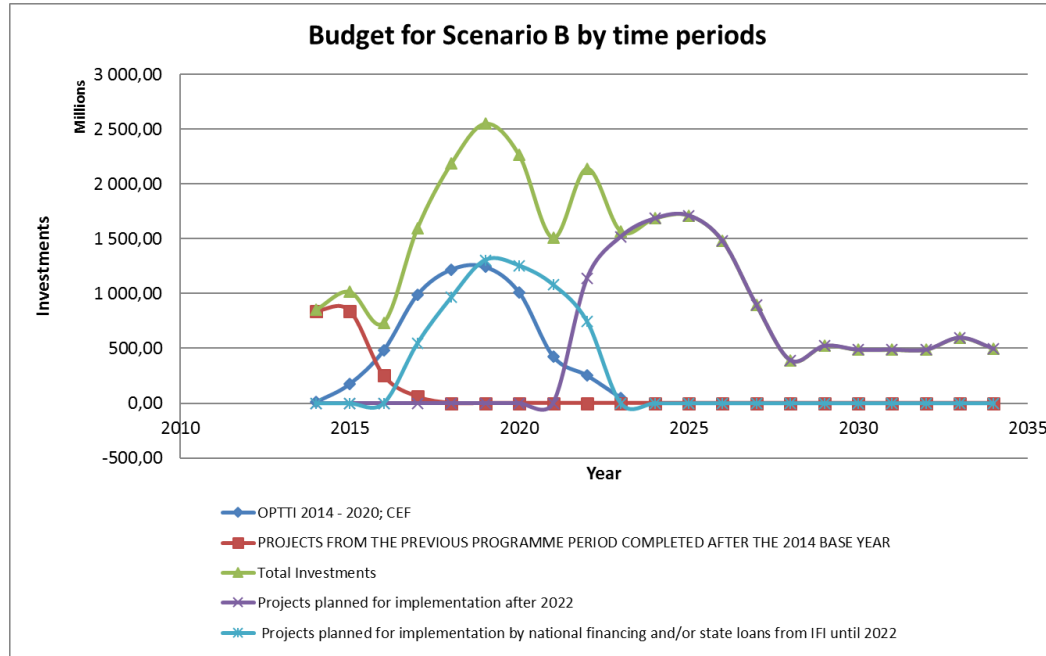


Figure 2-12 Budget for Scenario B by time periods

2.5 SCENARIO C

Table 2-7 Scenario C

SCENARIO C							
№	PHASE	PROGRAMME	PROJECTS	PERIOD OF IMPLEMENTATION		VALUE (W/O VAT) - BGN	TEN-T
				FROM	TO		
PROJECTS FROM THE PREVIOUS PROGRAMME PERIOD COMPLETED AFTER THE 2014 BASE YEAR							
RAILWAY RANSPORT							
1	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	MODERNIZATION OF THE SEPTEMVRI – PLOVDIV RAILWAY SECTION - PART OF THE TRANS-EUROPEAN RAILWAY NETWORK	2014	31.3.2017	269 050 032	TEN-T 1
2	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	RECONSTRUCTION AND ELECTRIFICATION OF THE PLOVDIV –SVILENGRAD RAILWAY LINE ON CORRIDORS IV AND IX, PHASE 2: PARVOMAI-SVILENGRAD SECTION	2014	31.12.2016	358 643 170	TEN-T 1
3	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	REHABILITATION OF RAILWAY INFRASTRUCTURE IN SECTIONS OF THE PLOVDIV - BURGAS RAILWAY LINE, PHASE 1	2014	31.12.2016	385 624 679	TEN-T 1
4	PHASE CONSTRUCTION WORKS	OPT 2007 - 2013	CONSTRUCTION OF INTERMODAL TERMINAL IN THE SOUTH CENTRAL PLANNING REGION IN BULGARIA – PLOVDIV	2014	2017	12 316 771	TEN-T 1
ROAD TRANSPORT							
5	PHASE COMPLETED	OPT 2007 - 2013	STRUMA MOTORWAY LOT 2 (DUPNITSA - BLAGOEVGRAD)	2014	2015	358 722 000	TEN-T 1
6	PHASE COMPLETED	OPT 2007 - 2013	STRUMA MOTORWAY LOT 4 (SANDANSKI - KULATA BCCP)	2014	2015	67 176 000	TEN-T 1
7	PHASE COMPLETED	OPT 2007 - 2013	BY-PASS ROAD OF THE TOWN OF MONTANA - ROAD I-1 (E79)	2014	2015	46 572 618	TEN-T 1
8	PHASE COMPLETED	OPT 2007 - 2013	SOFIA NORTHERN SPEED ROAD	2014	2016	240 956 836	TEN-T 1
9	PHASE COMPLETED	OPT 2007 - 2013	MARTISA MOTORWAY LOT 1 - ORIZOVO-DIMITROVGRAD SECTION	2014	2015	133 129 678	TEN-T 1

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10	PHASE COMPLETED	OPT 2007 - 2013	MARTISA MOTORWAY LOT 2 - SECTION "DIMITROVGRAD-HARMANLI	2014	2015	122 137 000	TEN-T 1
OPTTI 2014 - 2020; CEF							
RAILWAY TRANSPORT							
11	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	MODERNIZATION OF THE SEPTEMVRI – PLOVDIV RAILWAY SECTION: PART OF THE TRANS-EUROPEAN RAILWAY NETWORK - CONSTRUCTION OF FOUR ROAD OVERPASSES	19.8.2016	2017	19 998 000	TEN-T 1
12	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	REHABILITATION OF RAILWAY INFRASTRUCTURE IN SECTIONS OF THE PLOVDIV - BURGAS RAILWAY LINE – REHABILITATION, REPAIRS AND MODERNIZATION OF POWER SUBSTATION BURGAS, KARNOBAT AND YAMBOL	13.8.2015	2017	17 782 623	TEN-T 1
13	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	REHABILITATION OF THE PLOVDIV – BURGAS RAILWAY SECTION, PHASE 2. THE PROJECT INCLUDES ALSO IMPLEMENTATION OF ETCS FOR THE WHOLE RAILWAY LINE FROM PLOVDIV TO BURGAS WITH TOTAL LENGTH OF 293 KM.	2016	2022	675 092 693	TEN-T 1
14	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	MODERNIZATION OF THE SOFIA-PLOVDIV RAILWAY LINE IN THE SECTIONS OF ELIN PELIN - KOSTENETS	2016	2023	959 236 416	TEN-T 1
15	PHASE DESIGN AND CONSTRUCTION WORKS	CEF	MODERNIZATION OF RAILWAY SECTION SOFIA – ELIN PELIN	2015	2020	132 966 320	TEN-T 1
16	PHASE CONSTRUCTION WORKS	CEF	MODERNIZATION OF RAILWAY SECTION KOSTENETS - SEPTEMVRI	2016	2022	348 641 613	TEN-T 1
17	PHASE CONSTRUCTION WORKS	CEF	DEVELOPMENT OF THE SOFIA RAILWAY JUNCTION: THE RAILWAY SECTION SOFIA - VOLUYAK	2016	2020	203 819 092	TEN-T 1
18	PHASE CONSTRUCTION WORKS	CEF	DEVELOPMENT OF THE PLOVDIV RAILWAY JUNCTION	2017	2020	224 870 977	TEN-T 1

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19	PHASE PREPARATION AND CONSTRUCTION WORKS	OPTTI 2014 - 2020	RECONSTRUCTION OF KEY STATION COMPLEXES FOR THE DIRECTIONS WHERE RAILWAY INFRASTRUCTURE PROJECTS ARE IMPLEMENTED	2017	2020	26 000 000	TEN-T 1
20	PHASE IMPLEMENTATION	OPTTI 2014 - 2020	DESIGN AND IMPLEMENTATION OF MANAGEMENT AND CONTROL SYSTEMS IN RAILWAY TRANSPORT	2017	2021	107 200 000	TEN-T 2
21	PHASE PREPARATION	OPTTI 2014 - 2020	TECHNICAL ASSISTANCE FOR THE MODERNIZATION OF THE RAILWAY LINE SOFIA - PERNIK - RADOMIR - GUESHEVO - THE BORDER WITH MACEDONIA	2016	2018	26 099 225	TEN-T 1
22	PHASE PREPARATION	OPTTI 2014 - 2020	TECHNICAL ASSISTANCE FOR THE PREPARATION OF PROJECT MODERNIZATION OF RAILWAY LINE SOFIA - BORDER WITH THE REPUBLIC OF SERBIA	2016	2018	3 600 000	TEN-T 1
23	PHASE PREPARATION	OPTTI 2014 - 2020	TECHNICAL ASSISTANCE FOR SURVEY OF THE RUSE - TURKISH BORDER RAILWAY DIRECTION	2017	2019	3 000 000	TEN-T 1
24	PHASE IMPLEMENTATION	OPTTI 2014 - 2020	ANALYSIS AND UPDATE OF THE STRATEGY FOR INTEGRATION OF THE BULGARIAN RAILWAY INFRASTRUCTURE IN THE EUROPEAN INTERMODAL TRANSPORT NETWORK	2018	2019	1 050 000	(NATIONAL SIGNIFICANCE)
RAILWAY AND INTERMODAL TRANSPORT							
25	PHASE IMPLEMENTATION	NF OR LOANS FROM IFI, PPP	CONSTRUCTION OF INTERMODAL TERMINAL IN THE NORTHERN CENTRAL PLANNING REGION IN BULGARIA - RUSE	2018	2020	43 055 008	TEN-T 1
METROPOLITEN							
26	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	SOFIA METRO EXPANSION PROJECT: LINE 3, PHASE I - VLADIMIR VAZOV BLVD. - CSP - JITNITSA STREET SECTION	19.01.2016	31.12.2020	1 017 219 360	(NATIONAL SIGNIFICANCE)
27	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	SOFIA METRO EXPANSION PROJECT: LINE 3, PHASE II - JITNITSA STREET - OVCHA KUPEL SECTION - SOFIA RING ROAD	2017	2019	160 000 000	(NATIONAL SIGNIFICANCE)
28	PHASE COMPLETED	OPTTI 2014 - 2020	EXPANSION PROJECT FOR LINE 2 OF THE SOFIA METRO, SECTION JAMES BAUCHER METRO STATION TO VITOSHA METRO STATION - PHASE 2	2014	20.7.2016	26 432 856	(NATIONAL SIGNIFICANCE)

