

# ROAD TRANSPORT

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Violeta Bulc [European Commission]

## EU's decarbonisation plans scrutinised by divided transport industry

EU Transport Commissioner Violeta Bulc has to make good on a few promises she made before the summer break.

Bulc published a plan to cut carbon emissions from the transport sector in July that sent a chill through the car industry and perked up the ears of MEPs and environmental NGOs who had been pushing for measures including an EU-wide cap on truck pollution.

In July, Bulc's announcement included a lot of detail that could mean dramatic changes for the transport sector. The executive will promote cleaner fuels for transport and vehicle types that produce fewer emissions, like electric or fuel cell cars, for example.

Some of the commissioner's ideas will mean major changes for transport companies and will also force regulators to reconsider legislation: Bulc has promoted connected and driverless car technologies as another way to cut emissions, once

they're commercially available. Over the weekend, Bulc spelled out her support for those technologies at the G7 transport ministers' meeting in Japan—in November, she'll publish a detailed plan of how she wants to push them in the EU.

### 60% emissions reduction by 2050

The Commission had been under pressure to cut emissions from transport for a while. Five years ago, the executive promised a 60% reduction from the sector by 2050 compared to 1990 levels.

MEPs pointed out that while other areas, like industry and housing, managed to clean up their act, emissions levels from transport—especially from automobiles and aviation—kept climbing.

"The transport sector is nullifying all the efforts that have been done with taxpayer money in other sectors," German Green MEP Michael Cramer, the chair of the European Parliament's Transport and Tourism Committee, told EurActiv.com.

Bulc's plans to slash emissions will come in piece by piece over the next three years. Next week, she'll be in Montreal to negotiate for the EU in a meeting of ICAO, a UN body, focused on limiting emissions from aviation.

Many campaigners reacted positively to the commissioner's decarbonisation agenda on the whole, although some criticised the plans

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back in July for being too soft on policing aviation emissions.

Other industries have piped up since the commissioner presented her plans to tout the progress they've made to use less fuel or produce fewer emissions.

The car industry had lobbied against one of the bombshells in the July announcement: a first-ever binding limit on emissions from trucks across the EU. Bulc said she would propose the new standard for trucks by the end of her mandate in 2019. Other countries outside the EU, including the US, Canada and Japan, already have binding standards for trucks.

### Calls for 'balanced approach'

When Bulc went public with her plans, car industry association ACEA called for a "more balanced approach" that doesn't put too much of the emission-cutting burden on road transport while going easy on other modes of transport.

ACEA secretary general Erik Jonnaert called the Commission's decarbonisation

agenda "very ambitious" but insisted the industry would "do its part to continue reducing CO<sub>2</sub> emissions across its entire portfolio, which includes passenger cars, vans, trucks and buses".

To varying degrees, the different industries of the transport sector—road transport, rail, aviation and maritime—compete with each other for shipping and passenger traffic. Each of those corners is waiting eagerly for more details and the first proposals to come out of Bulc's plans—for some, big business is at stake.

The Commission's decarbonisation strategy specifies that policymakers will have an eye towards "incentivising a shift towards lower emission transport modes such as inland waterways, short-sea shipping and rail." Upcoming EU rules to overhaul how the rail sector works should "make rail more competitive and attractive for both passengers and freight," according to the strategy.

That won't make everyone happy in the transport sector.

Bulc will give a recorded keynote tomorrow (27 September) at a Brussels conference, where companies from

different transport industries will gather to mull over the decarbonisation initiative.

### Road freight bracing for change

The road freight industry—which now outweighs shipping on rail or any other mode of transport in Europe—is bracing itself for changes.

The sector will be hit with a new set of rules early next year, when Bulc proposes changes including an overhaul of how trucks are tolled and new measures to rein in how truckers can work when driving between EU countries.

MEPs have asked the Commission to consider a tolling system that would encourage cleaner trucks by charging them according to their CO<sub>2</sub> emissions levels or energy efficiency.

Currently, railways and automobiles are tolled very differently. Michael Cramer called the large gaps between the tolling systems "unfair competition".

"One hundred percent of the rail network is tolled and only one percent of the road network," he said.

## EU countries want legal change for driverless cars – but they'll have to wait

Driverless cars have figured into several EU policy plans lately, as politicians have advocated for speeding up work on the technology to stop countries like the United States from having a leg up on European auto manufacturers.

