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MTÜ ARB
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RB Rail AS reply's to MTÜ ARB.

Dear Priit Humal, Karli Lambot, Ilmar Paul and Raul Vibo,

thank you for your attention and your letters.

First of all, I would like to use this opportunity to introduce myself. I am Aivar Jaeski, a new team member in the Rail Baltica project as a country manager for Estonia and Finland, Estonian branch director. I joined RB Rail with the strong belief on the benefits of this project that it can bring to Estonia. As logistics engineer I am convinced that logistics infrastructure is the bloodstream for the economy. This infrastructure consists of roads, harbors, airports, signal and data lines, and also railways. If we want to live in prosperity we have to invest in infrastructure.

Transparency and openness in the implementation of a project of such a scale is important. Being for 25 years a governmental official, I am sure that our governmental and European officials are doing the best to establish effective and critical oversight on all phases of the Rail Baltica project. Therefore, RB Rail has stressed for many times that we value the true, open and constructive dialogue with stakeholders, including yourselves. Thus, allow us to express our deepest disappointment on your behavior at the meeting on September 18, 2017, initiated and organized as a good gesture by RB Rail, while MTU ARB refused to have a constructive dialogue with the gathered internal and external experts on the Rail Baltica Cost-Benefit Analysis (CBA).

The Rail Baltica project is involving and engaging many different players, including non-government organizations across the Baltics and also in the European Union. Only constructive dialogue among experts from different institutions will assure truthful result.

Nevertheless, please, find below our experts' responses to your questions according your numbering (please note that there are multiple overlaps in your questions):

1. *What kind of heavy truck type and why this is chosen in the assumptions "Heavy Truck Fuel % of OPEX 25%"?*

- a. The source referred to in the Rail Baltica Global Project CBA Final report (hereinafter – EY report) page 147 refers to the data that were used as a proxy (the range between 25-30%) that was substantiated during discussions with local industry (as indicated in the section 13.4. of EY report, more than 40 stakeholders have been interviewed) to arrive at relevant benchmark rate for the calculations, considering the local conditions.
 - b. MTU ARB does not provide a justifiable source regarding the need to change the assumptions of the EY report, merely indicating that 24 cents/km is the value which “corresponds to the actual situation today” (no reference provided).
2. *Why in the assumptions is used lower excise tax than actual today in Estonia and why this excise tax is not magnified by GDP growth as it is in the calculations of air pollution external costs?*
- Regarding the tax rate: the excise tax rate was chosen in adherence to the general methodology of the Global Project CBA, using a united source (Eurostat) for the date of the reference year for the analysis.
 - Regarding excise tax growth: RB Rail fully supports the position proposed by MTU ARB: “How much exactly excise and fuel prices are going to be in the future, or what kind of fuel is going to be used, nobody knows.”, which supports the approach by EY of keeping the variables unchanged in the forecasting period to the extent possible due to the uncertainty in the future. However, RBR cannot find a detailed justification for the assumption suggested by MTU ARB: “It makes sense to assume that excise duty will rise at the same pace as the predicted increase in climate change effects.” The analysis is done on real terms (page 143 of EY report), and all tax rates used in the analysis have been kept constant in real terms.
3. *What kind of heavy truck type and why this is used in the assumptions for external costs for truck in the motorway 0.1 EUR/vkm and in the city 0.22 EUR/vkm?*
- a. In line with the EU CBA guide (http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/cba_guide.pdf), the question should be considered from two separate perspectives:
 - i. Forecasting approach and reference scenario perspective. As per the CBA guide (page 26), CBA compares a scenario with-the project with a counterfactual baseline scenario without-the-project (Incremental approach). The incremental approach requires that the counterfactual scenario is defined as what would happen in the absence of the project. In cases of investments aimed at improving an already existing facility, it should include the costs and the revenues/benefits to operate and maintain the service at a level that it is still operable (Business As Usual (BAU)) or even small adaptation investments that were programmed to take place anyway (do-minimum). The choice between BAU or do-minimum as counterfactual should be made case by case, on the basis of the evidence about the most feasible, and likely, situation. If uncertainty exists, the BAU scenario shall be adopted as a rule of thumb. If dominium is used as counterfactual, this scenario should be both feasible and credible, and not cause undue and unrealistic additional benefits or costs. According to the EU CBA Guide, in most aspects of the analysis the reference scenario should be neutral and reflect the information that is known up to the point of the preparation of the forecasts. In other words, due to uncertainty of the future, the analysis should, to the extent possible, avoid any bias on results by making

assumptions about the expected changes in calculation parameters unless such changes in the future are fully certain or suggested by the methodology. Such principle is observed throughout the preparation of EY report (also referred above in the answer regarding the excise tax rate growth). This means that the indicated “error” needs to be interpreted as a discussion regarding the likelihood of the assumptions materializing in the future.

