

Summary of 1st Workshop

Nuwong Chollacoop
Renewable Energy Laboratory
National Metal and Materials Technology Center (MTEC)
nuwongc@mtec.or.th

The 2nd APEC Workshop on Guidelines toward High Biodiesel Blend Diesel
(eg B20) Specification in the APEC Region

19 March 2018
Hilton Waikiki Beach Hotel, Hawaii, USA

Agenda of 1st workshop in Bangkok (13-14 Dec 17)

ANNEXI AGENDA (Draft)

The 1stAPEC Workshop on Guidelines toward High Biodiesel Blend Diesel (eg B20)

Specification in the APEC Region

13-14 December 2017

Convention Center Room CC405

Thailand Science Park, Pathumthani, Thailand (<https://goo.gl/maps/e9rEp72J4F12>)

Wednesday, 13 December

Agenda	
08.30	Registration
09.00	Opening Session and Workshop/Project Overview Welcoming Remark by Dr. Aree Thanaboonsombut, Deputy Executive Director, MTEC Project overview by Ms. Munlika Sompranon, DEDE & EGNRET Representative Opening Speech by Mr. Yongyuth Sawatdisawane, Deputy Director General, DEDE Group Photo
09.30	Keynote – Overview of biodiesel development in Thailand Dr. Apiradee Thammanomai Department of Alternative Energy Development and Efficiency (DEDE)
10.00	Coffee Break
10.30	Overview of biodiesel specifications from around the world People's Republic of China: Ms. DU Guomin, Division Chief of Development Strategy, PetroChina Planning and Engineering Institute Indonesia: Prof. Tatang Hernas Soerawidjaja, Head of Center for Research on Natural Resource Utilization, Institut Teknologi Bandung (ITB) Malaysia: Dr. Harrison Lau Lik Nang, Leader of Biodiesel Technology Group, Malaysian Palm Oil Board (MPOB)
12.00	Lunch
13.00	Overview of biodiesel specifications from around the world (cont'd) Republic of Korea: Prof. Ocktaeck Lim, University of Ulsan Philippines: Mr. Ricardo S. Infante, Supervising Science Research Specialist, Department of Energy (DOE) Thailand: Dr. Manida Tongroon, National Metal and Materials Technology Center (MTEC)

14.30	Concern from automotive makers for higher blend of biodiesel Mr. Tomoaki Kakiyama, Chairman of Diesel Fuel Experts Group, Automobile Manufacturing Association (JAMA), Japan
15.00	Coffee Break
15.30	Discussion on guidelines toward high biodiesel blend diesel • Moderator will ask for opinion from participants on each technical specification
16.00	Way forward for guidelines toward high biodiesel blend diesel • Based on discussion from biodiesel producers and car makers, a way forward for guideline on high biodiesel blend diesel will be formulated.
16.30	Wrap up • The moderator will provide feedback and recommendations on potential guideline. All the feedback will be compiled for further discussion.
18.00	Welcome Dinner

Thursday, 14 December

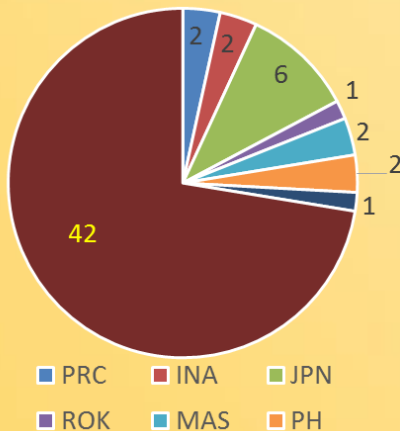
Thailand case study for higher blend of biodiesel & Site visit (by invitation)

Agenda	
08.30	Registration
09.00	Overview of Thailand case study for higher blend of biodiesel Dr. Nuwong Chollacoop, National Metal and Materials Technology Center (MTEC)
09.30	Introduction of H-FAME Technology for Thai B10 program Dr. Yuji Yoshimura Emeritus Researcher, National Institute of Advanced Industrial Science and Technology (AIST)
10.00	Coffee Break
10.30	Site visit to H-FAME pilot plant at Thailand Institute of Scientific and Technological Research (TISTR) https://goo.gl/maps/VVqBPFkcjmN2
12.00	Lunch
13.00	Site visit to Thai commercial biodiesel plant: Bangchak Biofuel https://goo.gl/maps/xGHbk5wGbsS2

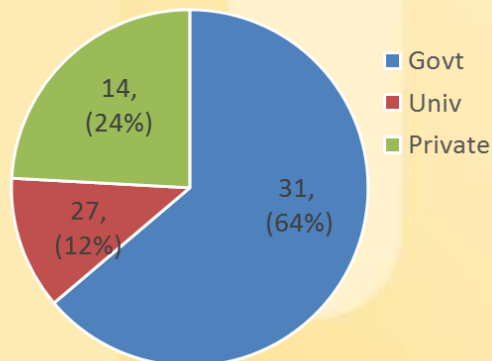
Statistic of 1st BDF workshop



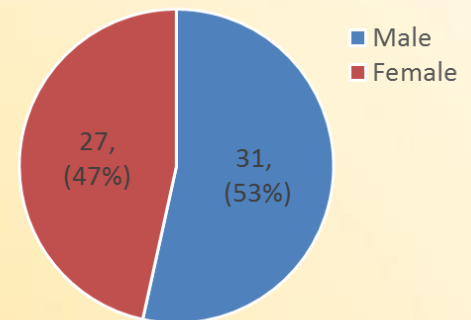
1st APEC Biodiesel Workshop
(58 participants)