Earlier this month, the European Commission proposed a major overhaul

of EU telecoms law that would modernise and speed up internet networks to support industrial broadband use for technologies like driverless cars.

Günther Oettinger, the EU tech policy chief responsible for the new telecoms rules, is one of a handful of commissioners pushing for legislation to help get cars with internet functions onto the market.

Some car industry lobbyists have called the Commission's approach to promoting driverless cars sloppy because there are too many top officials angling to own the file. Violeta Bulc, the EU transport commissioner, attended a UN traffic law meeting this summer where she was criticised for the Commission's slapdash work on new car technologies, according to a report from the session.

The chair of the UN group on autonomous vehicles slammed the executive for "confusion within the EU institutions between automated and connected vehicles," referring to cars that use the internet for specific functions like parking assistance.

A working group set up by a different commissioner, Elzbieta Bienkowska, who's in charge of internal market policies, is meeting with industry groups to pinpoint what pieces of legislation need to be changed before driverless cars can actually be sold and driven on public roads.

### Vienna Convention debacle

Some critics complain that EU

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countries won't manage to get driverless cars out before the US because 21 out of 28 EU countries signed onto the Vienna Convention on Road Traffic, a UN treaty that requires a driver to be able to take control of a vehicle at any point. The Convention allows for testing of driverless cars, but it doesn't allow them to run on public roads without a driver in control.

Google and Tesla have been developing driverless cars in the US, where the Vienna rules don't apply and traffic laws differ by state.

The UK did not sign onto the agreement and has been offering public funds to support driverless car testing.

European politicians have indicated they may try to change the agreement.

Bulc has said she is considering making changes to the Vienna Convention to allow cars to operate without any help from a driver.

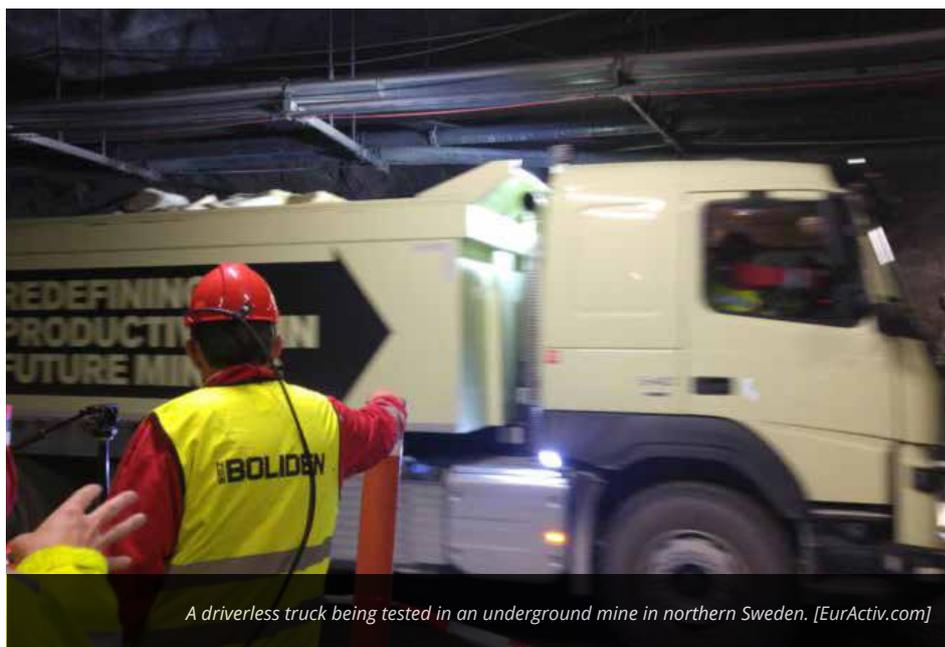
### Redefining the driver

Germany's Transport Minister Alexander Dobrindt has said he's lobbying for a change that will redefine a driver to include technologies that can control cars on their own. Dobrindt proposed a new national law earlier this month that will let drivers give up some control over automated cars—although they will still have to be ready to take over at any point.

But one Commission source said it will still take a while until a new amendment to the Vienna Agreement is introduced.

"If driverless cars are going to go cross-border, of course we need an amendment," the source said.