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29	PHASE CONSTRUCTION WORKS	OPTTI 2014 - 2020	EXPANTION OF THE SOFIA METRO LINE 3, PHASE III	2018	2022	140 000 000	(NATIONAL SIGNIFICANCE)
ROAD TRANSPORT							
30	PHASE DESIGN AND CONSTRUCTION WORKS	OPTTI 2014 - 2020	CONSTRUCTION OF THE STRUMA MOTORWAY LOT 3 - BLAGOEVGRAD - SANDANSKI PROJECT 1 - LOT 3.1 FROM BLAGOEVGRAD TO KRUPNIK, LOT 3.3 FROM KRESNA TO SANDANSKI AND THE JELEZNITSA TUNNEL	30.12.2015	30.12.2020	739 245 318	TEN-T 1
31	PHASE DESIGN AND CONSTRUCTION WORKS	OPTTI 2014 - 2020	CONSTRUCTION OF THE STRUMA MOTORWAY LOT 3 - BLAGOEVGRAD - SANDANSKI PROJECT 2 - FOR LOT 3.2 FROM KRUPNIK TO KRESNA	2017	2022	261 158 748	TEN-T 1
32	PHASE COMPLETED	OPTTI 2014 - 2020	CONSTRUCTION OF THE KALOTINA-SOFIA MOTORWAY - PHASE 2 OF LOT 1 SOFIA RING ROAD WEST SECTION, SECTION 2 - ROAD II-18 SOFIA RING ROAD	21.10.2015	13.9.2016	115 408 769	TEN-T 1
33	PHASE PREPARATION	OPTTI 2014 - 2020	PREPARATION FOR COMPLETION OF CONSTRUCTION OF THE CHERNO MORE MOTORWAY	1.1.2020	31.12.2020	2 592 000	TEN-T 2
34	PHASE PREPARATION	OPTTI 2014 - 2020	PREPARATION OF PROJECT: ROAD I-1 /E-79/ VIDIN - MONTANA - VRATSA" - SPEED ROAD	1.1.2020	31.12.2020	2 774 937	TEN-T 1
35	PHASE PREPARATION	CEF	SPEED ROAD ROUTE: RUSE - BYALA - VELIKO TARNOVO - GABROVO - HASKOVO - MARITSA MOTORWAY	1.1.2020	31.12.2020	3 139 131	TEN-T 1
36	PHASE PREPARATION	CEF	REHABILITATION OF THE SECTION FROM THE MARITSA MOTORWAY (HASKOVO) - KARDJALI - BCCP MAKAZA	1.1.2020	31.12.2020	2 611 303	TEN-T 2
37	PHASE DESIGN AND CONSTRUCTION WORKS	CEF	BY-PASS ROAD OF THE TOWN OF KARDJALI	1.1.2020	31.12.2020	109 209 329	TEN-T 2
38	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD II-57 STARA ZAGORA- RADNEVO (LOT 1)	1.1.2020	31.12.2020	28 755 007	TEN-T 3

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39	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION KOSTINBROD - BERKOVITSA (LOT 2 ROAD II-81 KOSTINBROD - BUCHIN PROHOD AND LOT 3 ROAD II-81 BUCHIN PROHOD- BERKOVITSA)	1.1.2020	31.12.2020	27 348 581	TEN-T 3
40	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION VARNA - KARDAM (LOT 4 ROAD II-29 VARNA - DOBRICH AND LOT 5 ROAD II-29 DOBRICH - KARDAM)	1.1.2020	31.12.2020	23 506 185	TEN-T 3
41	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD II-86 PLOVDIV - ASENOVGRAD (LOT 6)	1.1.2020	31.12.2020	25 392 217	TEN-T 3
42	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION PLEVEN - GABROVO (LOT 7 ROAD II-35 PLEVEN-LOVECH, LOT 11 ROAD II-44 SEVLIEVO - DRAGANOVTSI AND LOT 12 ROAD II-44 DRAGANOVTSI - GABROVO)	1.1.2020	31.12.2020	32 390 729	TEN-T 3
43	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION STARO ORYAHOVO - PROVADIYA (LOT 8 ROAD III-904 STARO ORYAHOVO - DOLNI CHIFLIK - GROZDYOVO AND LOT 9 ROAD III-904 GROZDYOVO - PROVADIYA)	1.1.2020	31.12.2020	18 580 438	TEN-T 3
44	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROADS WITH TOURISTIC SIGNIFICANCE (LOT 10 ROAD III-1002 VRATSA - LEDENIKA CAVE AND LOT 15 ROAD III-107-RILA - RILA MONASTERY)	1.1.2020	31.12.2020	28 974 843	TEN-T 3
45	PHASE DESIGN AND CONSTRUCTION WORKS	OPRG 2014 - 2020	REHABILITATION OF ROAD SECTIONS FOR THE DIRECTION TARGOVISHTE - TUTRAKAN (LOT 13 - ROAD II-49 TARGOVISHTE - RAZGRAD AND LOT 14 ROAD II-49 KUBRAT - TUTRAKAN)	1.1.2020	31.12.2020	20 710 924	TEN-T 3
MARITIME TRANSPORT							
46	PHASE EXECUTION	OPTTI 2014 - 2020	FEASIBILITY STUDIES FOR PORT COMMUNITY SYSTEM (PCS) FOR THE BULGARIAN PORTS	1.1.2020	31.12.2020	10 300 000	TEN-T 1
47	PHASE PREPARATION AND EXECUTION	CEF	PROJECT FAIRWAY DANUBE - GENERAL INFORMATION	1.7.2015	31.12.2020	45 766 000	TEN-T 1

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48	PHASE PREPARATION AND EXECUTION	CEF	PROJECT PORT BULGARIA WEST – SAFE AND COMPETITIVE MULTIMODAL PORT	1.7.2017	31.12.2020	29 337 450	TEN-T 1
ROAD USE FEES							
49	PHASE EXECUTION	OPTTI 2014 - 2020	IMPLEMENTATION OF A TOLL-SYSTEM FOR ROAD USE FOR HEAVY VEHICLES	2018	2019	200 000 000	TEN-T 1
PROJECTS PLANNED FOR IMPLEMENTATION BY NATIONAL FINANCING AND/OR STATE LOANS FROM IFI UNTIL 2022							
RAILWAY RANSPORT							
50	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE VOLUYAK – DRAGOMAN RAILWAY LINE	2017	2022	258 681 037	TEN-T 1
51	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	RESTORATION OF THE DESIGN PARAMETERS OF THE RUSE – VARNA RAILWAY LINE	2018	31.12.2022	749 082 890	TEN-T 2
52	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION AND REHABILITATION OF THE MEZDRA – GORNA ORYAHOVITSA RAILWAY SECTION	2018	31.12.2022	647 663 250	TEN-T 2
53	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	RESTORATION OF THE DESIGN PARAMETERS OF THE GORNA ORYAHOVITSA - KASPICHAN RAILWAY SECTION	2018	31.12.2022	466 000 000	TEN-T 2
54	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE KARNOBAT – SINDEL RAILWAY LINE (CONSTRUCTION OF THE LOZAREVO – PRILEP RAILWAY TUNNEL) AND OF SECTIONS OF THE LINE	2018	31.12.2022	338 400 000	TEN-T 3
ROAD TRANSPORT							
55	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SPEED ROAD ROUTE: SPEED ROAD I-2 RUSE – SHUMEN OR REHABILITATION	2019	2021	193 797 707	TEN-T 2
56	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	CONSTRUCTION OF THE KALOTINA-SOFIA MOTORWAY – ROAD I-8 KALOTINA - SOFIA RING ROAD	2019	2021	150 000 000	TEN-T 1

