Clear Air Turbulence: Decarbonisation of transport

The EU has set itself ambitious goals to meet its climate change obligations; dealing with the contribution from the transport sector will be one of the most challenging.

In signing the COP21 agreement, the EU sent a clear signal of its commitment to becoming a low carbon economy. Given transport’s major contribution to current emission levels, decarbonisation of the sector will be a priority. Irish EPP member Deirdre Clune, a member of the transport and tourism committee, agrees. “The time for action is now,” she says. “Reducing carbon emissions in our transport sector will increase efficiency, improve air quality and benefit public health.” She points out that, “The transport sector is the second-largest source of emissions after energy; it is vital that it plays its part in decarbonising the European economy.” However, Clune recognises the scale of the challenge; emissions from transport have risen from 15 per cent in 1990 to 22 per cent.

The Irish deputy believes that the key is using existing resources, such as transport links, as efficiently as possible. “One of the goals of the recently agreed fourth Railway Package is to encourage greater use of the rail network by improving the performance of our...”
rail services, creating investment opportunities and encouraging job creating in the sector.”

Clune believes that EU standards are delivering more emissions-efficient cars through support for technological innovation and research. The worldwide harmonised light vehicles test procedure (WLTP) for measuring pollutant and CO₂ emissions and other lightweight vehicles specifically focuses on improving CO₂ emissions and incentivising fuel-efficient vehicles. In addition, with heavy-duty vehicles the second-largest source of transport emissions, she points out that improving purchaser information with a view to implementing mandatory CO₂ targets is a potential action under the EU’s energy union roadmap.

She also points out that other circular economy elements can also assist decarbonising efforts including biofuel innovation through the rendering of waste products.

The ALDE group’s Dominique Riquet agrees; “There is no way the EU can expect to reach its objectives, nor member states meet their commitments without taking transport into account. While other sectors have seen emissions decrease, transport now accounts for a quarter of the EU’s total greenhouse gas emissions.”

The French deputy, also a member of the transport and tourism committee, believes there are two main ways to decarbonise road transport. “Firstly, by reducing the level of vehicle emissions, for example by setting legally binding limits – based on real driving conditions – and by improving engine performance and optimising the use of vehicles. This can be via intelligent transport systems (ITS) or through collaborative business models.” However, he notes that such models, considered ‘disruptive’, have had a lukewarm reception from most national governments. He also points that, “there are a lot of disparities within European cities in terms of public transport efficiency.”

The other way he suggests is to resort to technologies or modes generating less or no emissions. Although there have been European initiatives to promote electric, hybrid and fuel cell technologies as well as alternative fuels such as biofuels and liquefied natural gas (LNG) there has been no major uptake so far. He adds that, “There is more that has to be done to encourage a modal shift towards less emitting modes, such as rail and inland waterways.”

Riquet is clear that driving such change means, “setting an unambiguous decarbonisation target at political level and having the regulatory and financial incentives in place, ranging from research and development programmes to international agreements, through selective funding policies.” However, he also recognises the emotional appeal of road transport; “We should not forget the essential dream component that a Tesla car or an event like Formula E can stir in people’s mind.”

He urges the legal certainty offered by setting a predictable and clear framework to attract investment while ensuring a level playing field. Otherwise, he says, “following any other course of action means that we will never bring the urgency required to deal with the threat of global warming.”

Belgian deputy Ivo Belet believes that emission reductions have to be economy-wide, in all sectors. If not, he says; “We risk missing the target to limit temperature increase to 2°C let alone 1.5°C. Those sectors that have not already contributed to decarbonisation will need to step up.”

He believes it is important for all sectors to contribute, safeguarding the competitiveness of EU, rather than having other sectors make additional reductions to compensate.
He says: “Among these sectors, transport comes top of mind; it is the second-biggest emitting sector after energy. It is also the only major sector where emissions today are well above their 1990 levels, up 33 per cent by 2007. More than two thirds of these come from road transport.”

Like his EPP colleague, he singles out heavy-duty vehicles as an area for action. “Road freight traffic is still on the rise in Europe. Tackling heavy transport emissions is essential in reducing the carbon footprint, particularly with Europe (a shared target with the building sector of a reduction of 30 per cent by 2030 compared to 2005 levels), compared to the target set for industry (which has to cut emissions with 43 per cent).”

He is intrigued to see the content of Commissioner Cañete’s ongoing communication, which will address the decarbonisation of all forms of transport: fuels, traffic management, taxation, revision of emission testing cycles and car and lorry emissions.

A number of sectors are following developments closely. For some, it is a boost. The focus on ‘lightweighting’ as a method of reducing emissions in transport has given aluminium a starring role.

Gerd Götze, Director General of European Aluminium, points out that, “aluminium in cars is as safe as steel yet 40 per cent lighter, adding that it has, “the beauty of delivering a positive impact for any vehicle, regardless of whether it is driven by a combustion engine or an electric motor. Aluminium is increasingly important for transport applications.”

Philippe Citroën, Director General of the European Rail Industry Association, UNIFE, explains that the rail industry has long been a vocal advocate of decarbonisation of transport and modal shift. It is “already the most environmentally-friendly major mode of transportation and is committed to further improving its environmental performance.” He points to the recently concluded European R&D project, REFRESCO and the ongoing Roll2Rail and Shift2Rail projects as paving the way for lighter rolling stock, consuming less energy and further reducing CO2 emissions.

The vehicle manufacturing sector is also making significant efforts. Erik Jonnaert, Secretary General of ACEA, the European Automobile Manufacturers’ Association, points out that new cars are now much more fuel efficient. However, he points out, “new cars account for only five per cent of all vehicles.” He urges a comprehensive approach to speed the transition, “drawing on the full spectrum of solutions available, whether relating to the vehicle itself, more rapid fleet renewal, the potential of car connectivity and automation, properly maintaining infrastructure, decarbonising fuels or improving driver behaviour.”

There is a universal agreement that acting swiftly to decarbonise transport will be core to meeting the EU’s climate change obligations. Industry also needs to continue to travel in its current direction.

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Dominique Riquet

lagging behind China and the US. He proposes introducing mandatory monitoring of emissions, “as quickly as possible, rapidly followed by CO2 standards that drive innovation towards lower emitting trucks.”

Despite this, Belet notes that; “The reduction target set for the transport sector is relatively low for some, it is a boost. The focus on ‘lightweighting’ as a method of reducing emissions in transport has given aluminium a starring role.”