Next year, Bienkowska will announce whether she'll propose any legal changes to ease the way for driverless cars. Until then, the working group will write reports for the Commission on possible areas for change, like how data gathering and insurance will change once drivers are taken out of the equation.



A driverless truck being tested in an underground mine in northern Sweden. [EurActiv.com]

### Testing zones

Even if driverless cars aren't allowed on public streets, they are already being tested in some parts of the EU—and even as part of cities' public transport systems.

In the Helsinki neighbourhood of Hernesari, one driverless bus made by French manufacturer Easymile has been transporting commuters for the past month at a maximum speed of 40 kilometres per hour. And Finland is a signatory to the Vienna Convention.

Eetu Pilli-Sihvola, a special adviser at the Finnish Transport Safety Agency, says that was possible because of how Finnish regulators interpret the treaty's requirement of a driver who can take control of the vehicle.

A person stands inside the driverless bus—it doesn't have a steering wheel—poised to press an emergency brake in case the technology fails.

"For doing testing with individual vehicles the current Vienna Convention is enough, at least in Finland," Pilli-Sihvola said.

The driverless bus costs more than a standard bus—around €200,000, but the city plans to add another one by the end of this year. Eventually, the developers want the operator in control of the emergency brake to monitor the

bus rides remotely, leaving passengers on their own.

But auto manufacturers that already test their driverless models say only a change to the Vienna Convention will help the technology go into wider use.

"We're not only selling trucks in Sweden. We're in 192 markets so basically what we do here has to fit the world," said Christian Gante, an engineer working on Volvo's driverless trucks.

One model is already being tested inside a mine in Sweden's northern Lapland region. The truck runs nearly 500 metres underground, which forced engineers to develop sensors that could work without relying on GPS technology. Next year, the bus will be used along with regular trucks in mining work.

### Lowering fuel consumption

Engineers say the driverless truck could consume 40% less fuel because it will stop less and operate at a lower speed.

That could explain why EU legislators are eager to jump on the driverless bandwagon. The Commission has promised to dramatically slash the amount of carbon emissions from the transport sector by 2050.

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“With the same dimensional values we have today you probably could carry more goods and have a smaller carbon dioxide footprint. But that is very far out in the future,” said Torbjörn Holmström, Volvo’s chief technology officer.

### Competition between countries

The race for driverless trucks is also a testing ground for the highly competitive car industry, with some EU countries eager to compete with each other to attract the lucrative car business.

The UK government has poured public funds into driverless car testing in a bid to draw carmakers there with their newest technology. During her speech in May, the Queen even announced a new bill to “ensure the UK is at the forefront” of autonomous car technology.

That has caused some grumbling in other parts of Europe that the UK

is at an advantage. One reason for that, legislators and carmakers from competing countries say, is that the UK didn’t sign onto the Vienna Convention, so test drives can run without a driver ready to take over the vehicle.

Britain is not without rules, however. The UK government published non-binding guidelines for driverless cars late last year that more or less matched the treaty’s clause on drivers.

Speculation that the UK has an edge because it didn’t sign the treaty is “folklore,” according to Tim Armitage, director of a project that won government funding to test passenger cars and small vehicles for public transport in two UK cities.

“I don’t think that’s why the manufacturers have come to the UK to get involved in the testing. As all governments do, they want to make sure UK businesses get a piece of the action. They were keen to develop these technologies in the UK as a showcase,”

Armitage said.

### Liability

In the tests in Milton Keynes and Cambridge, drivers will be liable in case there’s a collision, Armitage said.

At a meeting of Bienkowska’s industry group in June, insurance industry lobbyists predicted a move towards car manufacturers becoming responsible in case a driverless vehicle crashes.

But Armitage says insurance issues won’t be a big obstacle in the years before driverless cars can be bought in Europe.

“The process will get even quicker with connected and autonomous vehicles because there will be so much data available. There will be black boxes and so much of that data will have to be held for a certain amount of time for investigations to be carried out really quickly,” Armitage said.

## Road sector braces for EU bid to cut emissions

After a year of being dogged by the dieselgate scandal, the European road transport sector has started soul searching prompted by new EU plans to reduce carbon emissions.

“The black cloud of dieselgate emissions still hangs over us, both literally and figuratively. It is time for the transport sector to regain our trust,” Geneviève Pons-Deladrière, director of the World Wildlife Fund’s EU office, told a Brussels conference yesterday (27 September).

