

Towards the Decarbonisation of Energy Intensive Industries in Europe

Promoting a bio-based and circular economy

Brussels (12 May, 2021). The “RE4Industry Approach” to Industrial System and Sources Integration for Low Carbon Fuels.

Energy Intensive Industries (EII) must play a crucial role in reaching the ambitious targets of the EU to become carbon neutral by 2050. As EII represent almost a quarter of the final energy consumption, a clear long-term strategy is required in order to remain competitive while contributing to the decarbonisation targets of the EU. The EU-funded RE4Industry project works on determining the most suitable, economically and technologically feasible renewable solutions for EII in the short-term goals (2030) and long-term (2050) visions. Along with determining an action plan for industrial decarbonisation, it also aims to shape the industrial landscape into a large market for the uptake of renewable energies (RE).

To demonstrate their activities, RE4Industry submitted and presented a scientific paper at the 29th European Biomass Conference and Exhibition (EUBCE) on 29th April 2021. Among the many other interactive presentations, exhibitions and networking events, the conference aimed to contribute to the goal of accelerating research and market uptake of biomass across the globe. Six scientific tracks led the way in exchanging about how to achieve these goals: sustainable resources for decarbonising the economy; biomass conversion for bioenergy; biomass conversion to intermediate carriers; impacts & policies; bioenergy integration; and industry.

As part of the industry track, RE4Industry showcased its methodology to promote and facilitate an increasing share of RE in EII, as presented by Clara Jarauta-Córdoba on behalf of a group of authors from the CIRCE Foundation. Demonstrating the strategies for EII's decarbonisation, the presentation focused the different perspectives that must be taken into account when defining and establishing a strategy both for the short and long-term climate and energy goals. The aspects that must be studied and incorporated are, for instance, a technological review for current and future RE solutions, a sector status overview, but also the triggering of engagement and interaction with a wide scope of stakeholders for an extensive multiplication and replication strategy. RE4Industry examines these and a variety of other factors as contributors to the successful decarbonisation efforts and uptake of RE in EII.

From the RE4Industry consortium, two additional partners took part in the same session as speakers: Felix Colmogren (WIP Renewable Energies) with a presentation on *biogas market uptake, opportunities and challenges*, and Patrick Reumerman (BTG Biomass Technology Group) with a session on *market uptake for intermediate bioenergy carriers, retrofitting opportunities* and more. The full conference proceedings are available on the Conference website.

Background information: RE4Industry project

The project aims at determining the most suitable and economically- and technologically-feasible renewable solutions for energy-intensive industries, together with the definition of an action plan for industrial decarbonisation pointing at transforming the EU industrial landscape into a large market niche for the uptake of RE, all the while defining the appropriate framework scenarios for short-term (2030) and long-term (2050) visions.

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A comprehensive network of stakeholders and market actors (RE4Industry collaborative network) will be at the core of the project activities, as they will be responsible for the identification of sector needs, appropriate technologies, and barriers that might hinder their application, interacting at the same time with industry representatives for a continuous feedback loop. The effectiveness of this approach relies on a strong engagement strategy that will count with the support of an advisory board and in thematic panels organised in the framework of the collaborative network, whose objective will be to retrieve and share feedback on technology, processes, industry, sector regulation, markets, and societal perceptions. Policy recommendations will thus be elaborated.

The RE4Industry approach will be validated in 3 representative industrial use cases in 3 different sectors: steel, aluminium, and chemical. Partners will then work on the definition of a suitable exploitation strategy as well, to replicate the RE4Industry innovation in additional sectors, all the while initiating cross-border knowledge transfer in multiple EU countries.

RE4Industry partners involvement

Bringing together expertise from 6 countries (ES, NL, GR, DE, BE, AT), RE4Industry consortium is a multidisciplinary and complementary group gathering expertise in energy, social studies, and knowledge transfer activities as well as with links and experience in the energy-intensive sector, retrofitting activities, and renewables.

Composed of 11 partners, the consortium will ensure a wide European geographical coverage in order to guarantee extensive engagement of external stakeholders and wide dissemination of project results. The companies and organisations have carefully selected to cover a specific role: 5 technological and social experts (Fundación CIRCE, BTG Biomass Technology Group, CERTH, WIP Renewable Energies, White Research), 3 renewable energy-oriented associations (Bioenergy Europe, Energy Efficiency in Industrial Processes, European Sustainable Energy Innovation Alliance) and 3 energy-intensive industries (SIDENOR, MYTILINEOS, CORBION).

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Additional resources

Project website www.re4industry.eu

Project information (CORDIS) [Link](#)

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Disclaimer

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