



Deliverable 7.2

Mid Term Dissemination Workshop

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Contents

Acronyms and Abbreviations	4
Executive Summary.....	5
1 Introduction	6
1.1 HyLIFT- EUROPE Mid Term Workshop organisation	6
1.1.1 Workshop program	6
1.1.2 Final participant list	8
1.1.3 Logistics details during the event	8
2 Breakout sessions.....	9
2.1.1 Break out session 1: <i>FC powered forklift trucks, by HyPulsion</i>	9
2.1.2 Break out session 2: <i>Hydrogen refuelling operations, by Prelocentre FLT operators</i>	9
2.1.3 Break out session 3: <i>Hydrogen refuelling operations, by Air Liquide</i>	10
3 General presentations and feedback	11

Acronyms and Abbreviations

FC	fuel cell
FCH JU	Fuel Cell and Hydrogen Joint Undertaking
FLT	Forklift truck
GHG	greenhouse gases
H ₂	hydrogen
TT	Tow truck

Executive Summary

The objective of the HyLIFT Europe Mid-term Workshop has been to report on the first experiences with operating larger numbers of fuel cell (FC) powered forklift and tow trucks, as well as on the various deployment recommendations as reported in deliverable 7.5:

1. Direct end-user funding for fuel cell purchases (€/kW for instance) is needed;
2. Direct funding of infrastructure needs to go to end-user or H2 supplier (fixed € amount or fixed € amount by size of infrastructure for instance);
3. Cash incentive (tax credit not possible at European level) could facilitate uptake;
4. Funding offices should be open all year long. No call for proposals and no selection based on scientific quality only;
5. Distribution at European and/or National levels; end users should organize competition.

The HyLIFT Europe consortium since 2012 has worked diligently to interest suppliers, operators and logistic centres as demonstration sites for fuel cell powered material handling equipment. This has proven challenging both for forklift trucks (FLT) as for the larger tow trucks (TT) for various reasons.

As a new location in France, the Prelocentre location near Orleans, that is operating only fuel cell powered forklift trucks, came on line, of which the hydrogen refuelling station is funded by the HyLIFT Europe project and data of their FC FLT operations are being made available for analysis, it was decided to organize the Mid-term Workshop there on June 7, 2016. This offered a unique opportunity for many colleagues working in the sector to see the operation of multiple FC powered trucks up-close and meet both with suppliers and operators.

1 Introduction

1.1 HyLIFT- EUROPE Mid Term Workshop organisation

The HyLIFT Europe project was designed to build on the learnings of its predecessor, the HyLIFT DEMO project, that started in 2010:

The HyLIFT Europe project that started in 2012 faced many challenges in ensuring contracts for larger scale fleet operations. Difficulties in scaling up fuel cell systems, engaging local management and the general requirements in availability of these trucks as well as extremely small margins prevented final contracts.

The Prelocentre location, as the first multiple fuel cell powered forklift trucks location in Europe financed by the HyLIFT Europe project, offered therefore an excellent location to fulfill the Mid-term workshop requirements.

1.1.1 Workshop program

At the HyLIFT Europe General Assembly in November 2015 a taskforce of Air Liquide HyPulsion, FAST and Prelocentre was set up to develop a program and invitation list for a workshop in mid March 2016. Several teleconferences with suppliers and Prelocentre were held to discuss the right program format and invitation list. As Prelocentre and HyPulsion had already experience in organizing client meetings at the site, using a specific program format of break-out sessions, that seemed successful, it was decided to use the same formula that would cover the various areas of FC FLT operation (see the program below)..

INVITATION

Discover the first 100% hydrogen-powered fuel cell forklift truck site in Europe

HyLIFT Europe, in cooperation with Prelocentre and Air Liquide, is pleased to invite you to discover the operation and recharging of the first fleet of 100% hydrogen-powered fuel cell forklift trucks in Europe on June 7th, 2016, at Prelocentre site, Saint-Cyr-en-Val, near Orléans (45), France.

