

## ENERGY POLICY



European energy experts say the European Union (EU)'s latest green energy targets within a new climate law to cut carbon emissions at least 55% by 2030 compared to 1990 levels will be challenging but achievable. It is a significant steepening of ambition compared to the EU's existing legislation, which aims to reduce emissions by at least 32.5% by 2030 from 1990 levels.

Industry associations say they are also keen to meet an EU climate neutrality-by-2050 goal, with the European Association for Electromobility (AVERE) saying this target is an 'existential necessity'. However, this is a later deadline than the 2040 date called for by environmental organisations such as the European Environmental Bureau.

There is less confidence, however, that the EU will make a 90% cut in transport emissions target by 2030 and phase-out of new internal combustion engines (ICE) vehicles by 2035. European automobile associations, including AVERE, say this would need real improvement in renewable energy expansion, increased recharging infrastructure and investment in e-mobility technologies.

#### Fit for 55

The latest proposals for a 55% cut in CO<sub>2</sub> emissions by 2030 came in the European Commission's (EC) 'Fit for 55' package of proposals announced in July this year. These include tougher rules for the EU Emissions Trading System (ETS); increased use of renewable energy; greater energy efficiency; a faster roll-out of low-emission transport modes; and an

# Going greener

**The EU's green energy targets are achievable, but major investments are required, write Liz Newmark and Poorna Rodrigo.**

alignment of taxation policies with environmental policy, notably new exemptions for renewable and alternative fuels, and measures to prevent carbon leakage.

According to the EC's climate and energy spokesperson Tim McPhie, the EU executive is 'confident' the EU can deliver on its targets that were originally outlined in the European Green Deal strategy released in December 2019. 'Since 1990, emissions have fallen by around 25% in Europe, while our economy has grown by over 60%. The policy framework that needs to deliver our 55% emission reductions for 2030 is already largely in place.' He also notes that a new €72bn Social Climate Fund could be used to support renewable energy and charging infrastructure.

Echoing AVERE's comment, McPhie adds: 'While we have had success in other areas, transport is a challenging area to decarbonise, with emissions rising

in recent years.' However, given transport accounts for 20–25% of emissions, he continues: 'We have to act, setting new CO<sub>2</sub> emissions standards for cars and vans, leading progressively to a situation where only zero-emissions new vehicles can be sold in Europe from 2035.'

The good news is that the EU market for electric vehicles (EVs) has tripled compared to 2019, with over 1mn cars registered, according to McPhie. 'To meet demand from drivers, the Commission is legislating to increase the number of charging points across Europe... with targets for the distance between charging stations on major European highways.'

As many cars already on the road will remain in circulation beyond 2035, the EC is also introducing 'an ETS for road transport fuels, meaning fuel suppliers have to pay for the emissions they will put on the market', McPhie notes. 'This will incentivise them to decarbonise their fuels and bring down compliance costs.'

#### All technologies needed

Meanwhile, EU refining industry association FuelsEurope's Communication Director Alain Mathuren says that although a transport ETS and plans to include growing emissions within the system 'will bring a welcome element of carbon pricing, it will also generate a cost for fuels' customers on top of existing fuels taxation'.

He argues that insufficient attention has been given to 'sustainable and renewable fuels' in the vehicles' CO<sub>2</sub> regulation. 'Electrification and hydrogen will play a critical role in the decarbonisation of road transport, but all technologies, including low-carbon liquid fuels, will be required to achieve climate neutrality.'

By 2050, every litre of liquid fuel could be net climate neutral given the right investment, according to Mathuren. Some €30–40bn would be needed between 2020 and 2030, including the creation of advanced biofuel and e-fuel plants; and €400–650bn by 2050, enabling the availability of 150mn toe low-carbon liquid fuels, he says.

The automotive industry in general is 'already delivering an ever-expanding range of electrified vehicles which are being bought in ever greater numbers', according to the UK's Society of Motor Manufacturers and Traders (SMMT). As a result, 'maintaining

A special meeting of the European Council, in Brussels, the EU's top decision-making body – which agreed the latest strategy on fighting climate change within Europe

Photo: European Commission/  
Etienne Ansotte



a strong and competitive market that ensures the shift to electrified vehicles is affordable for all' is crucial. That said, the goal of achieving net zero emissions through EVs cannot rely solely on automotive manufacturers, notes the Association. Massive investment in recharging infrastructure is needed, and at an accelerated pace for which 'we still await a plan and equally ambitious targets'.

### Powering positivity

Other sectors are more positive. 'The transformation of the power sector is real and on fast forward,' says Kristian Ruby, Managing Director of European electricity industry federation Eurelectric. 'We are committed to fully decarbonise the electricity mix well before 2050 and help end-use sectors like heating and cooling, transport and industries to decarbonise. In 2020, 60% of the EU's electricity was already carbon neutral, and within a decade this share will reach 80%.'