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57	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SPEED ROAD ROAD I-1 /E-79/ VIDIN – MONTANA – VRATSA" - SPEED ROAD	2018	2021	864 292 874	TEN-T 1
58	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SPEED ROAD RILA SPEED ROAD, ROUTE KIUSTENDIL - DUPNITSA - SAMOKOV – BOGORODITSA ROAD JUNCTION – TRAKIA MOTORWAY/HEMUS MOTORWAY	2019	2022	812 400 489	TEN-T 2
59	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SPEED ROAD ROUTE: RUSE – BYALA – VELIKO TARNOVO – GABROVO – HASKOVO – MARITSA MOTORWAY	2017	2022	1 497 662 821	TEN-T 1
60	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	REHABILITATION OF THE SECTION FROM THE MARITSA MOTORWAY (HASKOVO) – KARDJALI – BCCP MAKAZA	2019	2020	91 338 632	TEN-T 2
61	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SPEED ROAD GUESHEVO – SOFIA - ROUTE: BCCP GUESHEVO – KUSTENDIL – RADOMIR –PERNIK - SOFIA	2017	2022	670 757 124	TEN-T 2 И TEN-T 3
62	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	COMPLETION OF CONSTRUCTION OF THE CHERNO MORE MOTORWAY	2017	2022	450 000 000	TEN-T 2
63	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE ASENOVGRAD – SMOLYAN – RUDOZEM ROAD (PARTIALLY UP TO SPEED ROAD LEVEL)	2017	2022	543 374 192	TEN-T 2
64	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	PROJECT BY-PASS ROAD OF THE TOWN OF GABROVO" - SECTION 3 AND SECTION 4	2017	2018	54 380 122	TEN-T 1
65	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	PROJECT BY-PASS ROAD OF THE TOWN OF GABROVO" – STAGE CONNECTION INCLUDING TUNNEL UNDER SHIPKA /THROUGH STARA PLANINA MOUNTAIN/ (IT WILL BE FINANCED UNDER OPTTI 2014-2020, IF POSSIBLE)	2017	2019	152 554 740	TEN-T 1

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66	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	BY-PASS ROAD OF THE TOWN OF KAZANLAK	2022	2022	28 477 819	TEN-T 1
67	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SPEED ROAD PLOVDIV – ASENOVGRAD ROUTE: TRAKIA MOTORWAY JUNCTION – PLOVDIV BYPASS – ASENOVGRAD	2021	2022	214 858 407	TEN-T 2
68	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	CONSTRUCTION OF SPEED BY-PASS OF THE TOWN OF BURGAS	2022	2022	30 030 348	TEN-T 1
69	PHASE DESIGN AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	HEMUS MOTORWAY FROM YABLANITSA TO BELOKOPITOVO (SECTIONS FROM 1 TO 7) (SECTION 1 - YABLANITSA-ROAD II-35 WILL BE FINANCED UNDER OPTTI 2014-2020, IF POSSIBLE) AND BELOKOPITOVO - SHUMEN	2017	2022	2 658 152 061	(NATIONAL SIGNIFICANCE)
MARITIME AND INTERMODAL TRANSPORT							
70	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	CONSTRUCTION OF THE VARNA INTERMODAL TERMINAL	2018	2020	520 000 000	TEN-T 2
PROJECTS PLANNED FOR IMPLEMENTATION AFTER 2022							
RAILWAY TRANSPORT							
71	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE VIDIN – SOFIA RAILWAY LINE: VIDIN – MEDKOVETS RAILWAY SECTION	2022	2027	882 730 910	TEN-T 1
72	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE SOFIA – PERNIK RAILWAY LINE	2023	2026	400 000 000	TEN-T 1
73	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE PERNIK – RADOMIR RAILWAY LINE	2023	2025	303 271 257	TEN-T 1
74	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	DEVELOPMENT OF THE SOFIA RAILWAY JUNCTION (WITHOUT THE SOFIA – VOLUYAK SECTION)	2022	2027	419 625 303	TEN-T 1

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75	PHASE CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE RADOMIR – GUESHEVO RAILWAY LINE	2022	2027	933 320 005	TEN-T 1
76	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE RAILWAY SECTIONS MEDKOVETS – RUSKA BYALA AND RUSKA BYALA – STOLNIK	2022	2034	3 644 938 638	TEN-T 1
77	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE RUSE – GORNA ORYAHOVITSA – DIMITROVGRAD RAILWAY LINE	2022	2027	1 985 049 330	TEN-T 1
78	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE RADOMIR - KULATA RAILWAY LINE	2022	2027	1 691 154 792	TEN-T 1
ROAD TRANSPORT							
79	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SPEED ROAD VARNA-DURANKULAK- ROUTE: VARNA – KAVARNA – BCCP DURANKULAK /CONNECTION TO CONSTANZA, ROMANIA /	2025	2050	678 299 832	TEN-T 2
80	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	ORYAHOVO-BEKET BRIDGE /ON THE DANUBE RIVER/	2029	2034	357 012 582	TEN-T 1
81	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SILISTRA-CALARASI BRIDGE /ON THE DANUBE RIVER/	2030	2034	267 759 437	TEN-T 1
82	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	NIKOPOL-TURNU-MAGURELE BRIDGE /ON THE DANUBE RIVER/	2029	2033	357 012 582	TEN-T 1

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83	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SECOND BRIDGE AT RUSE / ON THE DANUBE RIVER/	2029	2033	267 759 437	TEN-T 1
84	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	NORTH ROAD ALONG THE DANUBE RIVER FROM VIDIN TO SILISTRA /NORTHERN HORIZONTAL/ - II-12 VIDIN – BREGOVO – BORDER WITH THE REPUBLIC OF SERBIA; II-11 VIDIN – ARCHAR – LOM - KOZLODYU – ORYAHOVO – GIGEN – BREST – GULYANTSI - (DEBOVO - NIKOPOL); II-52 (RUSE - BYALA) - MECHKA - NOVGRAD – SVISHTOV – DEKOV – BYALA VODA - NIKOPOL; II-21 RUSE - TUTRAKAN - SILISTRA	2026	2034	1 485 732 287	TEN-T 3 (NATIONAL SIGNIFICANCE)
85	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	SOUTH ROAD ALONG THE BORDER FROM PETRICH TO BURGAS /SOUTH HORIZONTAL/ - THE ROUTE NEAR THE BORDER IS FORMED BY THE FOLLOWING ROADS: III-198 PETRICH – GOTSE DELCHEV; III-197 GOTSE DELCHEV – DOSPAT – DEVIN; III - 866 DEVIN – SMOLYAN; II - 86 SMOLYAN – SREDNOGORTSI; III - 865 SREDNOGORTSI – ARDINO - KARDJALI; I-5 KARDJALI - MOMCHILGRAD; II - 59 MOMCHILGRAD - KRUMOVGRAD – IVAILOVGRAD; III-597 IVAILOVGRAD - LJUBIMETS; I – 8 LJUBIMETS - HARMANLI; II – 76 HARMANLI - TOPOLOVGRAD – SREDETS – BURGAS	2027	2034	2 166 207 900	(NATIONAL SIGNIFICANCE)
86	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	MODERNIZATION OF THE BURGAS – BCCP MALKO TARNOVO ROAD	2025	2026	337 518 080	TEN-T 2
87	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI	CONSTRUCTION OF BYPASS ROAD OF THE TOWN OF MALKO TARNOVO AND A GOOD QUALITY CONNECTION TO THE BCCP MALKO TARNOVO – DEREKYOI	2026	2026	25 816 340	(NATIONAL SIGNIFICANCE)
MARITIME TRANSPORT							
88	PHASE PREPARATION AND CONSTRUCTION WORKS	NF OR LOANS FROM IFI, PPP	CONSTRUCTION OF THE MAIN INFRASTRUCTURE OF A LOGISTIC COMPLEX AT THE VARNA-WEST TERMINAL	2033	2034	220 000 000	TEN-T 1

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Table 2-8 Budget for scenario C in BGN