June 7th, 2016
11:00 - 14:00

Prelocentre Site
Rue des Genêts,
45590 Saint-Cyr-en-Val

About the HyLIFT Projects

The HyLIFT projects HyLIFT-DEMO and HyLIFT-EUROPE, co-financed by the Fuel Cell and Hydrogen Joint Undertaking (FCH JU), have supported the development and demonstration of European manufactured fuel cell powered trucks and the hydrogen recharging infrastructure since 2009.

Programme

- ▶ 11:00 Welcome: Philippe Giroux, Prelocentre Director
- ▶ 11:15 Site tour: hydrogen station, fuel cells and refuelling of the forklift trucks
- ▶ 12:15 Speeches: FCH JU, local authorities, Air Liquide, HyPulsion, Colruyt
- ▶ 13:00 Cocktail

www.hylift.eu

Rue des Genêts is a short walk from Saint-Cyr-en-Val Train Station:



Please confirm your attendance by May 19, 2016 at: ehasecretariat@h2euro.org

1.1.2 Final participant list

The updated HyLIFT-DEMO database of contacts has been provided by EHA as a basis for the final guest list that resulted from the discussions between the organization team; Prelocentre, Air Liquide and Hypulsion actively supported the follow up of the invitations as well as the organization of the workshop.

The final list of invitees is provided in annex 1 of this deliverable.

40 people participated in the workshop including representatives from relevant companies such as Toyota, local authorities including the Mayor of St Cyr-en-Val and the DREAL territorial unit of Loiret as well as European institutions such as FCHJU. The list and signatures of participants are attached below.

Unfortunately, the floods in the area of Orleans and the railway and air control strikes that took place in France and Belgium the week and day itself of the workshop may have prevented other interested people to join the workshop.

1.1.3 Logistics details during the event

As there were no meeting facilities at the premises of Prelocentre a tent was rented with high tables and chairs for the occasion in order to accommodate the participants for the welcome and presentations and cocktail at the end of the program. Participants were divided into 2 groups for the sessions. At the end of the visit the participants were reunited for the presentations. The workshop was closed with a cocktail and buffet.

2 Breakout sessions

In order to provide the workshop participants with detailed insight in operating large numbers of fuel cell powered forklift trucks a tour was organized to highlight the different elements of operations. Led by experts of HyPulsion on fuel cells and FC powered forklift trucks, of Air Liquide on hydrogen refueling and distribution aspects, as well as Prelocentre personnel on filling the trucks during their shift, many of aspects of operating bigger number of FC trucks were presented. In this way questions and comments on the specific topic of the sessions could be dealt with and direct feedbacks from the drivers offered a glimpse of what clean logistic operations look like....

2.1.1 Break out session 1: *FC powered forklift trucks, by HyPulsion*



2.1.2 Break out session 2: *Hydrogen refuelling operations, by Air Liquide and Prelocentre FLT operators*



2.1.3 Break out session 3: *Hydrogen refuelling operations, by Air Liquide*



3 General presentations and feedback

The workshop final session consisted of presentations from:



Prelocentre: Philippe Giroux, director of Prelocentre, opened the session welcoming and thanking the participants and presenting the extraordinary work that have been done in Prelocentre, thanks also to the investments of the different parties. He expressed his great satisfaction with the FC FLT operations so far and hopes that other logistic centres will follow their example as well.

Christian Braux, Mayor of Saint Cyr-en-Val indicated that as a small municipality they were very proud to host a unique and innovative site like Prelocentre.

Enrique Giron presented the FCH JU perspective, the importance of continuing the funding of successful projects such as HyLIFT-Demo with his continuation, HyLIFT Europe.

Air Liquide: Xavier Pontone, Managing Director pointed the commitment and efforts of Air Liquide to offer comprehensive hydrogen refuelling solutions at the early stage of vehicle deployment.

HyPulsion – Plug Power: Jose-Luis Crespo, Vice President - Global Sales, highlighted the importance of investing in hydrogen and fuel cells and the importance of sites like Prelocentre to demonstrate that the technology is ready to move to larger scales.



The feedback from the attendants was very positive as for most it was the first time they had an opportunity to watch such a high number of FC FLT in operations from close up.

Recommendations for further events include the need to organize these events on sites where actual operations take place.

