The secretary-general of Eurelectric, Kristian Ruby, has emphasised the tremendous opportunities in store for the awakening electric power sector as the industry continues its drive to decarbonize.

Speaking at POWER-GEN Europe in Cologne, Ruby was keen to impress on the audience of power professionals just how much attitudes had changed towards the prospect of decarbonization since Eurelectric began polling power industry professionals five years ago.
POWER-GEN Europe's 25th anniversary show as well as the unveiling of its new guise as Electrify Europe, another sign of the transformational era the power industry is currently undergoing.

Electrify Europe is pitched as the world's first event dedicated to the convergence in the power generation and transmission and distribution sectors, driven by digitization, decentralization, electrification and customer engagement. That merging shows how complex the power system has become in a relatively short space of time.

“One question we ask delegates each year is do you see decarbonization as an opportunity or a liability,” Ruby said. “Five years ago, 40 per cent would say it’s an opportunity and 60 per cent thought it a liability. This year (when polled) 80 percent of all delegates said it’s an opportunity, a business opportunity. I think that’s significant and people are increasingly enthused in their perspectives of the energy transition and I think there is a close link between decarbonization and electrification.”

Ruby painted a picture of an industry getting to grips with the possibilities emerging from an embrace (belated for many) of the new paradigm.

He quoted IEA Chief Economist, Lazslo Varro who recently said, “If the 20th century belonged to oil, the 21st century will belong to electricity.”

The presence of Ruby, who previously headed Wind Europe and worked at the European Commission's Climate Action unit, is another indication of the momentum behind the global energy transition. He said his career had been dedicated to climate action and believed from the ‘bottom of my heart in the need for this
fundamental societal change.' Five years ago, this assertion may not have been well-received, or even believed.

He told the audience that significant opportunities were within the grasp of the power sector, though the 'big changes' unfolding were not easy to adapt to.

“If we hang in there, and avoid complacency there is a huge prize to be won for us at the end of this transformation.”

Ruby pointed to the ambitious scope of the Paris Agreement, and its target of limiting global warming to 1.5 degrees as the reason for a growing enthusiasm.

“Essentially, we need to decarbonize deeper and more rapidly, also in other sectors. Efforts up to now had focused on the power sector. The present modelling of our decarbonisation pathway as a society is based on us decarbonizing the electricity sector completely by mid-century. That still leaves the question what about the other sectors? If we go deeper, how do they follow along and that's where electricity comes into play.”

He noted that from 1990 to 2014, the power sector's carbon footprint had steadily decreased from 450 grams per kilowatt hour to lower than 300 in 2014, an unparalleled decrease for any energy technology.

Despite particular member states being wedded to coal and lignite, the average fuel mix across the European Union is 56 per cent, due to the combined effort of renewables and nuclear power. The implications of this, according to Ruby, are significant in terms of the long-term health of the power sector.

“If you were to power an Electric Vehicle (EV) based on that average, even though its theoretical, that car would run with 50 grams of CO2 emissions per kilometre. The average
emissions of a car at the moment is around 95. By already switching today, there would be an immediate climate benefit because if you power cars on electricity there is only a fraction of the emissions compared to other technologies such as combustion engines.”

Ruby noted that the energy transition has not been without great pain for the industry with over EUR115bn worth of assets written off and more to come. However opportunities are now presenting for those companies who are open to the accelerated transformation.

The building sector used 123 exajoules of power in 2014 and much of the decarbonisation of the sector is expected to come from electrification, when electricity is doubled in that space.

“It’s the same in transport,” said Ruby. “1 billion cars on the planet are based on combustion engines, diesel and gasoline. If we move forward more people will be wealthy and want cars as we progress through the 21st century, but the majority of cars will be powered by electricity.”

Eurelectric have made it a priority to push for economic value to be attached to availability of energy, what they see as a vital component to the system design as renewables continue to grow in share, but they are also calling for the EU budget to be leveraged to transform power sectors in countries resistant to new energy.

“This is a huge societal transformation and finance is important. We believe leveraging the budget of the EU, which on a seven-year basis, is around EUR950Bn; why not spend some of that money to get innovation going and get the transitions going in the regions that have trouble dealing with this, that have a traditional profile of high carbon assets. Make sure we leverage that public money for innovation and transition.”

“Steering that transition is important and moving out of nationally defined energy systems towards a truly European framework. I can
assure you that’s one of the most difficult things in terms of meeting opposition as everything is so embedded in the national context, the regulation, the mindset. Getting the regional cooperation is key.”

Ruby went on to call for clarity as a means of encouraging investment, particularly the infrastructure required for successful proliferation of electric vehicles. He then ended by sharing with the audience the closer cooperation of various actors on the European energy scene with that aim of greater electrification - a body called Electrification Alliance.

“Wind Europe, Solar Power Europe, the European Copper Institute, the European Heat Pump Association and the Electric Vehicle Association will work together to advance the idea of the electrification of the economy, to provide policy recommendations, create new insights and push the idea that we can create benefits for the European economy by gradually electrifying in a smart, sustainable way.”

News of such an alliance neatly tied in with the event’s own transformation to Electrify Europe for next year. Glenn Ensor, Managing Director of PennWell’s International Division said, “Responding to a dramatic shift in the European power market, Electrify Europe is an entirely new concept designed to foster information exchange between established and new players for the creation of advanced solutions across an entire electricity value network that has the customer as its focus.

“Inspiring thought leadership, collaboration and innovation, Electrify Europe unites every aspect of the European market to transform the future of electricity.”

That conference and exhibition will be held from 19 – 21 June 2018 at the Messe Wien in Vienna, Austria.