COMMENTS ON PUBLIC CONSULTATION ON NAVIGATION AND INLAND WATERWAY ACTION AND DEVELOPMENT IN EUROPE (NAIADES) III ACTION PLAN 2021-2027

The European Commission released on 18 December 2020 the public consultation on Navigation and Inland Waterway Action and Development in Europe (NAIADES) III Action Plan 2021-2027 roadmap. The emissions control industry that AECC represents, welcomes the opportunity to comment on this consultation.

Inland Waterways Transport (IWT) must be fit for the future if it is to be integrated to multimodal mobility of people and freight. AECC welcomes and supports this. In addition, AECC feels the IWT has to comply with emissions requirements similar to those for on-road heavy-duty vehicles, contributing to cleaner European towns and cities.

AECC's vision[1] for clean, efficient, convenient and affordable mobility and commitment to the European Green Deal are fully aligned with the European Commission's objective towards climate neutral and zero-emission mobility in 2050.

Non-Road Mobile Machinery (NRMM) is a fundamental tool for the European economic development. In particular, the ambitious call from the European Commission in the European Green Deal communication[2] for a shift of a substantial part of the 75% of inland freight transport currently carried by road to inland navigation and rail, highlights the importance that the inland barges will have in the multimodal mobility of people and freight in the future. As stated in the roadmap, the progress towards innovation and alternative fuels, including zero emissions vessels, is limited. This is where much can be accomplished by applying emissions requirements for the Inland Waterways Transport (IWT) similar to those for on-road heavy-duty vehicles.

The mentioned fleet aim in the roadmap should not only focus on reducing the current dependence on fossil fuels enabling the transition towards a climate-neutral fleet by 2050. It should also include innovation steps towards achieving a renewal of the fleet, considering the best available technology to power the vessels in the short and medium term. NRMM, like the IWT, are mainly powered by off-road internal combustion engines, which are divided into several engine categories. The pollutant emissions of these machines are currently controlled by Regulation (EU) 2016/1628[3] and its corresponding amendments. The CO_2 emissions of these machines are currently not regulated.

The limits for emissions and testing conditions included in the NRMM regulation differ from what has been legislated for heavy-duty vehicles. Emission compliance is based on an engine test in the laboratory under a prescribed cycle, which does not necessarily reflect the actual mission of many of these machines. Current regulation includes an in-service monitoring (ISM) framework (detailed on delegated regulation (EU)2017/655[4]). The ISM framework will be used to develop appropriate test procedures to define the in-service conformity in the future. However, inland waterway vessels engines are not yet included within the ISM framework. These will only be included in a new amendment[5] to the delegated regulation (EU) 2017/655. Although the in-service monitoring scope is to evaluate pollutant emissions of these machines under a representative day-to-day operation, which is a step forward, the monitoring phase is scheduled to last until at least 2024.

It is important to point out that modern heavy-duty vehicles are now equipped with Internal Combustion Engines (ICEs) with integrated emission control systems, allowing for emissions reduction of nitrogen oxides (NOx) and particles (PM and PN) among other harmful pollutants. Similar technologies could be implemented in NRMM and particularly on IWT applications. Despite some remaining challenging areas[6], commercial vehicles type-approved to Euro VID are showing low on-road emissions with improvements in emission control performance compared to previous emission stages. It is also important to note that combined lowering of pollutant emissions and CO_2 is possible.

Further improvements to lower pollutant emissions from road transport are required to comply with the ambitious 2050 goals provided by the European Green Deal. AECC demonstrates ultra-low emissions are technically feasible

for light- and heavy-duty vehicles and shows ICEs with advanced emission control systems can achieve ultra-low emissions for NOx and particulates in real world driving[7].

The Euro 7/VII regulation, which is being discussed by the Commission's services, is the unique opportunity to implement a regulatory framework that could consider following three overarching principles to improve European air quality and to ensure the health and well-being of everyone[8]: further focus on real-world emissions; be fuel- and technology-neutral and legislate according to a 'total system approach' using a 'whole vehicle' basis.

By integrating Inland Waterways Transport to multimodal mobility, these vessels will become an important link in the personal and freight mobility chain and will be constantly present inside those European towns and cities built next to inland waterways. These vessels should therefore comply with emissions requirements similar to those applicable to heavy-duty vehicles. This would ensure that this sector also contributes towards the efforts made to achieve the ambitious European Green Deal goals.

Should you need more information, you can contact AECC at info@aecc.eu.

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References:

[1] AECC 2025 vision for clean, efficient, convenient and affordable mobility
http://www.aecc.eu/wp-content/uploads/2020/02/200203-AECC-Vision-Document-Web.pdf.

[2] The European Green Deal Communication, COM(2019)640 final
https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF.

[3] Regulation (EU) 2016/1628 of the European Parliament and of the Council of 14 September 2016 on requirements relating to gaseous and particulate pollutant emission limits and type-approval for internal combustion engines for non-road mobile machinery, amending Regulations (EU) No 1024/2012 and (EU) No 167/2013, and amending and repealing Directive 97/68/EC.
https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1628&from=EN.

[4] Commission Delegated Regulation (EU) 2017/655 of 19 December 2016 supplementing Regulation (EU) 2016/1628 of the European Parliament and of the Council with regard to monitoring of gaseous pollutant emissions from in-service internal combustion engines installed in non-road mobile machinery
https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0655&qid=1608638971046&from=EN.

[5] "Extension of the scope of monitoring of in-service engines" European Commission Presentation, GEME, 18 November 2020
https://circabc.europa.eu/sd/a/f690bf6c-78d5-4954-9e3f-0b748efa5f73/6_Extension%20of%20scope%20of%20Reg.%202017-655.pdf.

[6] "AECC project results on Euro VI HDV real-world emissions" 4th AGVES meeting presentation
https://www.aecc.eu/wp-content/uploads/2020/08/200709-AECC-presentation-AGVES.pdf.

[7] "Integrated Diesel System Achieving Ultra-Low Urban and Motorway NOx Emissions on the Road", J. Demuynck, et al.; 40th International Vienna Motor Symposium, 15-17 May 2019
http://www.aecc.eu/wp-content/uploads/2019/04/190516-AECC-IAV-IPA-Integrated-Diesel-System-achieving-Ultra-Low-NOx-on-the-road-Vienna-Symposium.pdf.

[8] AECC position on Euro 7 emissions standards
https://www.aecc.eu/wp-content/uploads/2020/07/200709-AECC-position-on-Euro-7.pdf.

AECC is an international non-profit scientific association of European companies operating worldwide in the research, development, testing and manufacture of key technologies for emissions control. Their products are the ceramic substrates for catalysts and filters; catalysts (substrates with catalytic materials incorporated or coated); adsorbers; filter-based technologies to control engine particulate emissions; and speciality materials incorporated into the catalyst or filter. Members' technology is integrated in the exhaust emissions control systems of cars, commercial vehicles, buses, non-road mobile machinery and motorcycles in Europe. More information on AECC can be found at www.aecc.eu and www.dieselinformation.aecc.eu.

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