Annex 1 Invitation list

FIRST NAME	LAST NAME	Company
Oliver	Preissler	Crown
Sebastian	Schneeberger	Crown
Lars	Beuel	Hubtex
Dieter	Plachke	Kaercher
Reinhard	Rech	Linde MH
Hannes	Schoebel	Linde MH
Heinz-Werner	Haupt	Linde MH - Dealer GRUMA
Mark	Hanke	Linde MH
Karl	Ebnet	PEFRA (EL.ISA)
Alexander	Claus	STILL
Bernd	Kelm	STILL
Cem	Yavuz	STILL
Kai	Hesse	Toyota MH
Jörg	Hanke	Jungheinrich AG
Frank	Dening	Jungheinrich AG
Dominique	Jacquot	Toyota MH Europe
Alain	Alzeta	Toyota MH France
Franck	Ciret	Toyota MH France
Christian	Sauzin	Fenwick-Linde
Anthony	Vernizeau	Fenwick-Linde
Alizée	Le Reun	Fenwick-Linde
Benjamin	Bourguet	Jungheinrich
Bertrand	Lesenne	Jungheinrich
Dave	Zuuring	Toyota MH NL
Kjell	Totsas	Toyota MH Norway
Magnus	Senneryd	Toyota MH Europe
Craig	Walby	Toyota MH Europe
Thomas	Kattenstein	Netzwerk Brennstoffzellen und Wasserstoff NRW
Frank	Koch	Netzwerk Brennstoffzellen und Wasserstoff NRW
Stefan	Garche	Netzwerk Brennstoffzellen und Wasserstoff NRW
Wolfgang	Axthammer	NOW
Ulrich	Rahmann	Leitmarkt Agentur.NRW / Projektäger ETN Jülich
Walter	Ferstl	Audi
Adrian	Ksoll	Bayer/Chemion
Moritz	Lepere	BLG Industrielogistik
Christina	Woerle	BMW - HQ Munich (planning)

Paul-Nico	Stein	BMW - HQ Munich (planning plant of Mexico)
Patrick	Amann	BMW - Landhut
Ludwig	Huber	BMW - Landhut
Gerhard	Ostner	BMW - Landhut
Uwe	Schaefer	BMW - Landhut
Michael	Schamm	Wassermann AG
Franz	Geyer	BMW – Leipzig
Thomas	Stiede	BMW – Leipzig
Ochs	Markus	Continental Corperation
Matthias	Kromm	Daimler - Duesseldorf
Wolfgang	Radtke	Daimler - Duesseldorf
Stephan	Niesert	DB Schenker
Karadağ	Guerbuez	Fiege Logistics
Rolf	Beckmann	Fiege Logistics
Martin	Drueke	John Deere
Konrad	Ott	Kaufland Logistik
Ulrich Andreas	Weber	Kaufland Logistik
Andre	Koehler	LIDL Stiftung & Co. KG
Jörg	Steinheider	Metro
Stefan	Bouillon	Scherm truck Service
Alfred	Süllner	Tchibo
Daniel	Pivetti	Volkswagen
Toni	Albrecht	Volkswagen
Matthias	Hoffmann	Volkswagen
Uwe	Becker	Volkswagen
Ulfert	Stier	Volkswagen
Florian	Heuser	Volkswagen
Mario	Blank	Volkswagen
Tobias	Raspe	Volkswagen
Fedde	Alkeam	Flora Holland
Ingrid	Floore	Ahold
Jan	Pronk	Ahold
Hans	Rietveld	Ahold
René	Den Hartog	Ahold
Roy	Heijs	Ahold
Patrick	Sterckx	Audi Brussels
Patrick	Bruynseraede	Audi Brussels
Jonas	Cautaerts	Colroyut
Dimitri	Vandenborre	Colroyut
Jorn	Endresen	Asko
Tor Olav	Iversen	Asko

