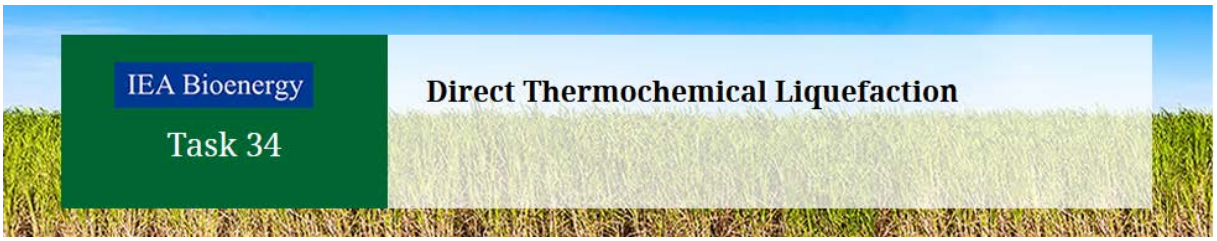


1st Task 34 Meeting Triennium 2019-2021
June 24th-25th 2019 at KIT, Karlsruhe/ Germany
Minutes

Recognition of Meeting Participants

Bert van de Beld	(BvB)	NTL The Netherlands
Paul Bennett	(PB)	NTL New Zealand
Justin Billing	(JB)	NTL U.S.A.
Alex Böhm	(AB)	Assistant Task Lead
Benjamin Bronson	(BB)	NTL Canada
Axel Funke	(AF)	Task Lead/ NTL Germany (Minutes)
Christian Lindfors	(CF)	NTL Finland
Luc Pelkmans	(LP)	IEA Bioenergy Technical Coordinator
Lasse Rosendahl	(LR)	NTL Denmark
Linda Sandström	(LS)	NTL Sweden

Country Reports Tuesday, June 25th 09:00h-16:15h

LP started with a general introduction of IEA Bioenergy and it's tasks. He also presented communication strategies and related workflows to the Task. Both presentations are attached to the minutes.

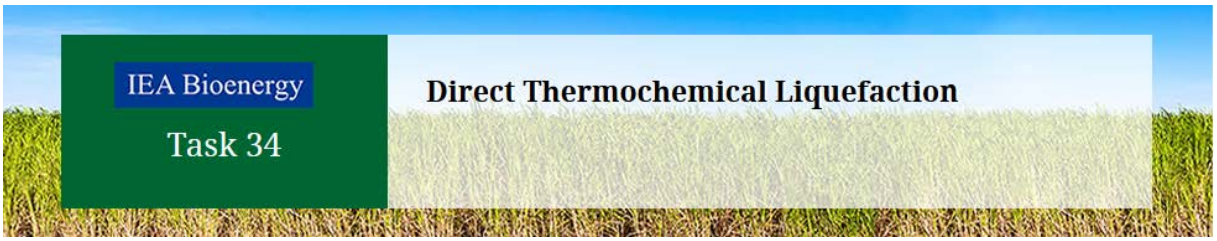
Subsequently, presentation of the country reports commenced. Each NTL has prepared a presentation to summarize activities/ policies related to DTL in their countries. A public summary of the country reports will be made available towards the end of 2019.

Expectations of participants

A short break-out session around the expectation of the NTL's associated with their Task 34 work was conducted in between the country reports. Ideas were collected and summarized to provide a reflection for the discussion of the second meeting day as well as future work in the Task. A summary of the feedback is given as follows:

What do you expect from IEA TCP Bioenergy?

- To achieve/ facilitate collaboration/ joint research/ industrial participation
- Credible, clear, concise and high quality publications/ information. Facilitation of top level dissemination. Assistance in communicating key messages
- Quality assurance ("IEA stamp of approval", "weeding out the frauds")
- Standard look for reports/ publications



How should Task 34 contribute to the field of DTL?

- Support R&D by sharing experience and putting international teams together (avoid duplication)
- Support industrial application/ commercialization
- Product standards
- Provide a repository of concise and factual information to give an overview of actual DTL status ("reality check"); also for non-technical audience
- Follow up emerging technologies ("early awareness")

How will participating Task 34 affect your personal development?