Pons-Deladrière told the room full of lobbyists she thinks the European Commission’s two-month old strategy to slash CO<sub>2</sub> emissions from the transport

sector is “very good”.

“It doesn’t happen often that a green NGO says so,” she added.

The European Commission has been under pressure to slash emissions from the transport sector. Transport is the only sector in the EU where greenhouse gas emissions continue to rise—industry and housing, for example, have both cut their carbon emissions levels. The European Commission promised a 60% cut in transport emissions by 2050 compared to 1990 levels.

Manufacturers, logistics firms, fuel industry lobbyists and environmental campaigners squabbled over the Commission’s plans, which include one bombshell: a promise to introduce the first EU-wide standard limiting truck emissions, as well as indications of incentives for alternative fuels and low and zero-emission vehicles.

But the industry does not have much to latch onto: the proposals will trickle out of the Berlaymont over the

next few years. For now, manufacturers may be eager to see details of the plans, but they are still in the dark.

### Truck emission limits

Miguel Arias Cañete, the EU climate commissioner, insisted the Commission does not know much more than the companies about its plans to rein in truck emissions.

“Our proposal will not be a copy and paste of solutions that have previously been adopted by others. Nothing has been decided yet,” Cañete said.

Car industry association ACEA warned last week that the Commission should finish developing a digital tool to measure truck emissions before it proposes a binding limit. The executive has been working on the VECTO tool since 2010. Sources involved in discussions about VECTO say it

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measures CO<sub>2</sub> emissions by configuring various dimensions and characteristics of trucks, and does not just monitor the engine.

Some manufacturers said they will not push back against a new EU-wide standard because they are used to complying with similar rules in countries outside the bloc.

"We are in the US, in Japan and in China," said Martin Lundstedt, the CEO of Volvo group, speaking at a panel discussion at yesterday's conference.

"VECTO is the most innovative way of looking at the full vehicle in use, in life, to drive down CO<sub>2</sub>. If we have an engine-only standard that would be for the 20th century. We are in the 21st century and we need to move along here," he added.

## Delay

Environmental campaigners have focused on the EU's delay in applying a standard for truck emissions as a failure compared to countries that already have limits. EU and national regulators have also come under fire for failing to

catch Volkswagen's emissions cheating in passenger cars—the United States' Environmental Protection Agency first caught the scandal, igniting criticism of EU authorities' ability to police manufacturers.

Ulf Björnholm, head of the EU office for the United Nations Environment Programme, called the Commission's plans to cut emissions from transport "inward looking". The failure to stop the dieselgate scandal showed the EU fell behind on limiting harmful emissions, he added.

"The thinking and policies that are underway now in China and even India, they're about introducing mandatory quotas. For every car you produce you need to produce X amount of electric cars. That's a very very hard regulatory policy. But I don't think there's room for the EU to be complacent about this," Björnholm said.

But others cautioned that dieselgate and the Commission's new plans to slash carbon emissions could quickly give way to an overzealous reaction against the industry.

"I'm worried the policy answer will

be to say we have to do more and more with less transport," said Christofer Fjellner, a Swedish MEP from the centre-right European People's Party (EPP).

"Pretty often the European Commission does impact assessments, it takes ages, then it hits the floor in the European Parliament and member states and we mess things up. I'm worried people will say it's not enough to reduce emissions, we have to reduce transport as well," Fjellner added.

More than two-thirds of carbon emissions from transport come from the road sector. The shipping industry could be hard hit by the Commission's plans as well: around 75% of all freight shipped in Europe is sent via road transport.

Peter Harris, director of sustainability for Europe, the Middle East and Africa for shipping giant UPS called the growing demand for more transport a "market opportunity" but said that created a big challenge for cutting emissions from the sector.

"This is not a simple engineering fix," Harris said.



