**Ex-post CBA R2 Ruskovce – Pravotice**

The Grant Agreement for the expressway project „R2 Ruskovce – Pravotice“ was signed on 10. 10. 2013. The Amendment to the Grant Agreement was signed on 06. 07. 2015. It was a financial contribution for the construction of 9,56 km of the expressway R2 Ruskovce – Pravotice.  The Beneficiary (National Motorway Company, hereinafter as “NMC“) received a financial contribution of **EUR** **71 103 927,27**, consisting of the contribution of **EUR** **60 438 338,18** from the European Regional Development Fund (85 % of the total amount) and the contribution of **EUR** **10 665 589,09** from the state budget (15% of the total amount). The contribution was determined on the basis of the financial analysis of the project’s cost/benefit analysis (CBA) at the financial  gap of **73,95 % (i.e. 73,95 % of the eligible project expenditure was provided from the Operational Program Transport 2007 - 2013)**. The expressway R2 Ruskovce – Pravotice is in operation since October 2016.

As the Managing Authority, the Ministry of Transport and Construction of the Slovak Republic proceeded to an ex-post review of CBA to improve the quality of future CBAs for road projects, to refine transport modelling of future projects and to help to update the CBA Methodological Guide (if proven necessary).

This activity will contribute to increasing the efficiency of expenditure of public and EU funds.

The following actual input data for the period from 2014 to 2018 were considered for the ex-post CBA:

*GDP – source: Statistical Office of the SR, Ministry of Finance of the SR, Slovak CBA Guide OPII*

*Inflation – source: Statistical Office of the SR;*

*Fuel prices – source: Statistical Office of the SR;*

*Investment costs – source: National Motorway Company accounting;*

*Traffic intensity – source: nation traffic census 2015, automated traffic counters of NMC;*

*Operation and Maintenance costs – source: National Motorway Company accounting;*

*Revenues – source: National Motorway Company accounting;*

*Accidents – source: Police of the SR*

Subsequently, the CBA of the entire project was recalculated including predictions until 2043 using the currently valid methodology for the Operational Programme Integrated Infrastructure (2014 - 2020). The original CBA was calculated using the methodology of the previous Operational Programme Transport (2007 - 2013).

**Evaluation of financial analysis**

The financial gap has increased from **73,95% to 85,11%,** which means that the contribution from the operational programme resources should currently be higher than those in the Grant Agreement dated in 2015. The increase of the percentage of the financial gap is mainly due to decline of the real income generated by the project as well as higher amount of the investment cost.

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| **Investment cost** | Original  **95 947 667 EUR** | Updated  **108 148 362 EUR** | **+12,7 %** |

The stated investment costs are undiscounted and excluding VAT.

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| **Residual value** | Original  **30 405 686 EUR** | Updated  **25 715 683 EUR** | **-15,4 %** |

In accordance with the current CBA manual the updated residual value was recalculated using the method on the basis of the lifetime of the infrastructure components.

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| **Discounted**  **Revenues** | Original  **20 747 951 EUR** | Updated  **7 966 617 EUR** | **-61,6 %** |

Incremental toll revenues are directly dependent on the freight transport intensities. Freight transport intensities on the analysed expressway section are lower compared to the expected traffic volumes from the original CBA. Another reason for the decline in expected revenues is the change in the method for their calculation; whereas in the original CBA only the toll revenue on the newly built expressway section R2 was quantified, the updated CBA includes the difference of toll revenues between the R2 section and the parallel road I/50.

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| **Operation & Maintenance costs** | Original  **4 627 973 EUR** | Updated  **1 123 777 EUR** | **-75,7 %** |

A significant change concerns the operation and maintenance costs of the project, which is caused by the change in the method of calculation in the current version of the CBA Methodological Guide. The current maintenance costs and periodic maintenance costs are incrementally higher due to the new CBA methodology: the considered area is calculated based on the size of the surface of the road in square meters of the parallel road I/50 as well as the expressway R2. However, there is a notable cost saving in the toll collection costs and therefore the overall cost of operation and maintenance of the infrastructure is lower.

**Evaluation of the economic analysis**

The cost benefit ratio (B/C) decreased from **5,32** to **2,76**. The decrease of B/C value was caused mainly due to lower values of the indicators below, as well as due to the fact that the ex-post CBA was recalculated using the currently applicable methodology that contains different rates (such as lower Value of time), and it also states a compulsory calculation of externalities (environmental pollution, greenhouse gas emissions, noise).

Despite the reduction in the cost benefit ratio we can conclude that the project is beneficial for society as the indicator B/C remains above value 1.

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| **Passenger travel time savings** | Original  **428 341 903 EUR** | Updated  **180 329 931 EUR** | **-57,9 %** |

Time savings have been reduced because of the use of the real traffic intensities, which are lower than those assumed by the transport model.

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| **Fuel costs savings** | Original  **9 113 559 EUR** | Updated  **20 003 413 EUR** | **119,5 %** |
| **Other vehicle operating costs savings** | Original  **-26 248 595 EUR** | Updated  **9 561 005 EUR** | **136,4 %** |

Vehicle operating costs consist of the fuel consumption costs (where savings are generated) and other operating costs of vehicles, such as depreciations, where the projects also generates savings.

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| **Accident costs savings** | Original  **10 935 649 EUR** | Updated  **-5 172 023 EUR** | **-147,3 %** |

The accident rate was calculated on the basis of the number of accidents for years 2014 – 2018 (parallel road), respectively 2016 – 2018 (expressway R2).

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| **Emission costs savings** | Original  **- EUR** | Updated  **38 088 283** | **-** |

Emission savings were not quantified in the original CBA. Based on the incremental fuel consumption (these form the basis for calculation of emissions) over the entire reference period significant savings were also calculated.

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| **Noise costs savings** | Original  **- EUR** | Updated  **14 491 492 EUR** | **-** |

Savings in the noise costs were not quantified in the original CBA. In general, construction of expressway sections means that the population is less exposed to noise from passenger and the freight traffic, which was also confirmed in the analysed section of the expressway.

**Final evaluation**

The CBA's retrospective assessment showed justification for funding the project from EU funds. The financial analysis has confirmed the assumption that the project is unable to fully cover the expenditure of its revenue, and therefore a financial contribution from the European Regional Development Fund is justified. The economic analysis confirmed the efficiency of the public funds expenditures as well as justification of the project, since the project's benefits to the society as a whole, outweigh its costs.