	2014	2015	2016	2017	2018	2019	2020
OPT 2007 - 2013	841 872 304	841 872 304	252 017 101	58 567 074	0	0	0
OPTTI 2014 - 2020	8 810 952	161 027 800	416 503 861	799 356 739	942 581 072	933 311 331	528 375 491
OPRG 2014 - 2020	0	0	0	0	0	0	205 658 925
CEF	0	14 275 983	65 168 124	191 267 767	258 729 060	258 729 060	232 003 651
NF, PPP and loans from IFI	0	0	0	1 073 900 778	1 876 075 646	2 391 081 079	2 340 229 499
Total investment	850 683 256	1 017 176 087	733 689 086	2 123 092 358	3 077 385 778	3 583 121 470	3 306 267 566
Cumulative investment	850 683 256	1 867 859 344	2 601 548 430	4 724 640 787	7 802 026 565	11 385 148 035	14 691 415 601
Total investment - only OP	850 683 256	1 017 176 087	733 689 086	1 049 191 580	1 201 310 132	1 192 040 391	966 038 067
Cumulative investment	850 683 256	1 867 859 344	2 601 548 430	3 650 740 010	4 852 050 142	6 044 090 532	7 010 128 599
	2021	2022	2023	2024	2025	2026	2027
OPT 2007 - 2013	0	0	0	0	0	0	0
OPTTI 2014 - 2020	332 322 970	203 755 972	47 961 821	0	0	0	0
OPRG 2014 - 2020	0	0	0	0	0	0	0
CEF	62 755 490	17 432 081	0	0	0	0	0
NF, PPP and loans from IFI	2 209 281 300	2 683 883 322	1 520 121 040	1 686 265 980	1 994 850 936	1 936 115 432	1 394 150 106
Total investment	2 604 359 760	2 905 071 374	1 568 082 861	1 686 265 980	1 994 850 936	1 936 115 432	1 394 150 106
Cumulative investment	17 295 775 361	20 200 846 735	21 768 929 596	23 455 195 576	25 450 046 512	27 386 161 943	28 780 312 049
Total investment - only OP	395 078 460	221 188 052	47 961 821				
Cumulative investment	7 405 207 059	7 626 395 112	7 674 356 933				
	2028	2029	2030	2031	2032	2033	2034
OPT 2007 - 2013	0	0	0	0	0	0	0
OPTTI 2014 - 2020	0	0	0	0	0	0	0
OPRG 2014 - 2020	0	0	0	0	0	0	0
CEF	0	0	0	0	0	0	0
NF, PPP and loans from IFI	963 442 093	1 094 346 707	1 059 625 503	946 575 531	946 575 531	1 056 575 531	861 618 401
Total investment	963 442 093	1 094 346 707	1 059 625 503	946 575 531	946 575 531	1 056 575 531	861 618 401
Cumulative investment	29 743 754 143	30 838 100 849	31 897 726 352	32 844 301 883	33 790 877 414	34 847 452 944	35 709 071 345
Total investment - only OP							
Cumulative investment							

The budget for Scenario C is shown on Fig. 2-13, Fig. 2-14, Fig. 2-15, Fig. 2-16, Fig. 2-17 and in Table 2-8. It is presented by financing sources, by years and as total expenses for each current year (cumulative). It also shows a budget including only of the financing from the operational programmes and CEF (Fig. 2-15, Fig. 2-16). Fig.2-17 of the budget is shown as investments divided into periods.

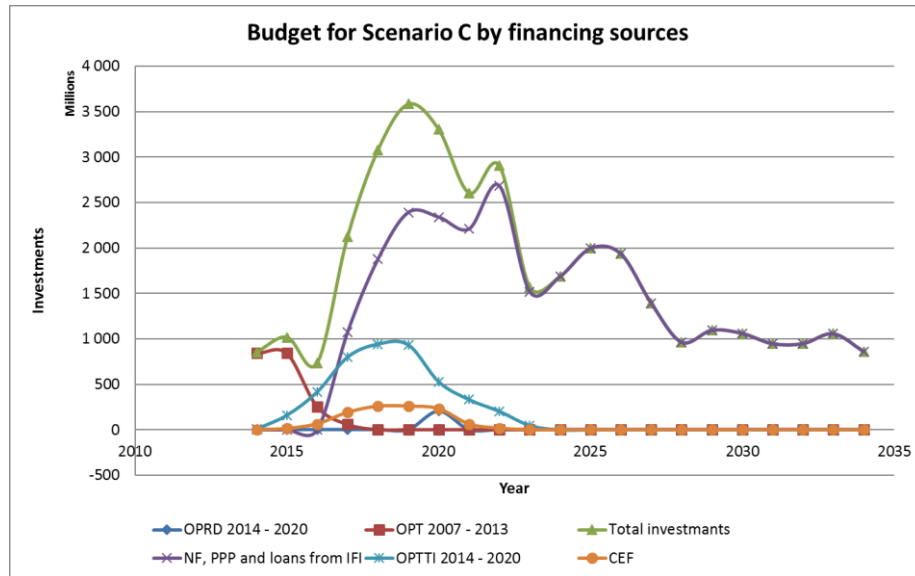


Figure 2-13 Budget for Scenario C by financing sources

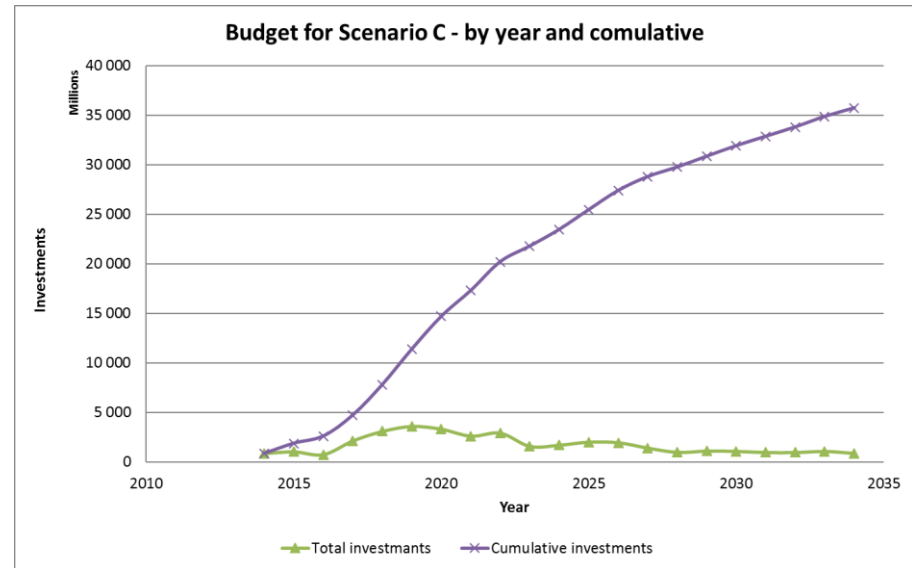


Figure 2-14 Budget for Scenario C

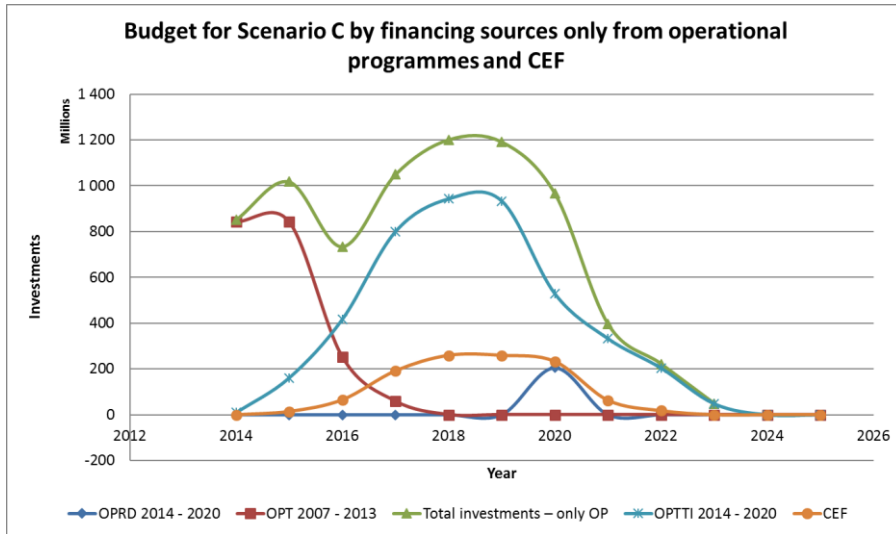


Figure 2-15 Budget for Scenario C by financing sources only from operational programmes and CEF

