This document is currently under revision by the European Commission (EC) and has not yet been validated or approved by the EC. The content provided herein is subject to change, and the information presented may not represent the final position or official stance of the EC.

This document is being shared for informational purposes only and is not to be considered an official or authoritative source of information from the European Commission. Any decisions, actions, or interpretations based on the content of this document should be taken with caution, as the content may be subject to modification or revision by the EC.

The EC accepts no liability for any inaccuracies, errors, or omissions in this document, and any reliance on its content is at the user's own risk. It is recommended to verify the information provided in this document with official EC publications or communications before making any decisions or drawing any conclusions based on its content.

Please note that the content in this document may be confidential or sensitive in nature and should be treated as such. Unauthorized dissemination, distribution, or use of this document is strictly prohibited.

By accessing and reviewing this document, you acknowledge and accept the terms of this disclaimer.

BL2F

Transforming Black Liquor to Biofuel

Research and Innovation Action

H2020-LC-SC3-2019-NZE-RES-CC

D7.4 - Report on the final workshop

WP7 - Task 7.2

27.3.2024 [M48]

Lead Beneficiary: LGI

Author(s): Eddo J. da Silva Rosa (LGI), Sarah Naffi Johansson (LGI)

@BL2F_EU **www.bl2f.eu** **BL2F_EU**

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Grant Agreement n°884111.

Disclaimer

The content of this deliverable reflects only the author's view. The European Commission is not responsible for any use that may be made of the information it contains.

Document Information

Grant agreement	884111
Project title	Black Liquor to Fuel by Efficient Hydrothermal Application integrated to Pulp Mill
Project acronym	BL2F
Project coordinator	Prof. Dr Tero Joronen
Project duration	1st April 2020 – 31st March 2024
Related work package	WP 7 – Dissemination and Communication
Related task(s)	Task 7.2 – Dissemination
Lead organisation	LGI
Contributing partner(s)	All partners
Due date	31/03/2024
Submission date	27/03/2024
Dissemination level	Public

History

Date	Version	Submitted by	Reviewed by	Comments
20/03/2024	N°1	Eddo J. da Silva Rosa	Sarah Naffi Johansson	

Table of contents

List of figures

List of tables

Abbreviations and acronyms

Acronym	Description
WP	Work Package
HTL	Hydrothermal liquefaction
iHTL	Integrated Hydrothermal liquefaction
BL	Black Liquor
BL2F	Black Liquor to Fuel

Executive Summary

The BL2F Final Workshop was a crucial platform for disseminating the BL2F project's findings on converting black liquor into sustainable biofuels. Through expert presentations and discussions, participants gained valuable insights into renewable fuel production strategies and future developments. In the run up to the final workshop, a range of promotional materials were created and widely disseminated across the BL2F communication channels, via our partners and external networks, to ensure broad participation. Presentations are now available on the BL2F website, offering valuable insights on the range of discussions that were had. The positive feedback received from partners and participants illustrates the impact of the final workshop and emphasises the importance of continuing collaborative projects to advance toward finding sustainable energy solutions.

Keywords

Black liquor, Fuel, Aviation, Shipping, Final Workshop, Renewable biofuels, Black liquor, Sustainable energy, Hydrothermal Liquefaction (HTL), presentations, experts, webinar.

1 Introduction

1.1 Final Workshop Objectives

The objective of the BL2F Final Workshop was to disseminate the findings and concepts of the BL2F project to stakeholders, including project partners, industry experts, and external participants. The workshop served as a central platform for knowledge sharing and discussion on the innovative approaches and advancements achieved within the BL2F project, particularly focusing on the conversion of black liquor into sustainable biofuels.

The workshop aimed to educate participants on current strategies and pathways to renewable fuels, emphasising the significance of the BL2F process chain in the context of future fuel production. As the future landscape of renewable fuel production shifts towards decentralised plants specialising in specific fuel types, understanding the principles behind processes like Hydrothermal Liquefaction (HTL) and other scalable technologies becomes crucial.

Key topics of discussion during the workshop included:

- From pulp to fuel via HTL and IHTL
- Coupling salt extraction from black liquor with hydrothermal liquefaction of its organic content
- Upgrading of biocrude and valorisation of side streams
- Plant design and materials
- Market opportunities for advanced biofuels and IHTL
- HTL technology for Black Liquor – lessons learned
- Catalysts for Supercritical Hydrodeoxygenation
- Pulp Mill's potential for Sustainable fuel generation
- Renewable materials for aviation and marine fuels

The workshop discussions provided the participants with a comprehensive overview of the many different aspects that make up the BL2F project and its role in the future of renewable fuel production. Through expert presentations, interactive discussions, and a wrap-up Q&A session, the workshop was an opportunity to engage in a conversation on how to advance the knowledge and understanding of renewable biofuels, and to receive updates on the latest developments and trends in the industry.

