Death of coal ‘might take longer than we think’, says EU’s new utility boss

“The future is not about conventional generation versus renewables, and it is not about centralised versus decentralised generation, rather about how both can complement each other in a sustainable power system,” said Eurelectric's outgoing President, Antonio Mexia. [Daniel Parks / Flickr]

The energy industry’s “denial phase” on renewables is over, said the outgoing president of Eurelectric, the EU power utility association, before passing the baton to his successor who predicted a longer agony for coal than previously thought.

Antonio Mexia, the outgoing president, spoke at the opening of the trade association’s annual convention in Estoril, Portugal, on Monday (19 June).

Mexia was referring to the relative slowness with which large utility companies adapted to the growing share of wind and solar power in the European energy mix, spurred by the EU's 2009 renewable energy directive (RED) and state subsidies.

"The future is not about conventional generation versus renewables, and it is not about centralised versus decentralised generation, rather about how both can complement each other in a sustainable power system," he told delegates in Portugal.

The electricity industry has in recent months intensified a campaign for the rapid electrification of sectors that have traditionally relied on fossil fuels – transport and heating.

And it is not alone in seeing the need for such a transition. "The 20th century undoubtedly belonged to oil, and there is no question that the 21st century belongs to electricity," said Laszlo Varro, chief economist at the Paris-based International Energy Agency (IEA).

If commitments to cut greenhouse gas emissions made at the United Nations Paris conference are to be met, electricity will have to be the dominant energy source for road transport by mid-century, Varro stressed.

Focus on electric cars

Elias Poyry, chief brand officer for the Finnish 'smart grid' firm Virta, agreed. "Electric vehicles bring batteries to the market with basically zero incremental cost – it's cheap storage," he said.

Storing electricity is frequently cited among a range of "flexibility" solutions to integrate an increasing share of intermittent renewables into Europe's electricity system. The idea is that cars will be plugged into the grid when parked, and used as backup when there is no sun or wind.

According to Poyry, the life-cycle cost of electric vehicles will reach parity with conventional cars between 2022 and 2025, by which time "a huge amount of storage capacity enters the market," he said. Estimates vary – Poyry also cited a European Commission forecast for 14% electric vehicle penetration by 2030 – but there was general agreement among speakers in Estoril that cars will be a crucial part of the transition to a decentralised low-carbon electricity system.

A poll of conference attendees showed just how much importance industry insiders attach to the future role of storage: over two-fifths (42%) said storage will be the most important factor in decarbonising Europe's electricity system, compared to just 8% in 2010.

The vote for renewable energy technologies themselves remained almost static, down just one percentage point at 30%, while the number of people who saw nuclear as the answer has crashed over the past seven years from 44% to just 3%.

Infrastructure

But using cars as a universal means of on-grid storage depends on a huge roll-out of charging infrastructure, participants at the event warned.

Regulations currently in force – whether from Brussels or national governments – were put in place ten or even 20 years ago and are not suitable for an environment where the focus has shifted to decarbonisation of the energy sector, said Jean-Bernard Lévy, CEO of French electricity giant EDF.

Lévy gave a less optimistic view on the potential uptake of electric cars, at least in France. Even if EDF were to double its forecast, it would only imply the deployment of storage capacity equivalent to one of France's 58 nuclear reactors by 2030, he said.

Questions are also being raised as to the benefits of grid-connected batteries. A report by European science academies earlier this week said grid-connected batteries as such were "not fundamentally needed", saying other solutions like demand-response systems could offer the same type of "flexibility" services to the grid.

Power utilities see regulation as the key to driving the expected surge in demand for power coming from electric vehicles. Norway successfully boosted e-car sales by heavily taxing other, more polluting options, one speaker noted. Other incentives have included allowing electric cars to use bus and taxi lanes.

Eurelectric has argued for a radical increase in electrification to meet climate targets set in the 2015 Paris Agreement. Industry leaders have also come up with a potential solution to soften the demand-damping effects of new EU energy saving goals: electricity from renewable sources should have a "primary energy factor" of zero, meaning it would not be counted in assessing compliance with energy efficiency targets. (This argument was elaborated in more detail in a joint statement last week.)

The end of coal "might be longer than we think"

This pro-climate argument assumes that the bulk of Europe's electricity will gradually be coming from renewable sources.

But Eurelectric's new president, Francesco Starace, suggested it would be a mistake to assume coal-fired power generation had no future, even if all the association's members – aside from Poles and Greeks – have agreed not to build any more coal-fired power plants.

Although he assiduously avoided any direct reference to coal, Starace's message was clear.

"I think there is a huge value creation potential, provided we don't just throw things in the bin because they belong to a certain technology that we think is at the end. It might be at the end, but it might be a longer end than we think," he said.

And the current wave of digitalisation sweeping through the power sector could actually help coal plants and other "legacy assets" reduce their emissions, Starace argued.

"If you take a power plant that was built 20 years ago…even five years ago, it is full of automation but is not a digital native," he said. Now you can install inexpensive sensors and digital control systems that enable more efficient operation, he said. "It becomes more efficient, it pollutes less, it provides more power and it is easier and cheaper to maintain," Starace said.

Starace is CEO of Italian energy giant Enel and was named as Eurelectric's new president on Monday (19 June) by the association's board of directors.

The first day of Eurelectric's annual meeting was also dominated by discussions around the rise of distribution service operators (DSO) in an increasingly decentralised power market.

DSOs have until now been rather passive, quietly providing a network of cables and substations that join individual consumers to large transmission lines. A strategy paper circulated at the meeting in Portugal envisaged them offering a new "platform-based" service that would bring together all participants in the new market.

These would range from self-generators with a solar panel on the roof to owners of electric cars and a new breed of active consumer. (The jury was out on how many people will opt to actively engage with wholesale power markets via smart meters and apps. Several at the conference saw opportunities for utilities in providing services to consumers who are not interested in actively engaging.)