In other words, the proposal expressed by MTU ARB is biased and if another core forecasting principle would have been applied it would affect the all modes of transport (including rail). Also, the suggested source by MTU ARB does not correspond to the Rail Baltica region and the truck fleet that would be potentially replaced by Rail Baltica.

ii. Existing emission factor perspective. According to the EY approach, a combination of average emission factor values that cover all EURO classes have been applied in the analysis to reflect the uncertainty of:

- exact existing and future parameters of the truck fleet that is used along the Rail Baltica corridor. For example, according to the forecasts, roughly one third of freight serviced by Rail Baltica shall originate in or travel to the CIS region which follows the EU emission regulations with a considerable delay and possible deviations (even up to 10 years: http://transportpolicy.net/index.php?title=Russia:_Heavyduty:_Emissions).

Also, according to the data by Latvian council of ports, transit and logistics (www.transport.lv), as of 1.05.2017 the share of Euro 0-II class vehicles registered for international freight shipments in Latvia was still above 20%.

Similar tendencies are observable in the overall European freight transport fleet (Eurostat data: http://ec.europa.eu/eurostat/statisticsexplained/images/c/ca/Share_of_age_categories_in_road_goods_transport%2C_2015_%28%25_in_vehiclekilometres%29-F4.png) that indicate around 20% share of vehicles over 10 years old in terms of vehicle kilometers, with shares being higher for local fleets in the Baltic States and especially Poland. These factors contradict the indicated assertion by MTU ARB that approximately 100% of trucks will comply with the Euro VI standard.

- the types of transport units most likely to be displaced by the future Rail Baltica due to modal shift. Considering that the Euro VI standard vehicles are relatively more advantageous in international freight shipments, as compared to older Euro emission class vehicles, Rail Baltica is more likely to displace particularly such lower Euro emission class vehicles. Lower Euro emission class vehicles are more likely to be outcompeted by the new rail service. Accordingly, the avoided emissions benefit would not be overstated in the EY report, even if cleaner lorries (e.g. EURO V/VI class) are displaced by Rail Baltica at a lower rate.

- average age of the truck fleet. For example, MTU ARB ignores the tendencies in the average age statistics in Europe

(<https://www.eea.europa.eu/data-and-maps/indicators/average-age-of-the-vehicle-fleet/averageage-of-the-vehicle-8>) that indicate observable growth of average vehicle age in the commercial vehicle categories. Especially this is noticeable between 2010 and 2014 when the EURO VI standards were introduced, what means that market reacted to the new standard introduction adversely. This provides another example why the estimation of air pollution benefits cannot be changed out of context by looking solely at one factor.

b. In addition, MTU ARB provides arguments that are biased towards only selected parameters, when methodologically correct approach would be to study such factors more carefully and as part of complex modelling for all transport modes. For example, MTU ARB argues that “The EU is also introducing rolling road testing, which in the near future is going to reduce truck pollution significantly. All this will also impact vehicles’ pollution effects, that even today are several times lower than the estimates used in EY’s calculations and will have decreased further by the time RB is projected to come into use.” Methodologically, the effect of new technologies would need to be considered for all transport modes, including rail. Also, for the achievement of improvements in truck operations, a series of investments into road infrastructure and lorry fleet need to be accounted in the counterfactual scenario, improving the relative benefits from Rail Baltica.