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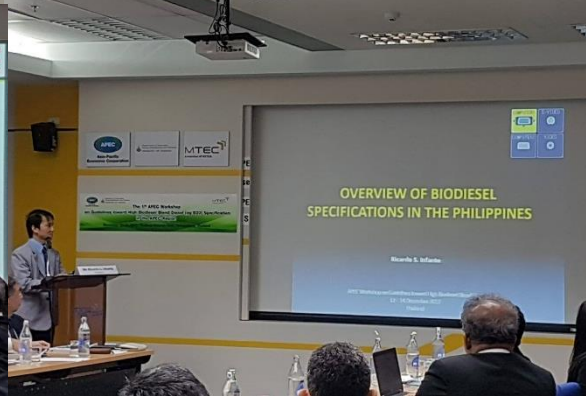


1st APEC Biodiesel Workshop
(58 participants)

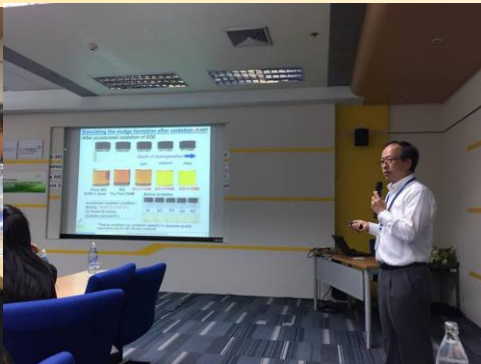


*Many MTEC staffs not in the photo

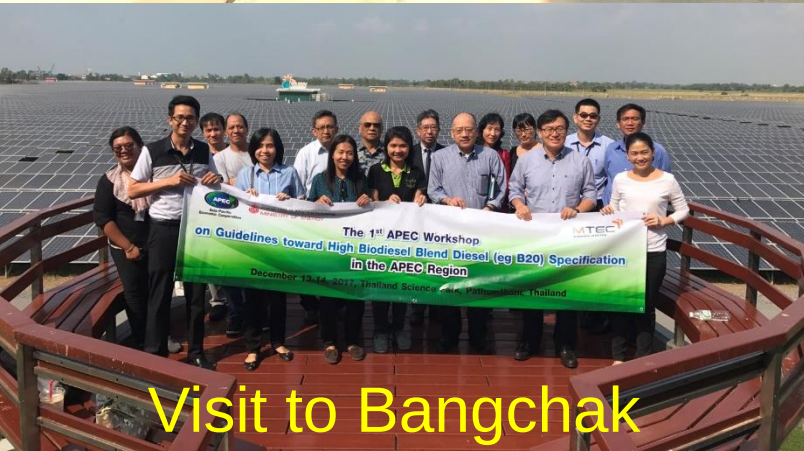
Day 1: 13 Dec 2017



Day 2: 14 Dec 2017



Visit to TISTR



Visit to Bangchak



Summary (I)

- PRC
 - Specification: B100 (S50 & S10) for up to B5 blending
 - ✓ feedstock: waste cooking oil
 - B5 nationwide after 2017
 - ✓ various grade depending on surrounding ambient temp (CFPP, freezing point)
 - ✓ additional requirement on impurities, PAH for EuroVI
- INA
 - Specification: B100 for up to B20 blending
 - ✓ feedstock: palm oil
 - B20 nationwide after 2016
 - ✓ improvement on various properties: sulfur/phosphorous content, acid value, oxidation stability, MG limit
- MAS
 - Specification: B100 for up to B7 blending
 - ✓ feedstock: palm oil
 - B7 nationwide since 2015
 - ✓ planned for B10 in Jun 2016 but postponed (B7 for EuroV)

Summary (II)

- POK
 - Specification: B100 for up to B2.5(2015) and B3(2018) blending
 - ✓ feedstock: imported palm oil (summer) & waste cooking oil (winter)
 - B3 nationwide after 2018
 - ✓ use of biodiesel mandated by RFS
- PH
 - Specification: B100 for up to B2 blending (since 2009)
 - ✓ feedstock: coconut oil
 - Plan for B5 (2018) but some problem on CME handling & cost
 - ✓ introduction of non-coconut biodiesel feedstock?
- TH
 - Specification: B100 for up to B7 blending
 - ✓ feedstock: palm oil
 - B7 nationwide since 2014
 - ✓ planned to introduce B10 with mandate in 2026

Summary (III)

- JAMA
 - Global statement to recommend up to 5% (or 7%) of biodiesel as for general public diesel fuel
 - Supplemental statement to accept up to 20% under conditions
 - ✓ Palm biodiesel,
 - ✓ Euro 4 diesel
 - ✓ Monoglyceride content in B100 & water content in Bxx
 - Recommend to keep conventional diesel fuel for older vehicle
 - Not sure impact of high FAME blends on EuroV
 - ✓ Higher boiling point of FAME (unburned FAME in exhaust)
 - ✓ Lower heating value of FAME to give enough exhaust gas temp for DPF regeneration
 - ✓ Poorer oxidation stability of FAME for potential sludge formation
- Discussion on way forward
 - International review of biodiesel standard with prior attempts on harmonization
 - Will consider AAF (ASEAN Automotive Federation) recommendation for further discussion
 - Guideline for maintenance?

Summary (IV)

- Thailand case study
 - H-FAME (partially Hydrogenated Fatty Acid Methyl Ester) technology to improve FAME quality: lowering monoglyceride
 - Currently undergoing B10 national project
 - Site visit to H-FAME pilot plant at TISTR & commercial biodiesel plant at Bangchak

Thank you

ขอบคุณ