Furthermore, the workshop represented an occasion for the BL2F project to conclude its dissemination activities, aimed at raising awareness of the project results and work towards a more sustainable and environmentally friendly energy future. Finally, it gave interested stakeholders a chance to interact with the project team and learn more about the results in this format.

2 Preparations for the Final Workshop

2.1 Organisation of the BL2F Final Workshop

The planning, organisation and communication about the BL2F Final Workshop was a joint effort led by representatives from LGI Sustainable Innovation (LGI) and Tampere University (TAU). The scientific content of the workshop was provided via input from TAU, Karlsruhe Institute of Technology (KIT), Paul Scherrer Institute (PSI), Technical Research Centre of Finland (VTT), SINTEF, SINTEF Energy Research, Brunel University (BUL), The Navigator Company SA (NVG), RAIZ, LGI, Valmet, NESTE, and Ranido during the event.

As the work package (WP) lead for Dissemination and Communication activities, LGI was responsible for putting together the agenda for the workshop, ensuring a well-balanced program that covered key BL2F topics, aligning all the content and the set-up of the various sessions. Part of that role was to create and disseminate new visuals for the social media channels, design a new events page and coordinate all incoming communications from interested participants. All BL2F partners contributed to disseminating information about the event.

The format of the workshop was set to a three-hour session and consisted of several scientific presentations focusing on key aspects of renewable fuel intermediates, while building on the knowledge shared during the lifespan of the BL2F project. The workshop provided a valuable opportunity for all attendees to gain insights into the latest research and innovations in renewable fuel. It offered a platform to learn from leading experts in the field that participated in the BL2F project, and enabled discussions on emerging trends and challenges.

2.2 Target audiences

The BL2F Final Workshop was targeted at technical stakeholders such as representatives from academia, industry (including biofuel manufacturers, transport industry, and the oil industry), and scientific/research stakeholders. The session was successful in that it did attract a diverse range of participants reflecting the broad interest in and relevance of the topics covered. In the end, the workshop did include representatives from academia, research institutions, industry, and business, spanning a wide range of expertise and roles. It particularly seems to have resonated with researchers (e.g., scientists and PhDs from academia and industry), which one could potentially connect to the BL2F Summer School that was held in June 2023, or the high technical level of the projects results. These researchers, along with project partners, and industry stakeholders, comprised the core audience of the workshop.

Finally, the BL2F workshop provided a valuable opportunity for all attendees to gain insights about the research and innovation in renewable fuel production, regardless of their level of experience and background. It offered a platform to learn from leading experts in the field, engage in discussions on emerging trends and challenges, and network with peers and industry

professionals.

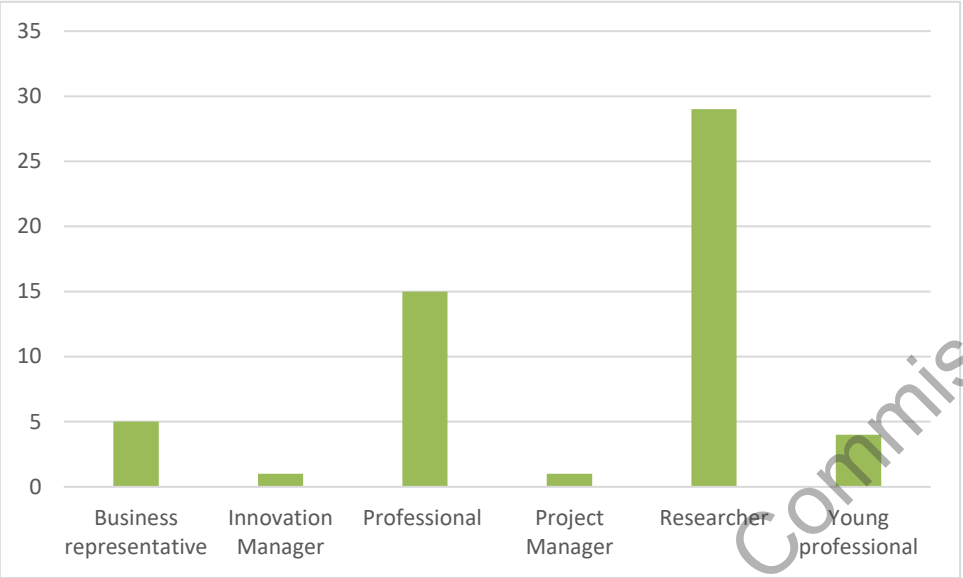


Table 1 - Profiles of attendees

Overall, the BL2F Final Workshop brought together 53 individuals (including those who were presenting on behalf of BL2F) passionate about renewable fuels and their role in fostering a sustainable future.