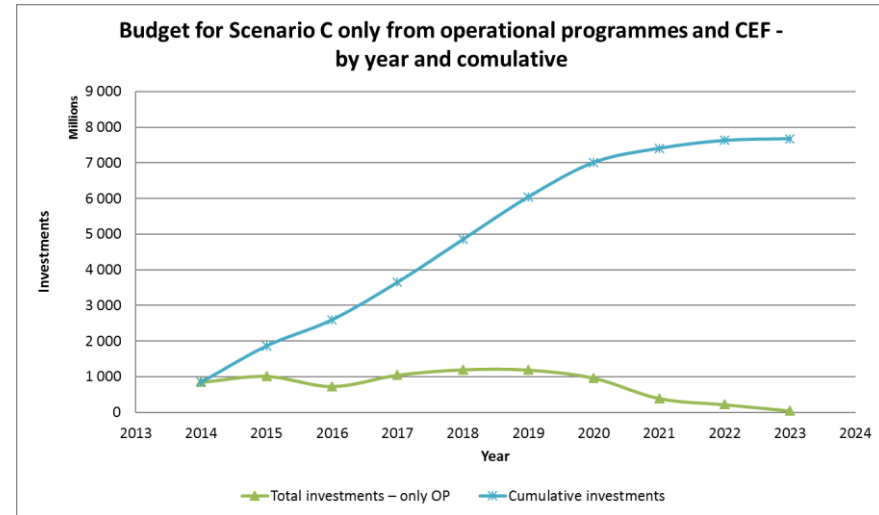


Figure 2-16 Budget for Scenario C only from operational programmes and CEF

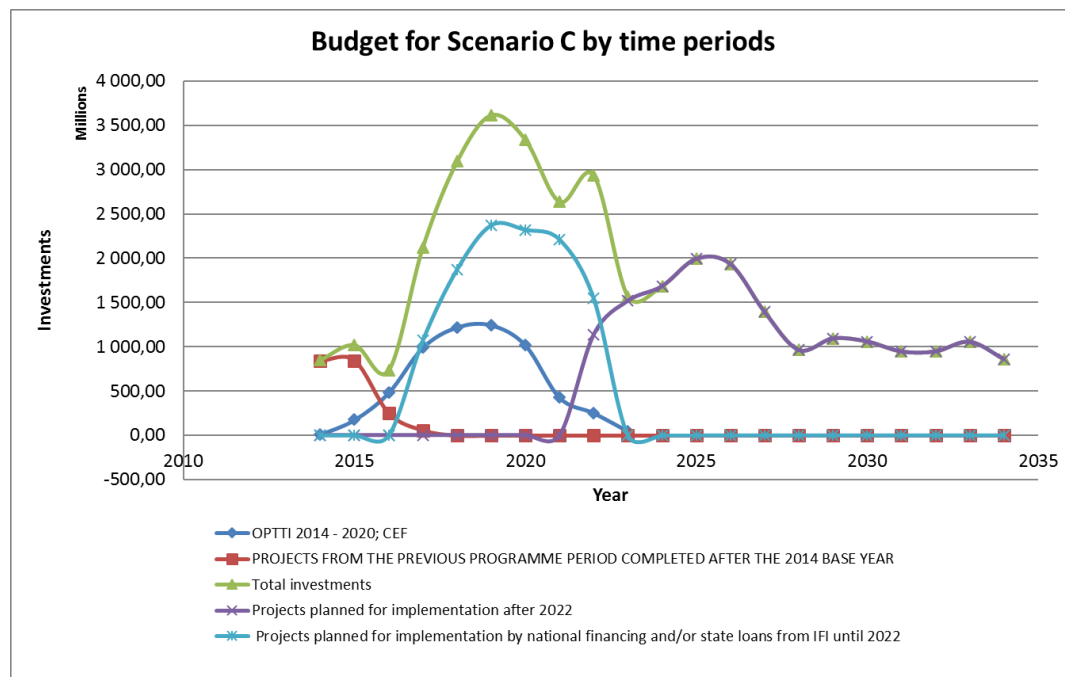


Figure 2-17 Budget for Scenario C by time periods

III. ASSESSMENT AND SELECTION OF SCENARIO FOR DEVELOPMENT OF THE TRANSPORT SYSTEM UNTIL 2030

3.1 METHODOLOGY FOR ASSESSMENT OF SCENARIOS

3.1.1 APPROACH AND PRINCIPLES OF ASSESSMENT

The assessment by multi-criteria analysis (MCA) aims to analyze the complex effects of combinations of measures proposed in different development scenarios. Multi-criteria analysis is a tool for comparing options with each other and not against benchmarks. Due to this fact there are also necessary preliminary analyzes of the measures and the identification of options. Another feature why using multi-criteria analysis is that it can set priorities of assessments, i.e. a set of criteria (e.g. environmental) can be prioritized over others by receiving more points.

The developed scenarios are assessed by multi-criteria analysis. Criteria, sub-criteria and indicators set in the multi-criteria analysis are assessed by data derived from modeling of identified scenarios with the developed transport model. For indicators for which there are no appropriate data obtained from the transport model relevant expert acceptances are made.

The assessment aims to analyze the complex effects of combinations of measures proposed in different development scenarios.

In preparation of the assessment of alternatives the following methodology is implemented:

- Identification and determining of appropriate basic criteria and sub-criteria for the assessment.
- Identification of appropriate indicators for the assessment of criteria.
- Description of indicators as key objectives and content.
- Assessment of alternative scenarios for each indicator, sub-criterion and criterion.
- Synthesis and summary of the assessment on the level of basic criteria.
- Displaying the results of the application of multi-criteria analysis for the different alternative scenarios.
- Selection of the most appropriate scenario for its inclusion in the integrated transport strategy.

The used system of indicators for assessing infrastructure projects, measures and scenarios is presented below in the appendix.

On the basis on all indicators displayed, the description of their objective and content, values are identified that determine the extent of compliance with the requirements of the respective criterion. A scale is selected from 1 to 5 providing comparable quantitative measurement of each indicator, where the particular value is motivated after expert acceptance or after rating within the range from 1 to 5 of appropriate and relevant quantitative data obtained from the modeling of transport system using the developed transport model for each of the alternatives. The smaller values are negative, while higher values are positive.

To determine the importance of each criterion in choosing the most suitable alternative, weight ratio is defined which is measured by percentage proportion, where the total value for all criteria may not exceed 100%. The relative weight is motivated for each specific case. The total amount of weight ratios is 100%.

For each alternative a final comprehensive assessment is determined from the MCA by adding together all the values of indicators multiplied by the respective weight ratios. The scenario, the alternative with the greatest value of the complex indicator is the scenario which can be selected as the best. The other scenarios are ranked based on the obtained values of the complex indicator.

3.1.2 SYSTEM OF CRITERIA AND INDICATORS FOR COMPREHENSIVE ASSESSMENT OF SCENARIOS. APPROACH IN DEFINING THE SYSTEM.

The main objective of this analysis is to define the basic criteria, sub-criteria and indicators that reflect the objectives of the given scenario, the interests and needs of all parties involved in the projects of the scenario, as well as all entities that will be affected by the implementation of this scenario.

From this perspective, the requirements to the basic criteria for assessment of different scenarios can be grouped in the following areas:

- Strategic, political and legal requirements.

It covers and reports on the contribution for the implementation of key European and national strategies and policies, effective maintenance and modernization of transport infrastructure, the establishment of trans-European network and the level of support for balanced regional development.

- Socio - economic criteria and contribution to regional development.

It covers and accounts the contribution in realization of the given scenario of socio - economic and regional development.

- Effectiveness of users of transport infrastructure.

It covers and reports on the effectiveness of operators of transport services (the users of transport infrastructure), the levels of consumption of energy and the costs for the operation and maintenance of transport vehicles.

- Expenses for realization of scenarios and measures and their financial viability.

It covers and reports on the total value of investments for realization of the respective scenario, the cost of operation and maintenance, financial viability (is there funding provided), the life cycle of assets at the end of the forecast period and cost effectiveness.

- Financial and economic efficiency of a given scenario.

It covers, evaluates and reports on the financial and economic efficiency of a given scenario.

- Impact of a scenario on the environment and security.

It covers, evaluates and reports on the impact on the population in terms of environment and security, modal split (achieving sustainable transport system by shifting traffic from road to railroad), which is implemented in a given scenario. It also takes into account the impact on biodiversity, landscape and preservation of cultural heritage.

Based on these requirements and to achieve the objective of the analysis the following main criteria are outlined and defined:

- Strategic, political and legal requirements
- Socio - economic criteria and contribution to regional development
- Effectiveness of users of transport infrastructure
- Expenses for realization of scenarios and measures and their financial viability
- Financial and economic efficiency of a given scenario
- Impact of a scenario on the environment and security

For each main criterion are defined sub-criteria and indicators reflecting the impact.

This system represents a framework for evaluating certain strategic objectives and the scope of decisions taken. Developed in advance, this system of indicators could serve as a tool for analyzing the condition of the transport system and identifying the problems. Furthermore, based on these indicators post-project monitoring should be carried out. Overall, the primary indicators for the functioning of the system are the basis for drawing up the most specific programmatic indicators. For example, the objectives of some programs to increase the share of rail transport for passenger and freight transportation aims at reducing the amount of harmful emissions and greenhouse gases, reducing the amount of consumed fuel that is derived from determining the primary indicators such as car-kilometers, speed on sections and others. Table 3-1 shows the most commonly used indicators and their relationship with the primary indicators of the functioning of the transport system received based on data after modeling the transport model.