To summarize, with respect to the primary claim made by MTU ARB that the CBA overestimates the rate of air pollution of lorries, calculated by EY by combining the relevant rates for all emission classes to reflect the mixed nature of the current fleet of lorries in the Baltic states, it is important to emphasize that – given the inherent complexity and uncertainty regarding the possible future development in transport decarbonization – in this and other similar contexts it is often impossible to make objective assumptions about the future behavior of emission parameters. With this in mind, the EU CBA Guide prescribes a cautious and conservative approach, whereby a neutral reference scenario must be chosen, reflecting the information that is known at the time of forecasting and abstaining from potentially biased assumptions about the uncertain future. The approach suggested by MTU ARB, on the other hand, departs from this principle of neutrality by not only suggesting highly ambitious emission standards for future lorries (which, theoretically, may as well materialize in the future, but there is no way of objectively judging today with any degree of certainty), but also, perhaps deliberately, failing to acknowledge the potential effects of further decarbonization and environmental innovation, for example, in the fields of rail traction and power supply. It is with this seemingly biased and methodologically unscrupulous approach that MTU ARB comes up with the sensationalist conclusion that the CBA emission benefits are overstated by around 3 billion euros.

4. *What proportion of “Outside city” and “Within city” is used in the calculations of total air pollution costs caused by trucks?*

The analysis has considered HEATCO indications. See also answer to previous question No 3.

5. *The CBA does not consider railway construction time environmental costs, permanent environmental costs, neither electricity production emissions that are required to run the electric locomotives. Please explain how this is in line with the EU CBA guidelines.*

In line with CBA methodology, financial construction costs and operating costs have been converted into economic CAPEX and OPEX values that consider such factors, e.g., fuel used in construction has excise tax element that represents the negative environmental externalities.

Assumption that railway construction and electricity production have consequences involving financial cost is correct. Same time you have to keep in mind that during the rise of traffic intensity on the roads you have to consider also investments to road infrastructure. Alternative to Rail Baltica would be investments to Via Baltica, enlarging road to 4 lines highway, that also brings additional similar construction and environmental costs. Such expenses will not happen only when status quo is kept and investments to road infrastructure will be avoided. In reality the fact that transport of goods through Via Baltica (look details at Estonian Road Administration web page www.mnt.ee) is growing, there is no reason to assume that investments to road construction is avoidable. Taking account that environmentally more friendly railway transport development has priority in Estonia as well in Baltics and EU as whole it is hard to believe that road transport development will get advantage in front of better alternatives.

6. *Have you submitted CBA to DG Move or DG Regio?*

The final report was thoroughly presented not only to all key Baltic and European institutional stakeholders, for example, DG MOVE, INEA but it was also made available – in its entirety – and presented to the general public, in line with RB Rail's wider philosophy of promoting transparency and openness to public scrutiny in the project implementation. Additional public seminars were held in Tallinn and Tartu to closely engage with both project supporters and critics in a constructive and open fashion. DG Move feedback assures that the analysis are fully in line with the Commission's guidelines for CBAs study's.

Therefore, we urge you to stop spreading false claims and misinterpretations regarding the role and position of the European Commission services regarding the Rail Baltica Global Project CBA.

7. *Please advice the names and titles of experts who have approved the CBA as stipulated in your reply 08.07.2017?*

Global Project CBA was carried out over a span of one and a half years in accordance not only with the Terms of Reference agreed by key project stakeholders, but also fully in line with the Guide to Cost-Benefit Analysis of Investment Projects released by the European Commission. The compliance of the CBA report with these Terms of Reference was consistently monitored by a Steering Committee involving key project stakeholders from all three Baltic states – Rail Baltic Estonia, Eiropas dzelzceļa līnijas, Lietuvos Geležinkeliai, Lithuanian Ministry of Transport and Communication and RB Rail. From Estonian side also Ministry of Economics and Communications as well Finance Ministry internal and external experts were involved. In addition, its compliance with the EU CBA Guide was examined by and further improved based on the suggestions of an experienced external reviewer.

The CBA was subsequently approved by the RB Rail Management Board and, thereafter, and positively noted by the RB Rail Supervisory Board.

8. *Has CBA got approval from EY internal quality checking? If so please provide the copy of the certificates. The report is lacking the QA/QC information.*

By tendering any study, RB Rail AS expects that any contractor has comprehensive internal quality systems in place and professional approach is used for delivering trustful results. Regarding EY internal quality procedures, please kindly contact EY.