The European Commission presented a plan to slash carbon emissions from the transport sector in July. [Wikimedia]

## INTERVIEW

## UNEP: Dieselgate will 'push the electric revolution very quickly'

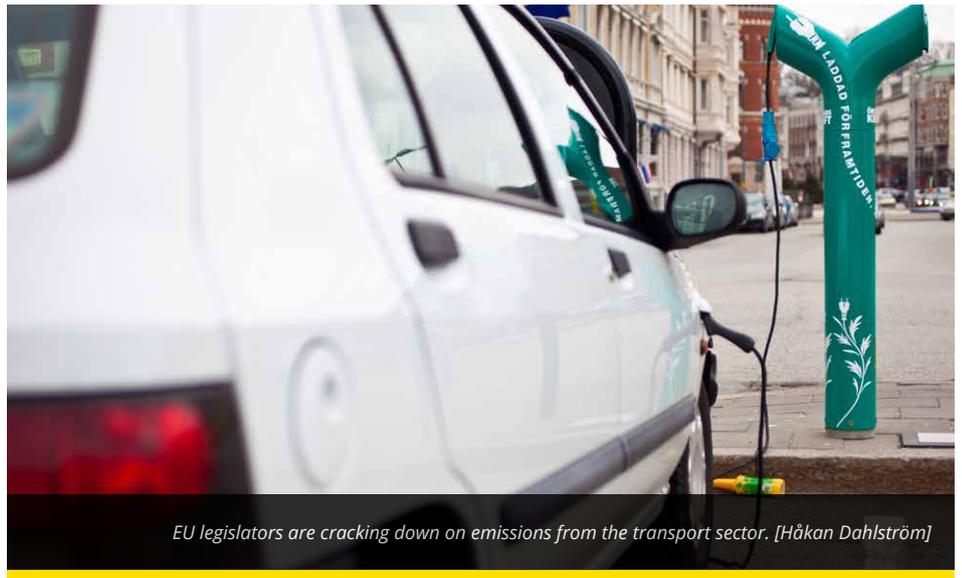
The 'Dieselgate' scandal will mark an important step towards phasing out the hundred-year-old internal combustion engine which doesn't have a place in a modern, low-carbon transport system, says Ulf Björnholm.

*Ulf Björnholm is head of the EU office for the UN Environmental Programme. He spoke to EurActiv.com at the European Transport Forum in Brussels.*

**The European Commission announced its plans for reducing carbon emissions from the transport sector in July. Last year, EU countries approved new legislation for tests that measure cars' emissions when they are out on roads, and the Commission proposed a new law to change the car type approval system. Does this tell us that dieselgate was really a wakeup call for EU legislators?**

Yes, definitely. I think dieselgate is a gamechanger. My guess is it will be one important step towards basically phasing out the hundred-year-old internal combustion engine. It doesn't have a place in a modern, low-carbon transport system. Except maybe in a few specific parts of the sector like heavy duty aviation. And there you need biofuels to deal with that.

But for smaller cars, it doesn't have a place. I think dieselgate may be a gamechanger because it's about air quality. It's not CO<sub>2</sub>-driven. If the car industry is to comply with those



EU legislators are cracking down on emissions from the transport sector. [Håkan Dahlström]

standards that we have agreed without cheating, it will push the electric revolution very quickly.

**We did see some member states still push back against the real driving emissions proposal even after Volkswagen's cheating scandal was revealed. Now the European Commission announced in July that it's going to come out with its first ever standard for truck emissions before the end of its mandate. Are you worried there won't be as much pressure left to clean up the transport sector by the time a proposal is out on limiting CO<sub>2</sub> emissions from trucks a few years from now?**

Not really. I think this is so big that it will have a lasting effect.

And it goes beyond the EU. In the US, you have a system of litigation. There, these car companies are paying huge fines. So even if it somehow doesn't work in the EU, there will still be these global repercussions.

For the sake of regaining trust with consumers, with the general public, the EU will have to address this publicly. Everybody realises that.

There's still a lot of back and forth on the details of how to do it. And of course there are huge economic interests here, but I don't think the EU has any choice but fixing the problem at its roots. And that is simple: it's about making sure that the driving tests for emissions reflect the

real emissions.

**The United States' Environmental Protection Agency led the investigation that uncovered dieselgate. So far the European Commission has rejected suggestions to have a central agency like the US EPA. Do you think it should reconsider?**

I think the US and the EU systems are fundamentally different when it comes to compliance. And that goes beyond emissions standards. In the US, anyone can take a company to court and then it's a litigation system investigating and there would be a ruling.

In the EU you have a system where the member states are responsible for implementing EU law, not a court. It would be up to member states whether to fine or not. There's much more flexibility. These systems will remain different, so we'll have to find a European solution. It's not going to be a US system for Europe, it's going to be different.