2.3 Promotional Materials

The BL2F Final Workshop was promoted through various communication channels, including via the project's social media platforms, the BL2F website, and via an email newsflash. A dedicated registration link was created to streamline the registration process for attendees. This link was shared as part of the promotional activities.

A diverse range of promotional materials was created to engage potential attendees and highlight the theme of the workshop. These materials included multiple images, GIFs, and a QR code linked to the registration page, enabling easy access and interaction for interested individuals across separate online platforms.

Figure 1 - Promotional materials

In addition to promoting the workshop via social media, a newsflash was sent out via the BL2F newsletter to subscribers, highlighting the key details of the workshop. This newsletter provided a direct channel in reaching project partners, stakeholders, and interested individuals, ensuring broad visibility and participation in the event.

Figure 2 - BL2F Final Workshop Newsflash

A webpage was created on the BL2F website (https://www.bl2f.eu/final-workshop/) to provide the latest information about the Final Workshop, including the agenda, speakers, registration link and any other details about the event.

Shared across various communication channels, e.g., via the social media posts and via the newsflash, the dedicated events page functioned as a resource hub for interested individuals to find all the necessary information about the workshop.

The combination of dissemination across BL2F's social media channels, the email newsflash, different promotional materials, including a dedicated events page, contributed to the success of the communications campaign for the BL2F Final Workshop.

Finally, the communication material about the event were put together in a TRELLO communications kit to facilitate the involvement of the project partners in in the dissemination activities,

A survey indicated that all these communication efforts, had a strong impact on the reach:

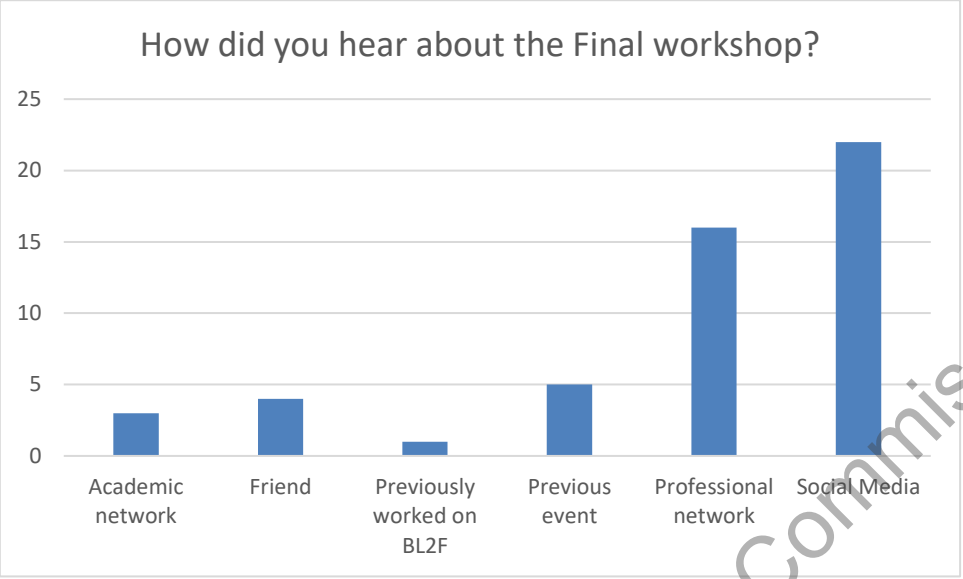


Table 2 - How did participants hear about the workshop.

3 Final Workshop proceedings

The final workshop was hosted online, on Microsoft Teams and held from 9:00 C.E.T to 12:00 C.E.T on the 6th of March 2024. The workshop consisted of multiple presentations by experts and researchers, and was moderated by Mathilde Legay, from LGI.

Presenters had participated in a pre-event briefing session where they could ask questions about the organisation of the workshop and align on the themes of the day.

Figure 3 – BL2F Final Workshop Background

The workshop was divided into three sessions with short breaks in-between each of them.