Anders	Odegard	Sintef
Steffen	Muller Holst	Sintef
Anthony	Jeantet	Saint-Gobain
Sylvain	Lachaud	FM Logistic
Denis	Marchal	FM Logistic
Olivier	Mangnier	Leroy Merlin
Arnaud	Manès	Leroy Merlin
Arnaud	Degezelle	Log's
José	Lavieville	Log's
Patrice	Rivière	Log's
Patrick	Lebrun	Stef Logistics
Olivier	Stoclet	Bonduelle
Jean-Christophe	Ménuel	Ikea
Cédric	Lipold	Ikea
Jérôme	Thomas	Kuehne & Nagel
Maxime	Bougault	Kuehne & Nagel
Daniel	Herbin	Toyota Motors France
Luc	Detournay	Toyota Motors France
Fabien	Boulangier	Toyota Motors France
Hughes	Hamelin	Geodis
Frank	Kronenberg	Knauber Gas GmbH
Zimmermann	Lars	Shell
Rahe	Eckard	Westfalen Gas
Schnitzler	Frank	Air Products Nederlande B.V.
Duran	Andreas Fernandez	Air Liquide Advanced Technologies GmbH
Olaf	Rohrmoser	Praxair Deutschland GmbH
Wolfgang	Axheimer	
Rodolphe	BIDAULT	Groupement opération - Lieutenant-colonel
Fabrice	CHAUVIN	Colonel SDIS 45
Jean Luc	Delplancke	
Jean-Christophe	VALETOUX	Groupement prévention - Commandant
J.P.	ALBERTINI	Commissaire général au développement durable
Maud	Barbalat	-
Denis	BAUPIN	Député de Paris
Clément	BEAUNE	Conseiller en charge des affaires européennes et budgétaires
Chékib	BEN SMIDA	Communauté d'agglomération de Douaisis
Gilles	BERHAULT	PRESIDENT
Celia	BLAUDEL	Adjointe à la mairie de Paris, chargée de l'environnement
Louis	Bô	

Luc	BODINEAU	
Thomas	Bonheure	
Georges	Bonifacio	
Nicolas	Brahy	
Christophe	BRUNIAU	
Guillaume	CANTILLON	Cabinet Maire de Paris, Anne Hidalgo
Nicolas	Chantrenne	Chef adjoint de service des risques technologiques
Alexander	Claus	
Daniel	CLEMENT	Directeur scientifique adjoint
Benjamin	COLPART	Bolloré
Délia	Copel	
Frédéric	Daubie	
Cathy	Day	DREAL Rhône-Alpes
François	DE MAZIERES	Député des Yvelines et Président de la communauté d'agglomération Versailles Grand Parc
Elodie	de RECY	Chef de division adjoint
Cédric	DESBOIS	Groupement prévention - Capitaine
Patrick	Dilly	
Eric	DOLIGE	Sénateur (LR) Loiret
Charline	Dubois	
Ahmed	Essam	
Ivan	FAUCHEUX	Directeur de programme énergie, économie circulaire
Pascal	FAURE	Directeur Général
Laurent	Ferenczi	
Michel	FERRANDERY	Sous-directeur, Smatériels de transport, de la mécanique et de l'énergie
Bruno	Forget	
Lirzin	Franck	conseiller en charge des filières industrielles
Jean Luc	FULACHIER	Conseiller S.ROYAL
Alban	GALLAND	Chef du Bureau "Filières industrielles de l'automobile"
Benjamin	GALLEZOT	Adjoint au Directeur général (P. Faure)
Pascal	GALLON	DREAL 45
Roger	GENET	Directeur Général
François	Ghestem	
Enrique	GIRON	
Jerome	Goellner	Chef de service des risques technologiques
Vincent	Gourlaouen	
Martin	GROEN	
Xavier	Haffreingue	
Vivien	ISOARD	Chef de bureau
Lionel	JODET	Directeur de programme adjoint énergie et transport