**Car manufacturers talk about technologies like driverless cars that could cut fuel consumption. Does this seem very promising as something that could cut fuel consumption or is it going to take so long before it catches on?**

I don't know. I think there's a big

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question mark there. I guess potentially it could be if you have smart technology solutions. I'm sure that could be part of the overall solution. But it doesn't really go to the root and I would be surprised if it's the gamechanger that we need.

Not to say that it's useless but it's not going to be the big solution. And there is no one solution. Probably we need to work on many many different fronts. I think it's really too early to say if this is going to be a big part of that solution or not, but I have doubts.

Regulation is not a bad word. It is what has driven innovation so far and it's going to be for the foreseeable future. You certainly have to work with incentives. I'm sure there will be solutions coming out of the sector also, such as also on technology.

The EU still hasn't yet ratified last year's Paris Agreement on climate. EU environment ministers could come to an agreement on Friday (30 September)

in Bratislava. Are you worried this delay is sending a bad signal about the EU's direction on climate policy or is this the normal pace you'd expect when you have so many negotiating partners at the table?

Representing the UN, I'm not sure the UN is worried. I think ratification will be sufficient to have the agreement enter into force. That seems to be now well on the way. But the Europeans are worried—those who want a progressive low carbon roadmap to what the EU has already agreed. And they're also worried that they won't be at the decision making table once it enters into force. Because they won't be included if they haven't ratified.

So the Europeans are worried. And they are in a difficult spot because there are clearly some member states who have issues and problems with ratifying before they know all the details of how it's going to be implemented in the EU, which is also understandable to some

extent.

**The Commission could technically bypass the member states and go ratify the agreement on their behalf. Would you prefer to see that if on Friday there is no agreement?**

I don't think it's for the UN to have a preference there. That's for the Europeans to decide. That is a difficult internal debate that they will have to flesh out. I think ideally it would be good if the EU had a unified position on this and had full ownership.

If that would happen, you would have a fragmented EU with some parts of the EU and some member states disagreeing with the approach. That would not be good for climate change or for implementing the Paris Agreement. It's something the EU has to work out and there's huge pressure so my guess is they will.

## Surge in electric cars could strain energy grid, warns EU agency

The large scale roll-out of electric cars on EU roads will help fight climate change but more electricity will have to be generated to power the vehicles which, the European Environment Agency (EEA) has warned, could have its own impact on global warming.

The European Environment Agency this week said that larger numbers of electric vehicles will not be enough to make to the transition to a low-carbon economy. The EU's transport sector still depends on oil for 94% of its energy needs.

The reductions in carbon dioxide emissions in road transport gained from the scaling-up of electric vehicles would outweigh emissions caused by the continued use of fossil fuels to generate the extra power needed to keep the cars on the road, the EEA said in a report.

But in countries where more electricity is generated through polluting fossil fuels, the environmental benefits will be lower, according to its analysis.

EU initiatives to boost renewable power generation and greater energy efficiency could lessen emissions caused by the extra electricity generation needed to run the cars.

"Electric vehicles powered by renewable energy sources can play a bridging role in the EU's plans to move towards a greener, more sustainable transport system, and in meeting its goal to reduce greenhouse gas emissions by 80-95% by 2050," said Hans Bruyninckx, EEA executive director.

"However, larger numbers of electric

vehicles will not be enough for the shift to a low-carbon economy. Other problems such as growing demand for transport and congestion remain and need to be addressed as well," he added.

### Paris Agreement

The shift to a low-carbon economy is vital if the EU is to meet its European and international climate commitments. World leaders in Paris last December pledged to limit global warming to less than two degrees above pre-industrial levels.

EU environment ministers meet in Brussels today (30 September) in a bid to secure bloc-wide agreement to ratify the Paris Agreement next month. The EU ratification will take the deal over the global emitter threshold needed to bring the landmark climate deal into force.

The EU's part in this global effort

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is based around its 2030 target to cut greenhouse gases, such as carbon dioxide, by at least 40%. It aims to cut greenhouse gas emissions by 80-95% by 2050.

Reaching both targets will only be possible if the EU's transport sector can be decarbonised.

