PRESS RELEASE

10 December 2019

Synthetic e-fuels from renewable energy show potential for sustainable shipping

A Ricardo study commissioned by the Environmental Defense Fund and focusing on Chile, highlights the enormous potential for the production of e-fuels from renewable energy for use by the shipping industry.

The report Electrofuels for shipping discusses how synthetic fuels derived from renewable energy could play an important role in decarbonizing the international shipping industry, with a specific focus on the role that Chile might play in delivering such a low carbon future. Using renewable energy, hydrogen can be produced in electrolysers by separating hydrogen atoms from water. This green hydrogen can then either be used as a fuel directly or processed further to produce green ammonia or carbon-based fuels like methanol. The substitution of these e-fuels for more traditional fuels are not without engineering challenges in terms of propulsion, fuel handling and storage systems, as well as protecting the safety of port staff and crew. Provided such engineering challenges are addressed, however, carbon neutral e-fuels offer a sustainable alternative to existing, fossil derived fuels used for marine applications.

The purpose of the report, which was produced by Ricardo for the Environmental Defense Fund, is to illustrate in a practical way how countries...
which possess large untapped renewable resources could use the energy demand from ships to unlock investment in new clean energy infrastructure.

Chile is heavily reliant on shipping for both international trade and domestic transportation. It also has one of the largest renewable energy capacities in the world with over 1,200GW of solar potential alone. Moreover, Chile’s unique geographic setting and size offer many favourable locations to set renewable infrastructure and fuel plants close to the main ports and therefore shipping routes. As such, the report demonstrates that Chile is perfectly positioned to become a South American hub for clean shipping.

This initiative would resonate with the strategy of the International Maritime Organization (IMO), which has agreed to cut greenhouse gas emissions by at least 50 percent by 2050 compared to 2008 levels and is now exploring polices that can achieve that goal. This, the report argues, will necessitate investment in new clean infrastructure and propulsion systems which will need to be supported financially to make them commercially competitive with traditional marine fuels. Chile is well-placed to be an early recipient of such investment.

“Ricardo is pleased to have been able to contribute to this important study on behalf of the Environmental Defense Fund,” said Nick Ash, principal consultant of Ricardo’s energy team. “The report shows that Chile has huge potential to decarbonize not only the shipping sector but its whole economy and implementation of zero-carbon marine fuels can be a driving force. This would also help to increase the country’s energy security and minimize its reliance on fossil fuel imports.”

For further information or to download a copy of the report, see: https://europe.edf.org/alternative-fuels-shipping

Ends
NOTES TO EDITORS:

Ricardo plc is a global, world-class, multi-industry consultancy for engineering, technology, project innovation and strategy. Our people are committed to providing outstanding value through quality engineering solutions focused on high efficiency, low emission, class-leading product innovation and robust strategic implementation. With a century of delivering excellence and value through technology, our client list includes the world's major transportation original equipment manufacturers, supply chain organizations, energy companies, financial institutions and governments. Guided by our corporate values of respect, integrity, creativity & innovation and passion, we enable our customers to achieve sustainable growth and commercial success. Ricardo is listed in the FTSE4Good Index, which identifies global companies that demonstrate strong environmental, social and governance (ESG) practices. For more information, visit www.ricardo.com.

Ricardo Energy & Environment is a leading sustainability consultancy, helping clients to respond to environmental challenges and opportunities around the world. Its team of over 450 staff draws on an impressive heritage supporting governments and businesses for over 40 years. Ricardo works with public and private sector organisations around the world to develop and implement smart networks that intelligently integrate energy generation, storage and demand in real-time. Its energy teams also provide strategic, economic and technical advice on how to connect renewable energy technologies into existing energy networks. Ricardo is providing strategic services to help businesses adapt to the UK’s changing energy mix. This includes supporting some of Europe’s largest road-vehicle fleet operators to plan for electrification. The consultancy is an operating division of Ricardo plc. For more information, visit https://ee.ricardo.com/

Media contacts:

Trevor Glue
Ricardo Energy & Environment
Tel: +44 (0) 1235 753429
E-mail: trevor.glue@ricardo.com

Anthony Smith
Ricardo Media Office
Tel: +44 (0) 1273 382710
E-mail: media@ricardo.com