Jeremy	LACROIX	Caserne de proximité
Florence	Lambert	
Hubert	Landinger	
Régis	LE BARS	Responsable programme Energies décarbonées
Romain	LEBAS	Chargé de mission DGEC/DE/SD2/2C
Pierre-Yves	LEBERRE	
Bruno	LECHEVIN	Président de l'ADEME
Dominique	Lecocq	
Laurent	LEVENT	
Hervé	Levifve	Conseiller technique cabinet de Christophe Najdovski
Julien	Marchal	conseiller en charge de l'énergie, des industries extractives et de l'environnement
François	Mayot	
Nacer	MEDDAH	Préfet du Loiret et de la région Centre Val de Loire
Laurent	MENARD	Directeur de la stratégie de l'investissement et du financement Européen
Hervé	METEYER	Chef de bureau adjoint industrie de l'énergie
Laurent	Michel	Directeur Général
Patrick	MIGNUCCI	
François	Moisan	Directeur exécutif de la Stratégie et de la Recherche
Xavier	MONTAGNE	Adjoint au directeur du secteur énergie, développement durable Chimie et procédés
Marc	MORTUREUX	Directeur générale, délégué aux risques majeurs
Jean-Luc	MOULLET	Directeur de programme compétitivité, filières industrielles et transports
Carlos	Navas	
Pascal	NEWTON	directeur du secteur énergie, développement durable Chimie et procédés
Louise	ORIOLE	Chargé de mission DGEC/DE/SD3/3B
Béatrice	Payen	
Hélène	PESKINE	Conseillère Transition Energétique, climat et écomobilité
Alberto	Pieri	
Christophe	PIERREL	Chef de cabinet adjoint
Gabriel	PLASSAT	
Xavier	Pontone	
Julien	POUGET	Conseiller affaires industrielles
Lionel	PREVORS	
Laurent	Prevost	Préfet directeur de la DGSCGC
Aliette	Quint	
Frédéric	RAVEL	Directeur Scientifique du secteur Energie
Marieke	Reijalt	
Agnès	Renard	

Marc	RICO	Chef de bureau Chimie et biotechnologies
Francis	ROL-TANGUY	Conseiller
Dominique	Romary	
Sebastien	ROUX	Groupement opération - Capitaine
Régis	Saadi	
Claire	SAURON	
Thomas	Spencer	
Benjamin	STREMSDOERFER	Directeur adjoint Programme Investissements d'avenir
Cédric	THOMA	Chargé de mission filières vertes (DGEC) at Ministère de l'Écologie, du Développement durable et de l'Énergie
Georgios.	TSOTRIDIS	JRC
Luc	Vandewalle	
Philippe	Vannson	DG RTD
Benjamin	Wainstain	
Katelyne	Braunlich	
Nathalie	Simon de Kergunic	
Pierre	Guillaumot	STILL
Davy	Guillemard	STILL
François	Brouart	STILL
Bruno	Chambraud	STILL
Christophe	Oruzio	STILL
Kai	von Berg	STILL
Cécile	Lavernhe	PersEE
Dimitri	Van den Borre	Colruyt Group
Daneel	Geysen	Group Machiels
Vincent	Hody	Ikea Distribution Benelux
Iwan	Behets	Jungheinrich
Jan	Hanssen	1-Tech sprl
Jean-Marc	Tixhon	Hinicio
Paul	Deprez	Hypulsion
Xavier	Fouquet	Philips lighting
Leonardo	Fornario	BXL Europe
Peter	Bouwman	Hyet
Wouter	Dalhuijsen	Hyet
Warren	Brower	Hypulsion
Ulrich	Dammans	Colruyt Group
Koert	Bardijn	Colruyt Group
Nathalie	Lambert	CEA Tech
Juris	Golunovs	Riga Energy Agency
Jan	Gerits	Nedstack fuel cell technology B.V.

Diana	Yawari	Mitsui & Co
Hubert	Landingier	LBST
Jean-Luc	Delplancke	FCH-JU
Jacob	Krogsgaard	H2Logic
Jorg	Coolegem	Nedstack fuel cell technology B.V.
Elise	Wheeler	Philips lighting
Philippe	Giroux	PRELODIS
Bernd	Oberschachtsiek	ZBT
Jan	Vanmechelen	Crown
Martin	Tröger	HYDROGENICS
Cecile	Bousquet	CleanHorizon
Peter	Tap	Toyota MH NL
Bert	Bomhof	Toyota MH NL
Sébastien	Gigault	Fm Logistic
Jean Alain	Stéphan	Log's
A déterminer	2ème personne	Log's
Nicolas	Mauvilain	Stef Logistics
2ème personne	Chef des Ventes	Jungheinrich France
3ème personne	Commercial local	Jungheinrich France
Jose Luis	Crespo	Plug Power
Tim	Schultz	Plug Power
Robert	Zalansky	Plug Power