

- IDEALFUEL -

Lignin as a feedstock for renewable marine fuels

GRANT AGREEMENT No. 883753

HORIZON 2020 PROGRAMME - TOPIC LC-SC3-RES-23-2019

“Development of next generation biofuel and alternative renewable fuel technologies for aviation and shipping”



Deliverable Report

D4.4 – Report on the potential of side streams for technical applications



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Publishable summary

The primary aim of IDEALFUEL is to facilitate the utilization of lignin from lignocellulosic biomass as a sustainable maritime fuel. The project seeks to develop an efficient and affordable chemical pathway for converting lignocellulosic biomass into Bio Heavy Fuel Oil (Bio-HFO) with low sulphur content, allowing it to be seamlessly integrated as a drop-in fuel in the existing maritime fleet.

During the production of Bio-HFO fuels, various interesting by-products are obtained. These side streams include intermediate products such as crude lignin oil (CLO) as well as by-products from the production of CLO and Bio-HFO which can be produced through different methods outlined in WP2. The objective of Task 4.2 is to examine these side streams, with a particular focus on the intermediate product – the CLO, to assess its potential use as bunker fuels. Additionally, the by-products such as cellulose and other specialty chemicals are evaluated for potential applications in higher value products like paper and textile fibers.

This deliverable provides an overview of the results from Task 4.2, focusing on the technical characteristics of the side-streams that have been analysed and documented through benchmarking. It also presents recommendations for potential applications and outlines a strategy for further investigations.

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Project partners:

#	Partner short name	Partner Full Name
1	TUE	Technische Universiteit Eindhoven
2	VERT	Vertoro BV
3	T4F	Tec4Fuels
4	BLOOM	Bloom Biorenewables Ltd
5	UNR	Uniresearch B.V.
6	WinGD	Winterthur Gas & Diesel AG
7		(Formerly SeaNRG, is now GOODFUELS #12)
8	TKMS	Thyssenkrupp Marine Systems GMBH
9	OWI	OWI – Science for Fuels gGmbH
10	CSIC	Agencia Estatal Consejo Superior De Investigaciones Cientificas
11	VARO	Varo Energy Netherlands BV
12	GOOD	GoodFuels B.V.



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