

### **Prof. Vicente J. Cortés**

- Co-founding President of INERCO, the first spin-off of the University of Seville (1984). INERCO is a holding with 16 companies, more than 650 people in the team and offices in 9 countries in Europe, Latin America and India.
- Professor of Chemical Engineering at the School of Engineering (U. of Seville) active until 2013, with over 35 years of teaching and research experience in energy conversion and decarbonisation processes.
- Author of 38 publications, inventor on seven patents, 1<sup>st</sup> Babcock Technological Innovation Award and 1<sup>st</sup> ENDESA Novare Award for Applied R&D in energy. Co-author of the European Academies Science Advisory Council policy report “Carbon capture and storage in Europe” (2013).
- Director of the CIUDEN CO<sub>2</sub> Capture Program (2007-2021), responsible for the team that built and operated the world’s largest oxyfuel CO<sub>2</sub> capture technology development plan for four years.
- Independent expert of the European Commission’s Directorate General for Energy.
- Member of the Advisory Council of the European Zero Emissions Platform, Vice-Chair of the Spanish CO<sub>2</sub> Platform and former member of the Executive Committee of the International Energy Agency Greenhouse Gas Programme.

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“Energy challenges in Europe. The role of Engineering in securing supplies and technologies”

Session 3: "The role of Engineering in the transformation of the oil and gas sectors"

“Carbon Capture and Use”. Prof. Vicente J. Cortés

Carbon capture, utilisation and storage technologies (CCUS) have traditionally been less attractive than other decarbonisation technologies, especially in southern Europe. However, the recent Net Zero Industry Act (NZIA, in the pipeline) establishes a level playing field with other technologies such as renewables, electricity and heat storage, electrolysers and renewable fuels of non-biological origin (RFNBOs). Reasons for this are:

1. Emission neutrality in 2050 implies that part of the emissions needs to be captured and stored geologically.
2. CCUS is essential to avoid so-called process emissions from industry.
3. Capture is absolutely necessary to ensure the availability of CO<sub>2</sub>, feedstock for certain RFNBOs and a new methanol-based carbochemistry. By 2030 20% of EU chemicals and plastics must come from recycled carbon from non-fossil sources.

The contribution will detail the importance of the three previous roles and will outline the current state of the European legislative train affecting the CCUS.