9. *Largest issue concerns the truck air pollution rate in motorways (10 EUR per/km) that is used in the calculations of socio-economic benefit. The total undiscounted value obtained from this*

assumption is 3,3 billion EURO, about 20% of total socio-economic impact. According the reference source, such an air pollution rate corresponds to EURO I or EURO II trucks. During time 2026-2055, it would be reasonable to expect EURO VI or better trucks to be used. The emission rate for these trucks is 25 times lower, as shown in reference source (0,4 EUR per/km). This correction results in a 3 billion EURO reduction of the social-economic benefits.

Same as question No. 3. See our response to answer No 3.

10. The correction of the long-haul road transportation vehicle type reduces the undiscounted socio-economic benefits by 220 million EUROS.

See the response to question No 3.

11. The correction of predicted fuel exercise growth decreases the undiscounted socio-economic benefit by 930 million EUROS addition?

See the response to question No 2

12. We notice that direct GHG emissions and other environmental impacts caused by the construction process and the new railway corridor have not been considered in the socio-economic impact calculations thus presenting the project more favorable than it actually is.

See the response to question No 5.

13. The cost savings of the rail freight on page 179 (table 77) and on page 75 (table 26) of the CBA shows example calculations of terminal to terminal rail freight costs, comparing them with door to door road freight costs. This fails to consider the costs it takes to ship freight from a customer's door to the railway terminal and from the destination railway terminal to the customer's door. Failure to account for door to terminal and terminal to door costs of rail transport overestimates the benefits i.e. cost savings of the rail freight and expected operator fees.

The cost savings are calculated considering relevant comparable distances (between major freight terminals). The so-called „last mile“ deliveries from a customer's door to the railway terminal and from the destination railway terminal to the customer's door are assumed to be done by truck, so no savings accounted for this section in the CBA. The information in the tables represents selected examples to demonstrate the circumstances how Rail Baltica is expected to be competitive.

Last but not least, let us summarize that being an EU co-financed project, its CBA was prepared in strict adherence to the principles and methodology stated in the EU CBA Guide. Best practice application of this guide prescribes a cautious and conservative approach, whereby a neutral reference scenario must always be chosen, reflecting the information that is known at the time of forecasting and abstaining from potentially biased assumptions in the presence of a high degree of uncertainty about the future. EY has consistently followed this principle throughout the CBA, including for the calculation of the emissions generated by road trucks.

Rail Baltica is a project of a century, made to benefit potentially all people of the world. It's a project by the people for the people. Lot of experts and specialists with hundreds of years consolidated experience in the corresponsive fields are participating and engaged in preparation of Rail Baltica project in a best possible way. We are thankful for the attention and energy by civil society organizations who are willing to help the project come true in the best possible way and we know

that at least some members of MTÜ ARB have previously expressed that they are not against Rail Baltica connection. We also find it would be absolutely good and necessary for the transparency and in the public interest to map the motivation and interests of involved organizations. It would also be good for the RB project to be all times aware of those very specific competences on the respected field that would benefit the project in the larger scale - good and competent people are always welcome to help to the success of the project. Therefore, we would kindly ask you to answer few questions of our own:

1. How many large-scale infrastructure projects has your organization analyzed and benchmarked when preparing your view on the Rail Baltica Global Project CBA?
2. Who are the experts and which organizations they represent that are valid and are qualified in the context of Cost-Benefit Analysis?
3. Which independent reputable institution in the field of transport economics has verified and endorsed your findings?
4. What is your professional experience and expertise in regard to the EU CBA methodology?

With regards,

Aivar Jaeski

RB Rail AS EST branch director

References:

- [1] http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/cba_guide.pdf
- [2] http://transportpolicy.net/index.php?title=Russia:_Heavyduty:_Emissions
- [3] www.transport.lv
- [4] http://ec.europa.eu/eurostat/statisticsexplained/images/c/ca/Share_of_age_categories_in_road_goods_transport%2C_2015_%28%25_in_vehiclekilometres%29-F4.png
- [5] <http://www.acea.be/statistics/tag/category/average-vehicle-age>
- [6] <https://www.eea.europa.eu/data-and-maps/indicators/average-age-of-the-vehicle-fleet/averageage-of-the-vehicle-8>