- Networking (very strong emphasis on this aspect)
- Exchanging experiences
- Gaining wider international perspective/ understanding international trends

Discussion of Task 34 Work Packages Wednesday, June 26th 08:00h-10:40h

AF explained the possibility to amend work packages to the existing proposal for the triennium of 2019-2021 in more detail. Additional member countries funds are available due to unexpected changes end 2019, i.e. there are now nine participating countries in contrast to the anticipated eight in the proposal. There are carry over funds from past triennium in addition to this increase in budget.

In a first step, ideas about additional work packages were collected and discussed. They are summarized in Table 1. Subsequently, all work package leads have been discussed and assigned among the meeting participants. The dissemination activities will stay with the task lead, i.e. AB and AF. Some work packages have been discussed in more detail as follows.

[D1.2] The co-processing report of Task 39 has already been finalized and will be published soon. Task 39 expressed interest in realizing a joint workshop with Task 34 (possibly End 2020 in Germany) to exchange experience in the field of bio-oil co-processing in existing refineries. There is consensus among the participants that collaboration should be followed. PB proposed that the deliverable should be slightly adapted to contribute to Task 39 WP 1.4.1a 'Extend assessment to refinery integration'. PB will clarify details with Task 39. Specifically, experience among Task 34 members regarding bio-oil standardization could be of value for this cooperation.

[D2.1] Several analytical methods have been discussed that should be looked at in this triennium. It was decided that a similar achievement as for fast pyrolysis bio-oil (i.e. standardization as boiler fuel) should be aimed at for bio-oil from HTL in long-term. LR will evaluate gaps/ issues in the required analytical methods to characterize bio-oil from HTL as boiler fuel in a pre-assessment. LP recommended that a detailed plan should be fixed very soon due to the efforts associated with organizing a Round Robin.

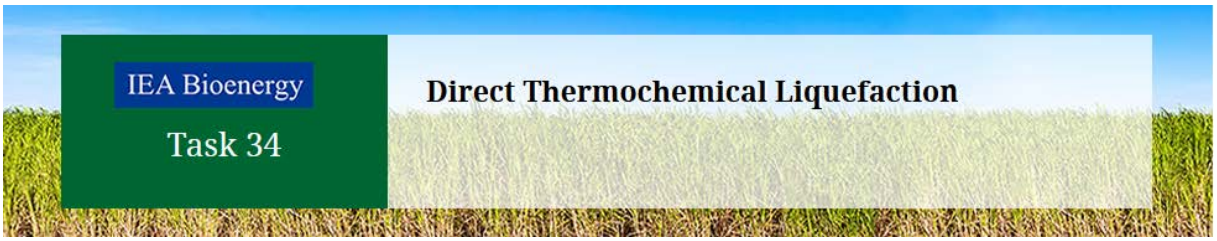
[D2.2] Will be detailed once D2.1 is fixed.

All WP leads have been asked to prepare specific content, timeline, and budget of each work package. AF will organize teleconferences with the WP leads for September 2019 to discuss the plans. A finalized work package plan will be presented in the next Task meeting. AF will clarify remaining questions about payment of task funds via KIT to cover work package expenses.

AF will contact Ferran de Miguel Mercader to ask for details about the Round Robin manuscript working progress and missing input information (remaining open deliverable from last triennium).

Table 1: Overview Work Packages, Deliverables, and Work Package Leads

Work Packages from the Proposal	**Deliverable**	**Due**	**Lead**
Review techno-economic assessment of DTL technologies	D1.1	Q4 2020	JB
Contribute to co-processing report of T39/ WP 1.4.1a	D1.2	Q4 2021	PB
Validation of analytical method	D2.1	Q2 2021	LR
Advanced analytical techniques workshop/ webinar	D2.2	Q2 2021	tbd
Report on standardization of bio-oil analysis and application	D3.1	Draft: Q2 2020 Final Q4 2021	CL, LR
Technical notes on R&D and commercialization experiences	D3.2	Q4 2020	BB
PyNe Newsletter	D4.1	Q2/Q4 2019/20/21	AB
DTL brochure	D4.2	Q4 2019	AF
Website content refresh	D4.3	Q4 2020	AB
Workshops, seminars, and/or site visits with key stakeholders	D4.4	Q2/Q4 2019/20/21	AF
Success stories	D4.5	Q2 2021	AF
Country reports	D4.6	Q4 2019/20/21	AB
Intertask project: High temperature heat for industry<	ITP1	tbd	BvB
Additional Work Packages not Contained in the Proposal			
Collaboration with Task 44 ‘flexible bioenergy and system integration’	ITP2	tbd	BvB
Best practice guide for HTL mass balances (batch reactor)	Add2.1	tbd	LR
Anniversary PyNe 2021	Add4.1	Q3 2021	AB
Task 34 Round Robin archive on website	Add4.2	tbd	AB
PyNe archive/ article database on website	Add4.3	tbd	AB
Generic data to assess safety data sheet relevant information for bio-oil	Add3.1	tbd	AF
Material compatibility workshop (connect to D3.2?)	Add3.2	tbd	BB
Overview commercialisation activities DTL (in addition to D3.2)	Add3.3	tbd	PB
Report on slurry pumping (for HTL) (in addition to D3.2)	Add3.4	tbd	JB
Evaluate available video tutorials around DTL; possibly create a video out of the DTL brochure	Add4.4	tbd	AF



Other Task 34 Business Wednesday, June 26th 10:40h-12:15h

PyNe Newsletter

An overview about the article's status was given and discussed. All NTL's are requested to evaluate potential contributions from stakeholders in their respective countries. Furthermore, NTL's are asked to have an initial check about article quality and correctness of provided information prior to handing them in.

It was agreed that a section about relevant commodity costs will be included in upcoming PyNe newsletters as well as a reference to PyNe articles ten years prior to the actual issue.

Country Reports

It was discussed how country reports will be handled with in the Task, i.e. how the regular reporting in the meetings should take place, and how these reports will be communicated with the public. There was consensus that country reports represent a valuable tool for exchanging experience and updates from each country. Country reports twice a year have been found to provide too little updates to justify a whole day's session. It will be continued to present country reports once a year in the fall meetings and to use the time in the spring meetings to focus on discussing the work packages instead. Public country reports will be generated from the country report presentations by the NTL's; AF will create/ organize a template that will be used for dissemination.

Next Task Meetings

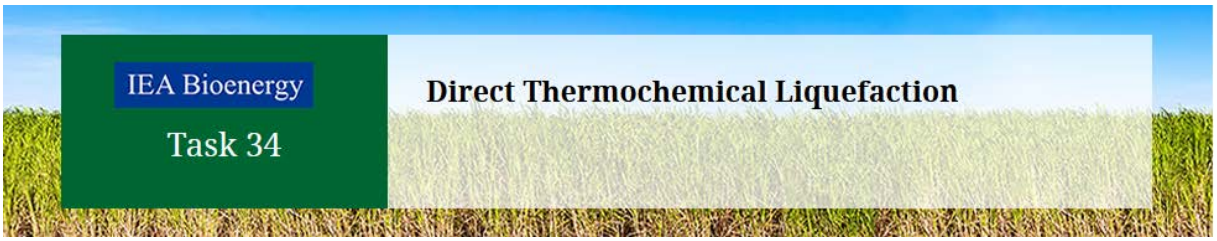
The following preliminary schedule for upcoming Task 34 meetings has been agreed upon:

Q4 2019	Denmark
Q2 2020	Finland
Q4 2020	U.S.
Q2 2021	Norway and/or Sweden
Q4 2021	New Zealand

The upcoming meeting will either take place October 25th/ 26th 2019 (preferred date) or October 28th/ 29th 2019 in Aalborg. LR will check availability of potential site visits for the preferred date.

It was preference to align the Task meeting in Q4 2020 with the TCS conference, which will take place at PNNL in Richland/Washington State. AF will ask T39 whether it is feasible to plan a joint workshop in Norway or Sweden in Q2 2021 (instead of the proposed Q4 2020 in Germany). This workshop could include relevant site visits such as e.g. Preem refinery.

The Q4 2021 Task meeting will be aligned with the IEA Bioenergy End of Triennium Conference in Brisbane/ Australia.



Site Visits/ Workshops with KIT Stakeholders Wednesday, June 26th 14:00h-16:15h

KIT researchers have been invited to join a lab tour, which started with a short workshop on hydrothermal liquefaction activities at KIT. This was followed by a brief presentation of research in the field of bio-oil upgrading. IEA task members were taken around to see experimental facilities around hydrothermal and solvothermal liquefaction.

The last item on the agenda was a site visit of the bioliq® pilot unit. Prof Dahmen presented the concept and guided IEA Task 34 through the fast pyrolysis unit, the pressurized entrained flow gasifier, and the gasoline synthesis via DME. Finally, there was a the chance to get a brief glance over the site of KIT's Energy Lab for investigation of energy system integration.