3.1 Session 1 – Technical Session

Time	Title	Presenting organisation
09:00-09:15	From pulp to fuel via HTL and IHTL	KIT & TAU
09:15-09:30	On coupling salt extraction from black liquor with hydrothermal liquefaction of its organic content	PSI
09:30-09:45	Upgrading of biocrude and valorisation of side streams	VTT

3.2 Session 2 – Technology, Sustainability, and Business

Time	Title	Presenting organisation
09:50-10:05	Plant design and materials	SINTEF and SINTEF Energy Research
10:05-10:20	Sustainability Assessment	BUL
10:20-10:35	Market opportunities for advanced biofuels and IHTL	LGI

3.3 Session 3 – Future Development and Potential

Time	Title	Presenting organisation
10:40-10:55	HTL technology for Black Liquor – lessons learned	Valmet
10:55-11:10	Catalysts for Supercritical Hydrodeoxygenation	Ranido
11:10-11:25	Pulp Mill's potential for Sustainable fuel generation	NVG & RAIZ – forest and paper research institute
11:25-11:40	Renewable materials for aviation and marine fuels	Neste
11:40-12:00	Panel discussion and Q&A	Valmet, Ranido, The Navigator Company, LGI Sustainable Innovation, and Neste

3.4 Participation rate

The promotional campaign (see section 2 – Preparations for the Final Workshop), was successful. The day before the event, the number of registrations exceeded over fifty people.

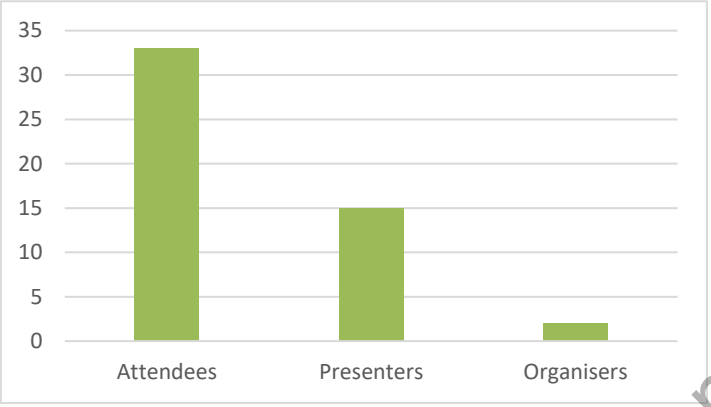


Table 3 - Type of participants at the Final Workshop

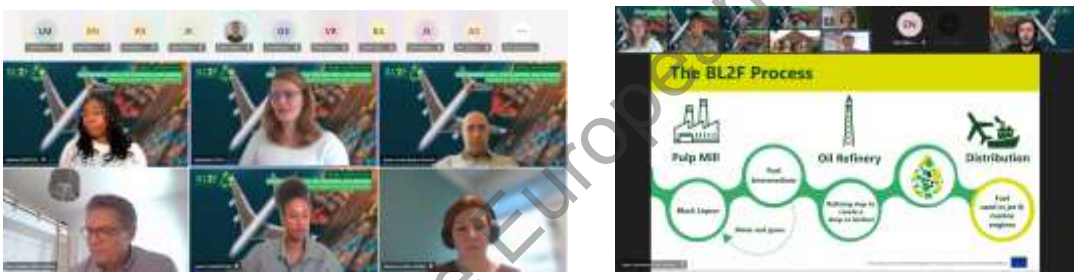


Figure 4 - Screenshots of the Final Workshop

4 Post-event survey

LGI created an anonymous survey to gather feedback from participants of the BL2F Final Workshop. Around 6 answers have been collected so far, and they are in general very positive.

1. How satisfied were you with the final BL2F workshop?

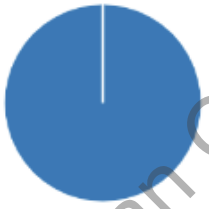
Plus de détails

Very satisfied	4
Somewhat satisfied	2
Neither satisfied nor dissatisfied	0
Somewhat dissatisfied	0
Very dissatisfied	0

2. Did the workshop cover topics relevant to your interests and needs, such as black liquor, biofuels, and renewable energy?

Plus de détails

Yes	6
No	0
Somewhat	0



3. How engaging and informative were the presentations and discussions on black liquor to fuel technology and its potential impact on renewable biofuels and climate protection?