Table 3-1 A system of criteria and indicators for assessing scenarios

Strategic, political and legal criteria		
Main criterion	Criterion	Indicators for assessment of criteria
1. Strategic, political and legal criteria	1.1 Contributing to the implementation of EU and national strategies and policies	1.1.1 Compliance with national and European policies, strategies, programs and plans.
	1.2 Effective modernization of transport infrastructure	1.2.1 Remove the "bottlenecks" and increasing transport capacity 1.2.2 Improving the accessibility to relevant infrastructure
	1.3. Creation of Trans European Network	1.3.1 Integration of the Bulgarian transport system into the EU transport system
	1.4. Supporting balanced territorial development	1.4.1 Development of sustainable transport
Socio-economic criteria		
Main criterion	Sub-criterion	Impact
2. Socio - economic criteria and contribution to regional development	2.1 Socio - economic criteria	2.1.1 Accessibility for socially disadvantaged persons to transport
		2.1.2 Accessibility for persons with reduced mobility to transport
		2.1.3 Creating local employment during the implementation of the scenario
		2.1.4 Contribution to the GDP of the country and the GDP of the regions
		2.1.5 Reduced time needed to travel
		2.1.6 Prices of transport services
		2.1.7 Affordability of transport prices
		2.1.8 Accessibility to job places
		2.1.9 Accessibility to retail outlets
		2.1.10 Accessibility to social services and health care
	2.2 Contribution to regional development	2.2.1 Increasing regional tourist potential
		2.2.2 Improving mobility and accessibility of the population
		2.2.3 Accessibility to tourist sites and recreation areas
		2.2.4 Transport accessibility to major cities
Effectiveness of users of transport infrastructure		
Main criterion	Sub-criterion	Impact
3. Economic efficiency of operators	3.1 The consumption of energy	3.1.1 Spent fuel
		3.1.2 Consumption of traction electricity
	3.2 Costs for operation and maintenance of transport vehicles	3.2.1 Costs for operation and maintenance of motor vehicles
		3.2.2 Costs for operation and maintenance of wagons and locomotives
Costs for implementation of projects and measures		
Main criterion	Sub-criterion	Impact
4. Costs for implementation of projects and measures	4.1 Total value of investments	4.1.1 Investment costs
		4.1.2 Structure of investments
		4.1.3 Costs of expropriation of property
	4.2 Costs for operation and maintenance	4.2.1 Operating costs
		4.2.2 Maintenance costs
	4.3 Financial viability	4.3.1 Funding provided

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		4.3.2 Financial sustainability
	4.4 Life cycle of assets at the end of the forecast period	4.4.1 Depreciation and amortization policy
		4.4.2 Residual value of assets
		4.3.3 Reinvestment and renewal of assets
	4.5. Cost effectiveness	4.5.1 NPV of total investments and operating and maintenance costs
		4.5.2 Part of NPV of the total investments and operating and maintenance costs attributable to transport work unit
Financial and economic efficiency of a given scenario		
Main criterion	Sub-criterion	Impact
5. Financial and economic benefits of the project	5.1 Financial analysis	5.1.1 Financial internal rate of return on investment
		5.1.2 Contribution of Community
		5.1.3 Financial internal rate of return on capital
	5.2 Economic analysis	5.2.1 Economic internal rate of return
		5.2.2 Benefits - costs ratio
Environment and security		
Main criterion	Sub-criterion	Impact
6. Environment	6.1 Population	6.1.1 Noise and vibration
		6.1.2 Greenhouse gas emissions
		6.1.3 Air pollution
		6.1.4 Accidents, killed, seriously injured and slightly injured persons
		6.1.5 Bypass roads around major cities
	6.2 Modal split	6.2.1 Share of public transport
		6.2.2 Share of rail transport
	6.3 Biodiversity	6.3.1 Impact on protected areas of international importance
		6.3.2 Impact on protected areas of national importance
		6.3.3 Effects on biodiversity, flora, fauna and water
	6.4 Landscape	6.4.1 Visible landscape
	6.5 Cultural and historical heritage	6.5.1 Affected areas and sites of cultural and historic heritage

3.1.3 METHODOLOGY FOR DETERMINING THE VALUE OF INDICATORS

On the basis on all indicators displayed, the description of their purpose and content, values are identified that determine the extent of compliance with the requirements of the criterion or the degree of impact.

As noted above, a scale of 1 to 5 is selected providing a comparable quantitative measurement of each parameter, where the specific value is motivated on expert basis or is obtained after calculations (ranking within the range of 1 to 5) for each of the alternatives (scenarios).

The scale of assessments is shown in Table 3-2.

Table 3-2 Assessment scale

Excellent	5
Favorable	4
Satisfactory	3
Unfavorable	2
Critical	1

For taking into account the importance of each criterion in choosing the most suitable alternative (scenario) a weight ratio is defined which is measured by percentage proportion where the total value for all criteria may not exceed 100%. The relative weight is also motivated for each separate case.

3.2 RESULTS OF THE ASSESSMENT BY MULTI-CRITERIA ANALYSIS

Multi-criteria analysis is realized on the basis of the selected above basic criteria, sub-criteria and indicators. Along with the description an assessment is made of key criteria, sub-criteria and indicators and on this basis the appropriate scenario has been selected. "Reference scenario" and three scenarios with development "Scenario A", "Scenario B" and "Scenario C" are being compared and selection is made.

3.2.1 STRATEGIC, POLITICAL AND LEGAL CRITERIA

Table 3-3 below outlines the strategic, political and legal criteria, sub-criteria and indicators. The indicators are assessed and evaluated.

Table 3-3 Strategic, political and legal criteria

Strategic, political and legal criteria			Reference scenario	Scenario A	Scenario B	Scenario C
Main criterion	Criterion	Indicators for assessment of criteria				
1. Strategic, political and legal requirements	1.1 Contribution to the implementation of EU and national strategies and policies	1.1.1 Compliance with national and European policies, strategies, programs and plans.	1,00	3,16	5,00	5,00
	1.2 Effective modernization of transport infrastructure	1.2.1 Removing the "bottlenecks" and increasing transport capacity	1,00	3,52	4,25	4,87
		1.2.2 Improving the accessibility of relevant infrastructure	1,00	3,52	4,25	4,87
	1.3. Creation of Trans European Network	1.3.1 Integration of the Bulgarian transport system into the EU transport system	1,00	2,00	4,00	5,00
	1.4. Support for balanced territorial development	1.4.1 Development of sustainable transport	1,00	3,16	5,00	5,00
Total values of the criterion by scenarios			5,00	15,36	22,50	24,73
Values of the criterion taking into account the weight with regard to scenarios			1,00	3,07	4,50	4,95

This criterion shows to what extent are satisfied the requirements on each of the scenarios listed. The scenarios are compared in terms of:

- Contribution to achieve compliance with European and national policies, strategies, programs and plans (indicator shows the compliance).
- Effective modernization of transport infrastructure evaluated by eliminating "bottlenecks" and increasing the transport capacity and improving the accessibility to relevant infrastructure.
- Creating trans-European network by integrating the Bulgarian transport system into the EU transport system.
- Supporting the balanced territorial development through the development of sustainable transport.

The weight of the criterion is 0.20, and the total weight of all the criteria is 1.00.

It is very important that the assessed alternative (scenario) should meet the European and national policies, strategies and plans. This would make the scenario attractive for funding and implementation. What matters is the compatibility of projects from the scenario considered with each other, as their implementation does not create problems but eliminates the "bottlenecks" and increases the transport capacity.

The striving to optimize the investment costs, which should be consistent with the scenario or the limited opportunities for co-financing, often impose compromises to be made in the design phase. This could be the selection of the proposed technology, materials for replacement, routes and more.

On the other hand, the designers strive to fully meet the requirements of the contracting authority reflected in the terms of reference and at the same time to fulfill all regulatory requirements at national and European level to integrate our transport network into the Europe transport network and the development of sustainable transport.

We should get such a development of different modes of transport so as to obtain a sustainable transport system and balanced territorial development.

European transport policy is related to the priority development of rail transport and the increase of the intermodality of shipments. This in turn leads to the creation of a sustainable transport system. Based on this, the assessment of compliance with the European and national strategies and policies and the development of sustainable transport and balanced territorial development is made on the basis of kilometers rehabilitated and upgraded railway lines for speeds above 100 km/h.

Eliminating the “bottlenecks”, increasing the transport capacity, improving the accessibility of the relevant infrastructure and creating trans-European network by integrating the Bulgarian transport system into the EU transport system is assessed by the total kilometers modernized and upgraded road and rail infrastructure.

With the highest value under this criterion ranks Scenario C (4,95 points). It most fully meets all the criteria, because it contains all possible projects, which also implies maximum funding. On the second place ranks Scenario B (4,50 points). It plans for more rail projects, but located at the end of the reference period because they do not have guaranteed funding. This scenario would have fully contributed to achieving a sustainable transport system and most completely would meet the requirements of the European and national transport policy for priority development of rail transport while at the same time complies with financing constraints.

On the third place ranks Scenario A (3,07 points). This scenario focuses on the limitations associated with the financing of projects within the scope of the scenario. And on fourth place ranks the reference option (1.00 point).

3.2.2 SOCIO - ECONOMIC CRITERIA AND CRITERIA FOR CONTRIBUTION TO REGIONAL DEVELOPMENT

Table 3-4 below presents the socio - economic criteria and the criteria for contribution to the regional development. The indicators are assessed and evaluated.

Table 3-4 Socio - economic criteria and contribution to regional development

Socio - economic criteria			Reference scenario	Scenario A	Scenario B	Scenario C	
Main criterion	Sub-criteria	Impact					
2. Socio - economic criteria and contribution to regional development	2.1 Socio - economic criteria	2.1.1 Accessibility for socially disadvantaged persons to transport	1,00	2,16	5,00	5,00	
		2.1.2 Accessibility for persons with reduced mobility to transport	1,00	2,00	4,00	5,00	
		2.1.3 Creating local employment during the implementation of the scenario	1,00	3,52	4,25	4,87	
		2.1.4 Contribution to the GDP of the country and the GDP of the regions	1,00	3,52	4,25	4,87	
		2.1.5 Reduced time needed to travel	1,00	2,99	4,08	5,00	
		2.1.6 Prices of transport services	4,00	3,00	3,00	3,00	
		2.1.7 Affordability of transport prices	4,00	3,00	3,00	3,00	
		2.1.8 Accessibility to job places	1,00	2,99	4,08	5,00	
		2.1.9 Accessibility to retail outlets	1,00	3,82	3,16	5,00	
		2.1.10 Accessibility to social services and health care	1,00	2,99	4,08	5,00	
	2.2 Contribution to regional development	2.2.1 Increasing regional tourist potential	1,00	3,52	4,25	4,87	
		2.2.2 Improving mobility and accessibility of the population	1,00	2,99	4,08	5,00	
		2.2.3 Accessibility to tourist sites and recreation areas	1,00	3,82	3,16	5,00	
		2.2.4 Transport accessibility to major cities	1,00	2,99	4,08	5,00	
	Total values of the criterion by scenarios			20,00	43,32	54,45	65,60
	Values of the criterion taking into account the weight with regard to scenarios			2,00	4,33	5,45	6,56

This is the criterion that shows to what extent the requirements on each of the scenarios listed are satisfied. The scenarios are compared in terms of:

- Socio - economic criteria related to the accessibility for socially disadvantaged persons to transport (assessed by the percentage reduction in the time needed to travel by public transport for the respective scenario), accessibility for persons with reduced mobility to transport (assessed on expert basis), accessibility to job places (assessed based on percentage reduction in time needed to travel by private and public transport), accessibility to retail outlets (assessed by the percentage reduction in the time needed to travel by private car - private transport) and accessibility to social

services and health care (assessed on the basis of the percentage reduction of the time needed to travel by public and private transport).

- Socio - economic criteria related to the creation of local employment during the execution of a scenario (assessed based on general infrastructure development - general kilometers of newly built, upgraded and rehabilitated road and railway sections for a given scenario).

- Socio - economic criteria related to the impact of the scenarios on the GDP of the country and the GDP of the respective regions (assessed based on general infrastructure development - general kilometers of newly built, upgraded and rehabilitated road and railway sections).

- Socio - economic criteria related to the reduced time needed to travel (assessed based on the percentage reduction of the time needed to travel by private and public transport), prices and affordability of transport services.

- Criteria for contribution to the regional development related to improving the regional tourism potential, improving the mobility and accessibility of the population (assessed based on the percentage reduction of the time needed to travel by private and public transport), improving the accessibility to tourist sites and recreation areas (assessed based on the percentage reduction of the time needed to travel by private transport - personal cars) and transport accessibility to major cities (assessed based on the percentage reduction of the time needed to travel by private and public transport), prices and affordability of transport services.

The values of parameters are obtained after expert assessment or after rating the initial data to values within the range of 1 to 5.

The weight of this criterion is 0.10, and the total value of all weights of the criteria used is 1.00

With the highest value under this criterion ranks Scenario C (6,56 points). On the second place ranks Scenario B (5,45 points), on the third place ranks Scenario A (4,33 points) and on the last fourth place ranks the reference scenario (2.00 points).

3.2.3 3 EFFECTIVENESS OF USERS OF TRANSPORT INFRASTRUCTURE

Table 3-5 below presents the criteria and indicators related to the economic efficiency of users of transport infrastructure. The indicators are assessed and evaluated.

Table 3-5 Economic effectiveness of users of transport infrastructure

Economic effectiveness of users of transport infrastructure			Reference scenario	Scenario A	Scenario B	Scenario C	
Main criterion	Sub-criterion	Impact					
3. Economic effectiveness of operators	3.1 The consumption of energy	3.1.1 Spent fuel	1.00	2.00	4.00	4.00	
		3.1.2 Consumption of traction electricity	1.00	2.00	4.00	4.00	
	3.2 Costs for operation and maintenance of transport vehicles	3.2.1 Costs for operation and maintenance of motor vehicles	2,89	2,25	3,92	3,65	
		3.2.2 Costs for operation and maintenance of wagons and locomotives	3.00	3.00	3.00	3.00	
	Total values of the criterion by scenarios			7,89	9,25	14,92	14,65
	Values of the criterion taking into account the weight with regard to scenarios			0,39	0,46	0,75	0,73

The scenarios are compared in terms of:

- Consumption of energy in realization of a given scenario, and
- Cost of operation and maintenance of transport vehicles in the realization of a given scenario.

The values of parameters are obtained after expert assessment or after rating the initial data to values within the range of 1 to 5.

The weight of this criterion is 0.05, and the total value of all weights of the criteria used is 1.00.

With the highest value under this criterion ranks Scenario B (0,75 points). On the second place ranks Scenario C (0,73 points), on the third place ranks Scenario A (0,46 points) and on the last fourth place ranks the reference scenario (0.39 points).

3.2.4 CRITERIA RELATED COSTS OF IMPLEMENTATION OF THE SCENARIOS AND MEASURES AND THEIR FINANCIAL VIABILITY

Table 3-6 below presents the criteria and indicators related to the costs for the implementation of the measures and projects. The indicators are assessed and evaluated.

Table 3-6 Costs for the implementation of projects and measures

Costs for the implementation of projects and measures			Reference scenario	Scenario A	Scenario B	Scenario C	
Main criterion	Sub-criterion	Impact					
4. Costs for the implementation of projects and measures	4.1 Total value of investments	4.1.1 Investment costs	5,00	2,48	1,75	1,13	
		4.1.2 Structure of investments	5,00	3,00	2,50	1,00	
		4.1.3 Costs of expropriation of property	5,00	2,48	1,75	1,13	
	4.2 Costs for operation and maintenance	4.2.1 Operating costs	5,00	2,48	1,75	1,13	
		4.2.2 Maintenance costs	5,00	2,48	1,75	1,13	
	4.3 Financial viability	4.3.1 Funding provided	5,00	4,00	3,00	1,00	
		4.3.2 Financial sustainability	5,00	4,00	3,00	1,00	
	4.4 Life cycle of assets at the end of the forecast period	4.4.1 Depreciation and amortization policy	5,00	4,00	3,00	1,00	
		4.4.2 Residual value of assets	1,00	3,52	4,25	4,87	
		4.4.3 Reinvestment and renewal of assets	1,00	3,52	4,25	4,87	
	4.5. Cost effectiveness	4.5.1 NPV of total investments and operating and maintenance costs	5,00	2,48	1,75	1,13	
		4.5.2 Part of NPV of the total investments and operating and maintenance costs attributable to transport work unit	1,00	5,00	3,00	2,00	
	Total values of the criterion by scenarios			48,00	39,45	31,76	21,40
	Values of the criterion taking into account the weight with regard to scenarios			12,00	9,86	7,94	5,35

The criterion "Costs for the implementation of projects and measures" indicates the degree of investments for each of these scenarios. Scenarios are compared and evaluated in terms of:

- The value of the investments for each scenario related to the assessment of the investment costs, structure of investments and the cost of expropriation of property (assessed based on the overall development of infrastructure - general kilometers of newly built, upgraded and rehabilitated road and railway sections for a given scenario).
 - The value of the costs of operation and maintenance (assessed based on general infrastructure development - general kilometers of newly built, upgraded and rehabilitated road and railway sections for a given scenario).
 - Financial viability associated with secured financing and financial sustainability of projects and measures included in the relevant scenario.
 - Lifecycle of assets at the end of the forecast period associated with the assessment of depreciation and amortization policy, assessment of reinvestments (asset renewals) and assessment of the residual value of the assets (assessed on the basis of general infrastructure development - general kilometers of newly built, upgraded and rehabilitated road and railway sections for a given scenario).
 - Cost effectiveness related to the assessment of the NPV of the total investments and the costs of operation and maintenance and of the portion of the NPV of the total investments and operating and maintenance costs attributable to unit of transport operation (assessed based on the overall development of the infrastructure and traffic).

The values of the parameters are obtained after rating the initial data to values within the range from 1 to 5. Higher values are positive, while lower values are negative.

The weight of the criterion is 0,25, and the total of all weights of the used criteria is 1.00. The weight of this criterion is high, due to the importance of the level of investment needed and the related sub-criteria and indicators. The higher the investments, the harder it would be to provide financing and financial sustainability of projects included in this scenario and this makes it more risky and difficult to implement.

The highest value of this criterion is the reference scenario (12,00 points). Second is the "scenario A" (9,86 points), third scenario "scenario B" (7,94 points) and finally fourth place was "Scenario C" (5,35 points).

With the highest value under this criterion ranks the Reference Scenario (12,00 points). On the second place ranks Scenario A (9,86 points), on the third place ranks Scenario B (7,94 points) and on the last fourth place ranks Scenario C (5,35 points).

3.2.5 CRITERIA RELATED TO THE FINANCIAL AND ECONOMIC EFFECTIVENESS OF A GIVEN SCENARIO

Table 3-7 below presents the criteria and indicators related to the financial and economic effectiveness of a given scenario. The indicators are assessed and evaluated.

Table 3-7 Financial and economic effectiveness of a given scenario

Financial and economic effectiveness of a given scenario			Reference scenario	Scenario A	Scenario B	Scenario C
Main criterion	Sub-criterion	Impact				
5. Financial and economic benefits of the project	5.1 Financial analysis	5.1.1 Financial internal rate of return of the investment.	1.00	5.00	3.00	2.00
		5.1.2 Community contribution.	1.00	5.00	3.00	2.00
		5.1.3 Financial internal rate of return of the capital.	1.00	5.00	3.00	2.00
	5.2 Economic analysis	5.2.1 Economic internal rate of return.	1.00	5.00	3.00	2.00
		5.2.2 Benefit coefficient – costs.	1.00	5.00	3.00	2.00
	Total values of the criterion by scenarios			5.00	25.00	15.00
Values of the criterion taking into account the weight with regard to scenarios			0,50	2,50	1,50	1.00

Scenarios are compared and evaluated in terms of:

- Financial effectiveness related to the evaluation of possible values of financial internal rate of return on investment, the Community contribution and financial internal rate of return of capital.
- Economic efficiency associated with the evaluation of possible values of economic internal rate of return and benefits ratio - costs.

The values of the parameters are obtained after rating the initial data to values within the range from 1 to 5. Higher values are positive, while lower values are negative.

The weight of the criterion is 0,10, and the total of all weights of the used criteria is 1.00.

With the highest value under this criterion ranks Scenario A (2,50 points). On the second place ranks Scenario B (1,50 points), on the third place ranks Scenario C (1,00 points) and on the last fourth place ranks the Reference Scenario (0,50 points).

3.2.6 CRITERIA RELATED TO THE EVALUATION OF A GIVEN SCENARIO ON ENVIRONMENT AND SECURITY

Table 3-8 below presents the criteria and indicators related to the impact on the environment, climate and security level in the implementation of any of the accepted scenarios. The indicators are assessed and evaluated

Table 3-8 Environment and security

Environment and security			Referenc e scenario	Scenari o A	Scenari o B	Scenari o C	
Main criterion	Sub-criterion	Impact					
6. Environment and security	6.1 Population	6.1.1 Vibration noise	2,00	3,00	5,00	4,00	
		6.1.2 Greenhouse gas emissions	5.00	3.00	4.00	1.00	
		6.1.3 Air pollution	5.00	3.00	4.00	1.00	
		6.1.4 Accidents, fatalities, serious and light injuries	1,00	3,51	4,71	5,00	
		6.1.5 Bypass routes for big towns	1,00	1,12	5,00	4,96	
	6.2 Modal split	6.2.1 Share of public transport	1,00	3,00	5,00	4,00	
		6.2.2 Share of railway transport	1,00	2,87	5,00	4,97	
	6.3 Biodiversity	6.3.1 Impact on Protected areas with international significance	5.00	3,50	3.00	1.00	
		6.3.2 Impact on Protected areas with national significance	5.00	3,50	3.00	1.00	
		6.3.3 Effects on biodiversity, flora, fauna and water	5.00	3,50	3.00	1.00	
	6.4 Landscape	6.4.1 Visible landscape	1.00	4,00	4.00	4,50	
	6.5 Cultural and historical heritage	6.5.1 Impacted areas and sites of cultural and historical heritage	5.00	3,50	3.00	1.00	
	Total values of the criterion by scenarios			38,00	37,00	48,71	33,43
	Values of the criterion taking into account the weight with regard to scenarios			11,10	11,25	14,61	10,03

The criterion for Environment and Security shows to what extent the implementation of any of the accepted scenarios affect environmental change, security, cultural heritage and population. Scenarios are compared and evaluated in terms of:

- The impact on the population evaluated in terms of noise and vibration caused after the realization of a given scenario, the levels of greenhouse gas emissions affecting climate change, levels of gases emitting harmful elements and solid particles polluting the air, the level of safety related with occurring incidents and the corresponding number of fatalities, seriously injured and slightly injured and the positive effects after construction of ring roads around cities.

The following emissions of gases, solids and elements have been evaluated: CO (carbon monoxide); CO₂ (carbon dioxide); PM (particle matters); HC (hydrocarbons); NO_x (nitrogen oxide); PN (particle number); Benzene; CH₄ (methane); SO₂ (sulfur dioxide); NO₂ (nitrogen dioxide); NMHC (non-methane hydrocarbon); NH₃ (ammoniac) and N₂O (nitrous oxide). Values for emissions were obtained after modeling the scenarios with the developed transport model.

- The achieved modal split after implementation of a given scenario assessed by the share of public transport for passengers and the share of railway transport in public transport for passengers.
- The impact of the realization of a given scenario on biodiversity.

This indicator is evaluated based on the potential effect on protected areas of international importance affecting the protected areas of national importance and likely effects on biodiversity, flora, fauna and water.

- The impact of the realization of a given scenario on the surrounding area (landscape).
- The impact of the realization of a given scenario on the preservation of cultural heritage.

This index is evaluated based on the potential effect on areas and sites of cultural heritage.

The values of the parameters are obtained after rating the initial data to values within the range from 1 to 5. Higher values are positive, while lower values are negative.

The weight of the criterion is 0.30, and the total of all weights of the criteria used is 1.00. The weight of this criterion is highest due to its importance for the environment, reducing the impact on climate change, air pollution, biodiversity, the landscape and the preservation of our cultural and historical heritage. Also, the reduction of accidents and related numbers of killed and injured is important, which to a higher level of safety. The higher the positive effects are, the higher the values of the indicators.

With the highest value under this criterion ranks Scenario B (14,61 points). On the second place ranks Scenario A (11,25 points), on the third place ranks the Reference Scenario (11,10 points) and on the last fourth place ranks Scenario C (10,03 points).

3.2.7 RANKING OF ALTERNATIVES BY SCENARIOS

3.2.7.1 *Evaluating variants.*

The relative weight determines the importance of each criterion in the evaluation of the alternatives (scenarios). The starting point for their prioritization is as follows:

- strategic, political and legal criteria are very important and therefore their influence on the choice of scenario is significant. So these are given relative weight of 0.20 or 20%.
- socio-economic criteria are important for the choice of an alternative because they determine certain expectations of society in various aspects of social development of the country or areas affected after the realization of a scenario. Therefore, this criterion has a weight of 0.1 or 10%.
- the criterion related to the efficiency of users of transport infrastructure by operators offering transport services has a weight of 0.05 or 5%.
- the criterion for Costs for realization of projects and measures is very important, and because of this it is related to the opportunities for successful financing and realization of a given scenario. This criterion has a weight of 0.25 or 25%.
- the criterion related to the financial and economic efficiency of a scenario determine the viability thereof. It has been expertly assessed based on previously developed and designed transportation projects. It has a relative weight of 0.10 or 10%.

▪ The most important criterion is related to environment and security. The benefits of implementing a scenario are estimated precisely according to the indicators included in the criteria. It has the highest relative weight of 0.30 or 30%.

The values obtained in the relevant criteria are multiplied by their relative weights and finally summed up. Thus, the final score for a given scenario, after application of the MCA is obtained.

The scenario with the highest value of the evaluation is selected. We are looking for the maximum evaluation and the corresponding scenario.

3.2.7.2 Evaluation of the alternatives and recommendations for selections

On the basis of the evaluation of the indicators for each scenario and the justified weighting of the criteria the rankings of scenarios is obtained for this strategy and is presented below in Table 3-9.

Table 3-9 Final ranking of scenarios

CRITERIA	REFERENCE SCENARIO	SCENARIO A	SCENARIO B	SCENARIO C
STRATEGIC, POLITICAL AND LEGAL CRITERIA	1,00	3,07	4,50	4,95
SOCIO-ECONOMIC CRITERIA	2,00	4,33	5,45	6,56
EFFICIENCY OF USERS OF THE TRANSPORT INFRASTRUCTURE	0,39	0,46	0,75	0,73
COSTS FOR PROJECT AND MEASURE IMPLEMENTATION	12,00	9,86	7,94	5,35
FINANCIAL AND ECONOMIC EFFECTIVENESS OF A GIVEN SCENARIO	0,50	2,50	1,50	1,00
ENVIRONMENT AND SECURITY	11,10	11,25	14,61	10,03
TOTAL RANK TAKING INTO ACCOUNT THE CRITERIA WEIGHTING	26,99	31,48	34,74	28,62

After application of the MCA it is evident that Option B has a maximum score of 34,74 points. Second is Option A with 31.48 points, third is Option C with 28,62 points and finally the reference scenario with a score of 26.99 points.