To deliver the 2030 target, 500 GW more renewable energy will be needed, almost half the total EU current capacity. 'To get there, we need to tackle the remaining barriers – solve the permitting issues, provide long-term investment certainty, strengthen the EU ETS and ensure a level playing field with other energy carriers,' says Ruby. Streamlining the current slow and complex permit granting procedure for green energy is a key necessary reform, he adds.

Eurelectric also wants a 50–70% increase in spending on electricity distribution grids to upgrade and modernise networks, helping integrate additional renewable capacity and supporting the electrification of transport, buildings and industries.

Ruby says the EC's €17.5bn Just Transition Fund is 'a good start' in investment, but its Modernisation Fund, helping the lower-income member states of Bulgaria, Croatia, Czechia (the Czech Republic), Estonia, Hungary, Latvia, Lithuania, Poland, Romania

Transport is a key focus for EU policies promoting green innovation – pictured here is the *Sankta Maria* solar-electric ferry which was developed with co-funding from the EU's Interreg programme

Photo: European Union/Jean-Christophe Verhaegen



European Commission President Ursula von der Leyen at the June 2021 G7 meeting in Cornwall, UK, where a united effort to fight climate change was an agenda priority

Photo: European Commission/Tim Ireland

and Slovakia upgrade their energy systems, should also be reinforced and prioritised in future long-term EU budgets.

Bronagh O'Hagan, Communications Director for Eurogas, representing European gas wholesale, retail and distribution sectors, agrees that the EC's energy goals are achievable and that gas can help. She reports that a Pathways analysis by Eurogas and DNV suggests that optimising the role of gas could cut EU carbon reduction transition costs by €4.1tn by 2050.

O'Hogan adds that the EU gas sector was committed to deliver a carbon neutral gas sector already by 2045, noting: 'Incorporating renewable and low carbon gases into networks is a quick and cost-effective way to do that.' Eurogas is also calling for binding 2030 targets to reduce the greenhouse gas (GHG) intensity of gas consumed by at least 20% and to increase the share of renewable gas to at least 11% of gas consumed, she says. The organisation also wants more investment and better recognition of carbon capture and storage (CCS), development of hydrogen infrastructure and the repurposing of existing methane networks.

Representing the renewables sector, European wind industry association WindEurope's Communications Manager Christoph Zipf welcomes the 'Fit for 55' package as 'a crucial step to deliver on Europe's climate commitments'. But to meet the EC's ambitious goal to raise the renewable energy target from 32% to 40% by 2030, he estimates: 'The EU will need to install 30 GW of new wind farms every year between now and 2030, or 451 GW of wind power capacity by 2030, up from 180 GW today, so we need to double the annual installations.'

He believes this is achievable, with projected onshore wind prices falling to €33/MWh by 2030, a 28% cut compared to today. Offshore wind costs could decrease 44% to €48/MWh and floating offshore wind costs by 65% to €64/MWh over the same period, he adds.

Like Eurelectric, Zipf notes that permitting rules are too complex, lengthy and burdensome. Ultimately, 'an accelerated expansion of wind energy is not a question of technology, cost or finance' but of 'administrative reforms and political willingness', he says.

### Transport targets

Meanwhile, the European Automobile Manufacturers'

Association (ACEA) says its members support climate neutrality, investing 'billions of euros in innovative and sustainable technologies'. However, the Association argues the 55% by 2030 CO<sub>2</sub> reduction target for cars, based on 2021 levels, will be very challenging, requiring a corresponding binding target for member states to build up the required charging and refuelling infrastructure.

ACEA President and BMW CEO Oliver Zipse, referring to the goal of getting petrol and diesel cars off roads by 2035, states that 'banning a single technology' is not a rational way forward to climate neutrality: 'It is not the internal combustion engine that is detrimental to the environment, but fossil-based fuels,' he says. However, AVERE disagrees, saying 'combustion fossil vehicles' should be phased out earlier, by 2030. 'The mass uptake of electromobility is key to achieve the EU's target of 90% reduction in transport emissions,' says its Communication Manager Lorenzo Marchese.

Tax incentives, training programmes and investment in battery technologies can help, adds Marchese, emphasising that with the right backing and cooperation, 'the transition to renewables and electric transport will be not only fully viable but also economically convenient, creating jobs in growing sectors like wind and solar'.

One measurement of the EU record will be reviewing it against the UK. Following the UK's exit from the EU as of 1 January 2021 ('Brexit'), the UK government has published an ambitious planned target of reducing emissions by 78% by 2035 compared to 1990 levels, which Ellen Jennings of Energy UK characterises as the 'most ambitious emissions reduction targets of any major economy'. As for how such goals might be achieved, Jennings says as well as attracting the 'billions of pounds of investment that will be needed', focusing on maintaining 'security of supply and keeping costs down for consumers' are important too. That will certainly be needed to secure UK government commitments under its Ten Point Plan for a Green Industrial Revolution published in November 2020, which includes increasing UK offshore wind capacity to 40 GW by 2030, delivering 5 GW of low carbon hydrogen production capacity and removing 10mn t/y of CO<sub>2</sub> using CCS, also by 2030, she concludes. ●