Transport is the only sector in the EU where greenhouse gas emissions continue to rise— industry and housing, for example, have both cut their carbon emissions levels. The European Commission promised a 60% cut in transport emissions by 2050 compared to 1990 levels.

Although sales and the use of electric vehicles are increasing, they still only make up 0.15% of Europe's car fleet and only 1.2% of total passenger car sales in the EU.

The EEA research modelled a scenario when electric cars have an 80% share of the EU fleet in 2050. That would bring a net reduction of 255 million tonnes of carbon dioxide in 2050, or about 10% of the estimated total emissions of the year.

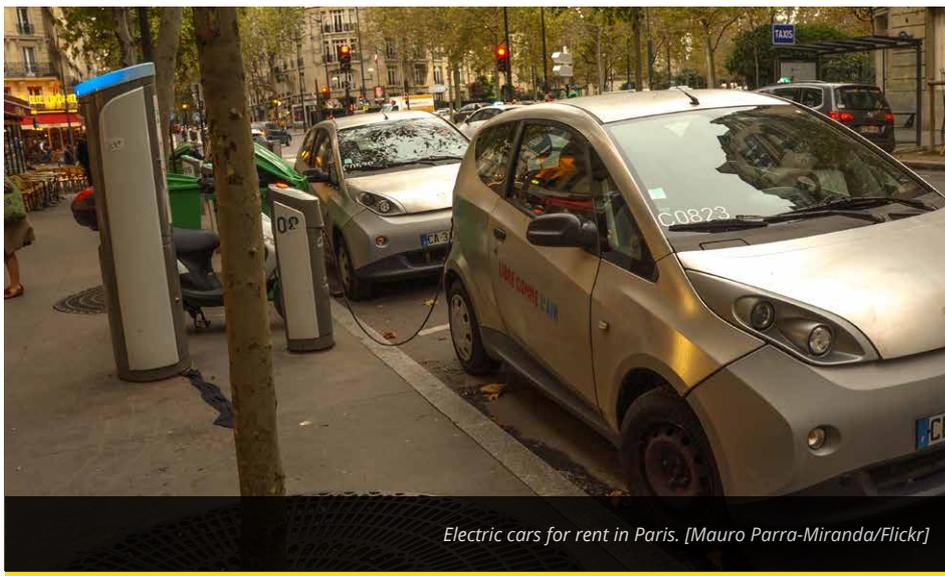
A larger number of electric cars will increase electricity consumption, raising their share from 0.03% in 2014, to 9.5% by 2050 under the 80% scenario.

The EEA said that it would be crucial for the road transport and energy sectors to work closer together to manage the additional stress on the grid, and ensure policy and investment decisions are coordinated.

## Energy Union

The Commission's flagship Energy Union strategy looks to better incorporate renewables into the EU power grid, while putting "energy efficiency first" in a bid to lessen dependence on imports and fight climate change.

The Commission's low-emission mobility plan concedes that meeting electricity demand could be a challenge at peak times.



Electric cars for rent in Paris. [Mauro Parra-Miranda/Flickr]

As part of Energy Union, the Commission is working on a proposal for electricity market design. That should make it easier to integrate electromobility into the system by incentivising charging at times of low demand.

It also looks to encourage consumers to generate their own power by, for example solar panels on their roofs. This energy could be used to power electric cars, reducing the strain on the grid.

Extensive infrastructure investment with more public car charging points and increased power capacity will be needed.

That is recognised in the European Commission's strategy on low emissions mobility, which was published in July this year.

It calls on member states to design policy frameworks for the roll out of electric recharging points by November this year. Customer awareness campaigns are also backed in the plan.

EU leaders have agreed to boost the share of renewables and energy efficiency by 27% by 2030. After the Paris Agreement, that commitment is due to be hardwired into an EU bill.

Forthcoming energy efficiency legislation from the European Commission is expected to propose a 30% efficiency increase to reflect the ambition of the Paris Agreement.

The European Parliament is pushing for 40% and both MEPs and the Council

will ultimately have to agree an identical text before the goal becomes law.

The executive has also vowed to make the EU the world number one in renewables, and is also trying to reform its carbon market to incentivise industry to cut emissions.

But huge challenges remain, not least in terms of finance both in infrastructure investment and research and innovation.

The Commission is hoping to harness the power of capital markets to incentivise sustainable investment through its Capital Markets Union strategy.

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