Plus de détails

Very engaging and informative	1
Engaging and informative	5
Neutral	0
Not very engaging and informat...	0
Not engaging and informative a...	0

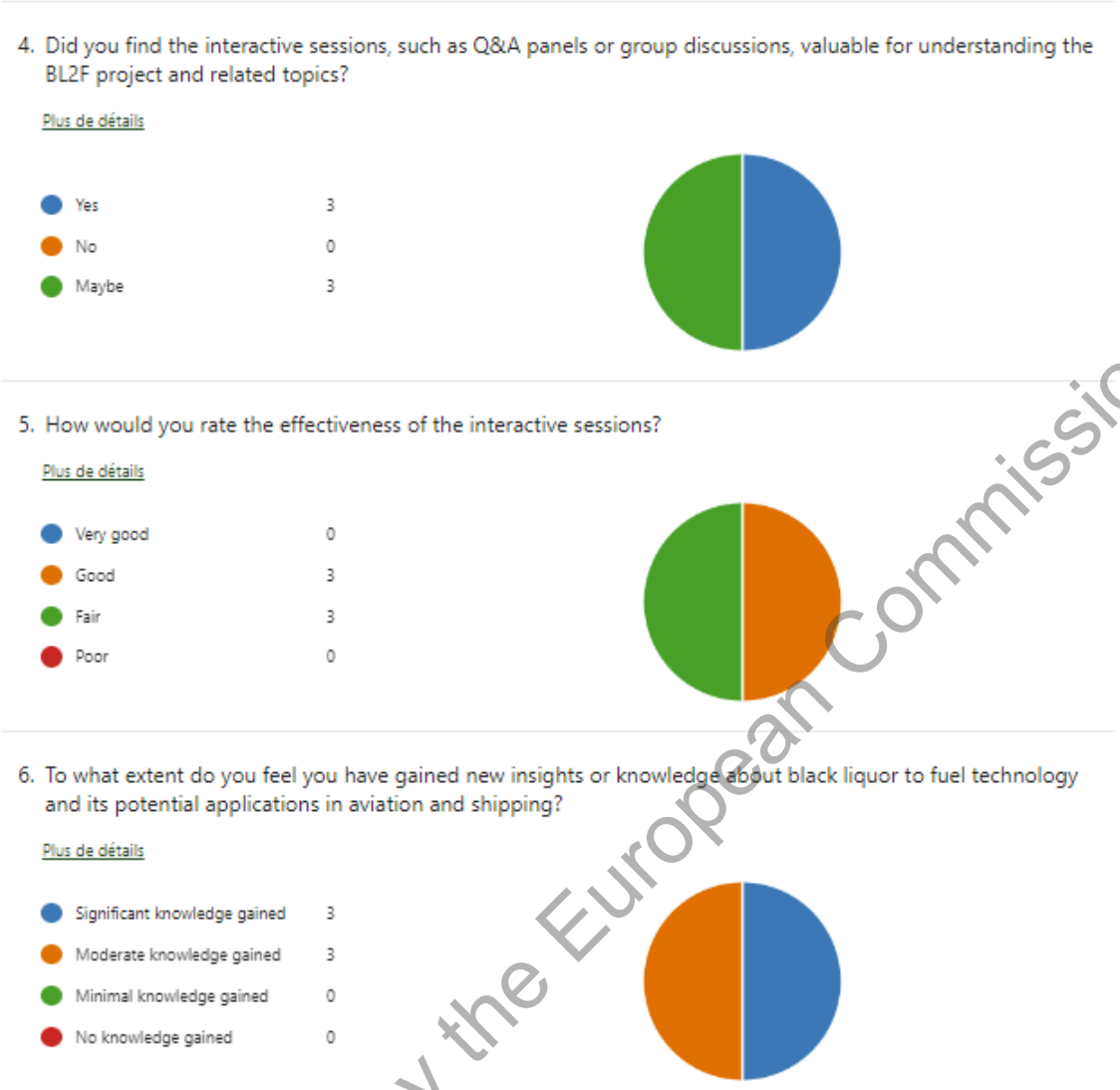


Figure 5 - Post Workshop Survey Answer

The last question, *"Do you have any suggestions for improving the content or format of future workshops or events related to BL2F or similar topics?*", received only one answer – a request to elaborate on potential business cases, input feedstock costing, analysis on alternative uses of various feedstock.

Conclusion

The BL2F Final Workshop marked a significant milestone in the dissemination of the BL2F project's findings to stakeholders, including academia and industry. With a focus on the project's main goal of converting black liquor into sustainable biofuels, the workshop provided a comprehensive platform for sharing the achievements and results of BL2F.

Through presentations from experts, engaging discussions, and a Q&A session, participants gained insights into the latest advancements in renewable fuel production.

Moreover, the workshop was also a final opportunity to connect with the BL2F consortium and to share the project's results in detail.

To continue dissemination efforts beyond the project's lifespan, presentations from this workshop are available on the BL2F Final Workshop page and the end-of-project landing page (which will include other materials, such as the summer school presentations), ensuring continued access to valuable insights and information for stakeholders interested in renewable biofuels.

Annex

BL2F Final workshop Survey: