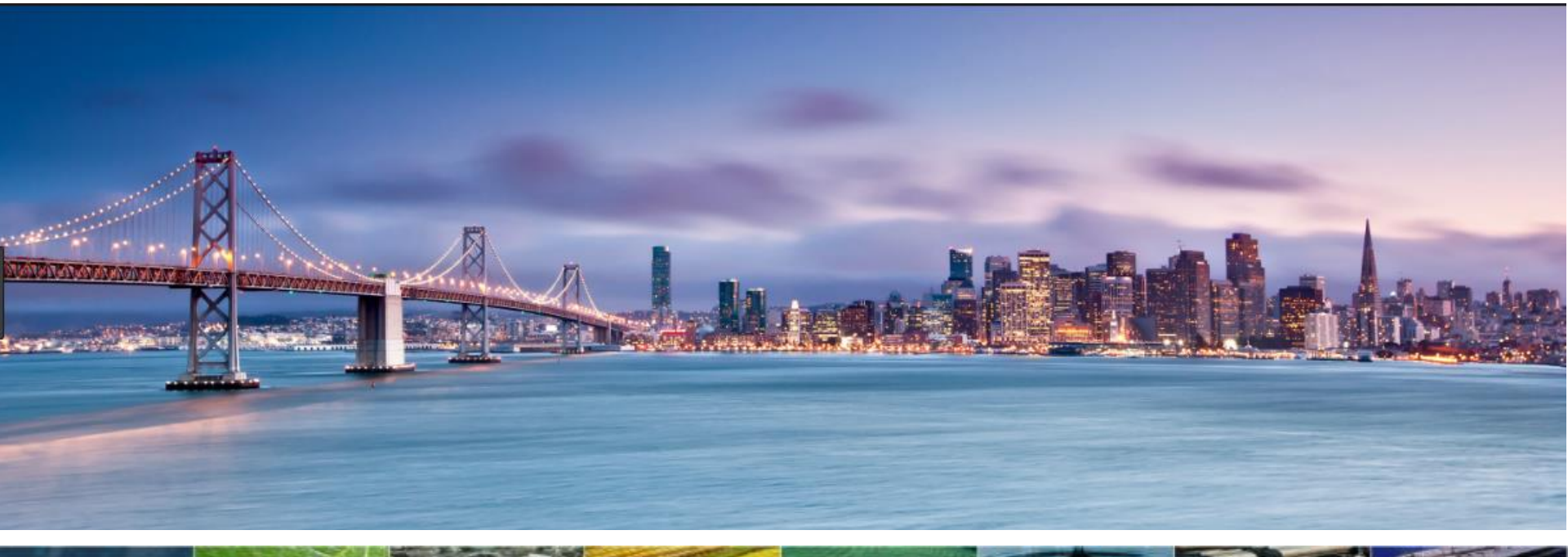


# Welcome to the IEA Bioenergy Task 39 Business Meeting

5 November 2018  
Hotel Nikko San Francisco, USA



# Monday, 5 November 2018

8:30-9:00	Welcome (Jim McMillan / Jack Saddler) Group introductions, local arrangements and logistics. Tabling of meeting agenda.
9:00-9:30	Current triennium – Feedback on last ExCo meeting (Ottawa), review of Task deliverables for this triennium including commissioned work, budget status, etc. (Jim M./Jack S.)
9:30-10:00	Drop-in Biofuels report, including two proposed inter-Task activities for next triennium (Jack Saddler) - Production and uptake of drop in biofuels, status of technology providers, integration with refineries and co-processing potential and challenges. These will continue to be major foci in next triennium.
10:00-10:30	Survey of Advanced Biofuels for Advanced Engines report (Nicolaus Dahmen) - Report status / achieving “sign off” and status of AMF Annex 52 to which this report contributes - Next steps / possible Task 39 collaborations with AMF & Combustion TCPs
10:30-11:00	<i>Coffee/tea break</i>

# Monday, 5 November 2018

11:00-12:00	<p>Comparison of LCA models report (Antonio Bonomi)</p> <ul style="list-style-type: none"><li>- Progress to date/ status of Phase 2 final report. Phase 1 papers in peer review for journal publication.</li></ul> <p>When will draft of final report be circulated, etc.</p> <p>Proposed LCA plans for coming triennium (Don O'Connor)</p> <ul style="list-style-type: none"><li>- What to prioritize for next triennium, leveraging expertise of Task 39's LCA biofuels advisory committee (Don O'Connor, Michael Wang, Mark Staples, Adrian O'Connell, Antonio Bonomi)</li></ul> <p>Integration with new "sustainability" Task.</p>
12:00-12:30	<p>Implementation Agenda report (compare and contrast biofuels policies) (Mahmood Ebadian &amp; Jack Saddler)</p> <ul style="list-style-type: none"><li>- Feedback on questionnaire / template that was distributed</li><li>- Feedback on the progress on the draft report</li><li>- How can the process be made easier but still allow the needed data to be collected?</li><li>- What should be done in this area in the coming triennium?</li></ul>
12:30-13:15	<p><i>Lunch Break</i></p>

# Monday, 5 November 2018

- 13:15-15:00
- Review and discuss proposed Task 39 activities for new triennium (Jan 2019 - Dec 2021) (Jim/Jack)
- Identify project leads/champions for (some) of the topics below (following Prolongation Proposal)
- 1) Continue updating implementation agendas report (Discuss approach of breaking up effort into regions (e.g., Europe, Asia, North and South America, Australasia, Africa?) Also evaluate which types of policies – carbon tax, low carbon fuel standard, mandates, etc. – work best? (Mahmood Ebadian)
  - 2) Continue focus on drop-in biofuels, especially for marine and aviation. Develop roadmaps for decarbonisation of long-distance transport (marine, rail, truck, air); study refinery integration; assess development of standards to commoditize bio-intermediates in biorefineries (UBC, others, also with other Tasks; also ties into item 6 below)
  - 3) Conduct feedstock-to-biofuel(s) supply chain analysis to identify CAPEX and OPEX cost reduction opportunities (with Task 43/Feedstocks)
  - 4) Sustainability assessment of biofuels pathways (with new Sustainability task, and/or multi-task). Identify key metrics beyond GHG reduction; span both feedstocks and conversion technologies. Co-lead biofuels LCA studies (A. O’Connell, M. Staples, D. O’Connor, A. Bonomi, M. Wang)
  - 5) TEAs of advanced biofuels feedstock/technology pathways, particularly for drop-in biofuels (UBC)
  - 6) Review existing/proposed certifications used for oleochemical- and lignocellulosic-based biofuels supply chains; identify certification scheme improvement opportunities (with Task 40 /Trade?)
  - 7) Continue to follow commercialisation of advanced biofuels, particularly cellulosic ethanol plants, and tracking Biofuels Demonstration Facilities (“Demoplants database”) (Dina Bacovsky)
  - 8) Coordinate with IRENA on biofuels developments in non-IEA countries / emerging economies
  - 9) Ongoing collaboration with other Tasks, TCP’s such as AMF and agencies such as IRENA, FAO, GBEP, etc.

15:00-15:15 *Coffee/Tea break*

# Monday, 5 November 2018

15:15-16:30	Continue discussing/identifying project leads (and contributors) for priority future Task activities
16:30-16:45	<p>Planning for next Task 39 business meetings in 2019 – Proposal from Adrian/JRC/Ispra, Italy 20-24 May, (possible tie in with 2018 European biomass/bioenergy meeting, Lisbon, 27-30 May).</p> <p>Where will we meet in the second part of 2019. Japan, Australia, other??</p> <p>There is also a joint meeting of AMF and Combustion TCP task leaders scheduled in Switzerland in later 2019</p> <p>Planning for the last 2018 newsletter – Feature story on/by European Commissions?</p> <p>Planning for the three newsletters to be published in 2019: Brazil, Netherlands and Denmark</p>
16:45-17:00	General discussion
17:00-18:00	Close of meeting
18:30	Informal group dinner at <a href="#">Zero Zero</a> , 826 Folsom St, San Francisco, CA 94107, 15-minute walk from Hotel Nikko

# Tuesday, 6 November 2018

## Morning tour of the JBEI facilities

**8:30am: Leave Union Square BART station**

**9:30 am: Take the BART and free “Emery Go-Round”  
shuttle to get to JBEI facility**

**9:30am-12pm: Site visit**

**12-1pm: Informal lunch**

**Free Afternoon**

# Current triennium 2016-2018

- **Feedback on last ExCo meeting (Ottawa)**
- **Review of Task deliverables for this triennium including commissioned work**
- **Budget and spending status**

# Gantt chart 2016-2018

Project No.	Topic (collaboration)	Deliverable	% Work completed	2016				2017				2018				Alarm
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
T39-T1	Update status and potential for <u>algal</u> biofuels production in a biorefinery context	Report	Planning Actual 100%													Completed
T39-T2	Advanced biofuels in <u>advanced engines</u> (with IEA AMF)	Report	Planning Actual 100%													Completed
T39-T3	Comparison of LCA models (with Task 38 & contributing to intertask) 3 Phases	3 Reports	Planning Actual 75%													Ph. I Completed Ph. II In progress
T39-T4	Assessment of <u>large-scale</u> demonstration plants (with Bioenergy 2020+)	Database updates	Planning Actual 100%													On-going Completed annually
T39-T5	<u>Definitions and terminology of biofuels</u>	Report	Planning Actual N/A													cancelled
T39-T6 (& P2)	Update drop-in report, specifically focusing on aviation and maritime fuels	2 Reports	Planning Actual 75%													Marine completed Drop-in In progress
T39-T7	Biofuel production and consumption in <u>emerging economies</u> (China)	Report	Planning Actual 100%													Completed
T39-P1	Update on country policies and implementation agendas	Report	Planning Actual 90%													In progress
--	<u>Roadmap</u> for Integration of advanced biofuels (with IEA AMF)	Report	Planning Actual													On hold
--	Assessment of advanced biofuels commercialization success (with Task 42)	Workshop	Planning Actual													On hold
--	Co-products and biorefineries (with Task 42)	workshop	Planning Actual													On hold
--	Potential of “generation 1.5“ feedstocks (with China and possibly Task 43)	Report	Planning Actual													On hold
--	<u>Spatial</u> analysis of biofuel feedstock reserves (with Task 43).	Report	Planning Actual													On hold
--	Task 39 Newsletter		Planning Actual 66%													On-going
--	IEA Annual Report (Task progress)		Planning Actual 100%													Completed



# Update on Task activities

- **Published two newsletters in May and October included feature articles on “Biofuels Production and Consumption” in the US and Canada**
- **T39-T4 Demonstration plant database- Ongoing**
- **T39- T5 Drop-in biofuel report- Draft Report by Mid-December**
- **T39-P1 Biofuels policies (implementation agendas) compare-and-contrast. Draft report by Mid-December**

## Update on commissioned work

- **Survey on Advanced Fuels for Advanced Engines with IEA Advanced Motor Fuels TCP (AMF)- Completed**
- **T39-T3 - Update of GHG Emissions and Energy Balances for Advanced Biofuels: Phase II of Comparing Different GHG Models on Biofuel Systems**
  - Phase II completed by end of 2018 (Phase III cancelled)
  - Project leaders: Antonio Bonomi (CTBE, T39); Helena Chum (NREL, T38)
    - CTBE, NREL and IEA Bioenergy Tasks 38 & 39
    - Phase 1 (2016/17) completed -
    - Phase 2 - completed by end of 2018

# On-hold projects to possibly be included in the next triennium

- Roadmap for Integration of advanced biofuels (with IEA AMF)
- Assessment of advanced biofuels commercialization success (with new Inter-Task?)
- Co-products and biorefineries (with Task 42?)
- Potential of “generation 1.5” feedstocks (with China and possibly Thailand)
- Spatial analysis of biofuel feedstock reserves (with Task 43).

# Budget status and spending

<b>Budget break down (2018)</b>						
				Estimated		
		Budget	Spent as of	Total Expenses by	Budget-Aug. Actual	BUDGET
Category		2018	30-Sep-18	31-Dec-18	BUDGET	CARRYOVER
		(US \$)	(US \$)	(US \$)	VARIANCE	TO 2019
Salaries, administration, website, newsletter		62,497	40,590	62,497	21,907	
Total budget for Projects in 2017		243,000				
Commissioned Work (included in projects)						
• Jim McMillan (NREL) Updated TSA	45,000		25,000	45,000	20,000	-
• Advanced Fuels for advanced engines (commissioned by Mueller-Langer \$27,000 pd + \$27,000 in 2016)	27,000		27,000	27,000	-	
• GHG model comparison (Phase II) (Antonio Bonomi, CTBE)	60,000		60,000	60,000	-	
• Update demoplant database (D. Bacovsky \$15,000 annually over three years)	15,000		15,000	15,000	-	
• Update to Drop-in biofuels Report (\$15,000 2016 + \$10,000 2017+\$50,000)	75,000			55,000	75,000	20,000
• Implementation Agendas (Mahmood Ebadian, UBC)	21,000		1,998	21,000	19,002	-
Travel, workshops, meetings		20,068	16,405	20,068	3,663	-
Materials & supplies, courier, bank charges and exchange rate		4,300	4,215	4,300	85	-
<b>Subtotal</b>		<b>329,865</b>	<b>190,208</b>	<b>309,865</b>	139,656	<b>20,000</b>
Overhead (8%)		26,389	15,217	24,789	11,172	1,600
<b>Total</b>		<b>356,254</b>	<b>205,425</b>	<b>334,654</b>	150,829	<b>21,600</b>

# Possible resource allocation for next triennium

- **Continue updating implementation agendas report (Mahmood Ebadian?)**
  - Focus report into regions (e.g., Europe, Asia, North and South America, Australasia, Africa?)
  - Evaluate which types of policies - carbon tax, low carbon fuel standard, mandates, etc. - work best?
- **Conduct feedstock-to-biofuel(s) supply chain analysis to identify CAPEX and OPEX cost reduction opportunities (with Task 43/Feedstocks?)**

# Possible resource allocation for next triennium

- Sustainability assessment of biofuels pathways (with new Sustainability task, and/or multi-task). Identify key metrics beyond GHG reduction; span both feedstocks and conversion technologies (led by D. O'Connor with A. O'Connell, M. Staples, M. Wang and A. Bonomi??)
- Develop roadmaps for decarbonisation of long-distance transport (marine, rail, truck, air); study refinery integration; assess development of standards to commoditize bio-intermediates in biorefineries (UBC, others, also with other Tasks??)

# Possible resource allocation for next triennium

- Review existing/proposed certifications used for oleochemical- and lignocellulosic-based biofuels supply chains; identify certification scheme improvement opportunities (with Task 40 /Trade?)
- TEAs of advanced biofuels feedstock/technology pathways, particularly for drop-in biofuels (UBC?)
- Continue to follow commercialisation of advanced biofuels, particularly cellulosic ethanol plants, and tracking Biofuels Demonstration Facilities (“Demoplants database”) (Dina Bacovsky)

# Possible resource allocation for next triennium

- Coordinate with IRENA on biofuels developments in non-IEA countries / emerging economies
- Ongoing collaboration with other Tasks, TCP's such as AMF and agencies such as IRENA, FAO, GBEP, etc.? (Task 39 secretariat)



# Upcoming meetings

- **First half of 2019: JRC/Italy/Adrian, 20-24 May.**  
**Could be held prior to the European biomass/bioenergy meeting, Lisbon, 27-30 May**
- **Second half of 2019: Australia, Japan??**
- **There is also a joint meeting of AMF and Combustion TCP Task leaders scheduled in Switzerland in late 2019**
- **Suggestions for 2020?**

# Proposed upcoming newsletters for 2018-2019

- **December 2018: Feature story on/by European Commissions?**
- **April 2019: Feature story on/by Brazil**
- **September 2019: Feature story on/by Netherlands**
- **September 2019: Feature story on/by Denmark**

## Continue to recruit new members to join Task 39

- Keep pursuing key countries to join the IEA Bioenergy TCP and Task 39
- Invite former members to rejoin including Finland, Italy and Norway
- Norway has confirmed its interest to rejoin in the next triennium to run 2019-2021
- Countries that are prospects to become new members of IEA Bioenergy and Task 39 in the next triennium include Chile, China, India, Indonesia, Malaysia, Mexico and Thailand.

## Proposed IEA Bioenergy Task 39 Gantt Chart, 2019-2021

Project No.	Topic	Status	2019				2020				2021				Alarm	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
REPORTS	1.4.1a	Extend assessment of drop-in biofuels - focus on refinery integration and bio-intermediates standards	Planning													Upcoming
	1.4.1b	Decarbonisation strategies for long distance transport sectors.	Actual													Upcoming
	1.4.1c	Assessment of <u>large-scale</u> demonstration plants (with Bioenergy 2020+)	Planning													Upcoming
	1.4.1d	Successes and lessons learned for advanced biofuel technologies commercialization	Actual													Upcoming
	1.4.1e	Advanced biofuels <u>in advanced engines</u> (with AMF TCP)	Planning													Upcoming
	1.4.1f	The potential for “generation 1.5” type feedstocks	Actual													Upcoming
	1.4.1g	Update on status of algal biofuel technologies (multi-task)	Planning													Upcoming
	1.4.2a	Update Implementation Agendas report comparing member country policies and deployment successes	Actual													Upcoming
	1.4.2b	Policies to promote drop-in biofuels for highly international aviation and marine sectors	Planning													Upcoming
	1.4.2c	Feedstock-to-biofuel supply chain analysis for cost reduction (with new Deployment Task).	Actual													Upcoming
	1.4.2d	Status of biofuel production and consumption in emerging markets	Planning													Upcoming
	1.4.2e	Extend assessment of the sustainability of biofuels pathways (with new Sustainability Task),	Actual													Upcoming
	1.4.2f	Evaluate certification schemes and recommend improvements for oleochemical and lignocellulosic feedstock-to-biofuel supply chains (with T40 / Trade, maybe also with T43 / Feedstocks, Sustainability tasks)	Planning													Upcoming
			Actual													
OTHER	--	Task 39 Newsletter	Planning													Ongoing
	--	IEA Annual Report (Task progress)	Actual													Ongoing

# Proposed budget, 2019-2021

## Task 39 budget 2019-2021 per annum

Cost per participant	\$15,000
Number of participants:	15
<b>TOTAL</b>	<b>\$225,000</b>

Cost/year (US\$)	Task Administration	Technology & Commercialization	Policy, Market Sustainability & Implementation	Information Dissemination	Total for Task
Labor and benefits	\$35,000.00	\$30,000.00	\$30,000.00	\$10,000.00	\$105,000.00
Workshops, business meetings	\$3,000.00	\$3,000.00	\$3,000.00		\$9,000.00
Travel	\$6,000.00	\$7,000.00	\$7,000.00	\$3,000.00	\$23,000.00
Materials & supplies	\$500.00			\$2,000.00	\$2,500.00
Consultants, contracts		\$24,000.00	\$24,000.00		\$48,000.00
<b>Subtotals</b>	<b>\$44,500.00</b>	<b>\$64,000.00</b>	<b>\$64,000.00</b>	<b>\$15,000.00</b>	<b>\$187,500.00</b>
Overheads (8%)					\$15,000.00
Held-back funds (10%)					\$22,500.00
<b>TOTAL</b>					<b>\$225,000.00</b>