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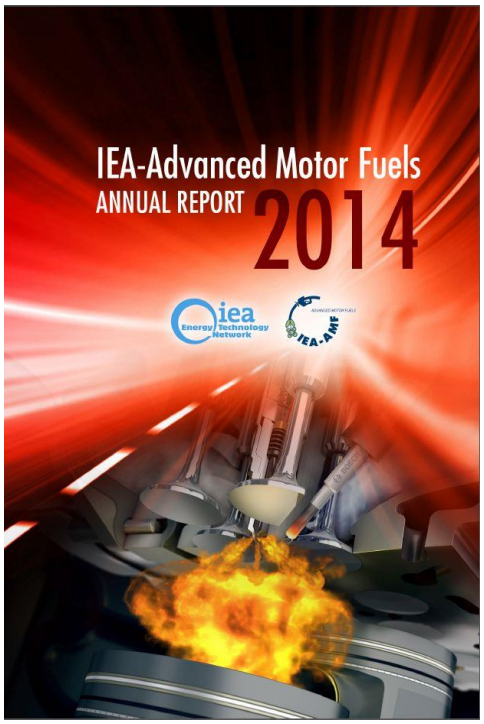
AMFI Newsletter



AMF Annual Report and other publications

The AMFI Newsletter is prepared for the members of the Implementing Agreement for Advanced Motor Fuels of the International Energy Agency (IEA/AMF).
The AMFI releases four electronic newsletters each year.
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The AMFI Newsletter is available online at: www.iea-amf.org

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DETAILED CONTENTS

GENERAL INTEREST

400 ppm CO2 concentration crossed in March

Concentrations of carbon dioxide in the atmosphere reached a record global average in March, underscoring the crucial importance of reaching an effective universal climate change agreement in Paris at the end of the year. According to the US National Oceanic and Atmospheric Administration, monthly global average concentrations surpassed 400 parts per million in March 2015 for the first time since the administration began tracking carbon dioxide in the atmosphere. The current concentrations are unprecedented in millions of years.

According to the UN's Intergovernmental Panel on Climate Change, around 80% of known fossil fuel reserves would need to stay in the ground for humanity to limit the concentration of CO2 in the atmosphere to 450 ppm. This level would in turn give humanity a 50% chance of limiting global warming to the internationally agreed limit of a maximum 2°C global average temperature rise.

Source/ read more: http://newsroom.unfccc.int/unfccc-newsroom/wake-up-call-ahead-of-paris-2015-400ppm-co2-level-breached/

EU Parliament supports advanced biofuels

A draft law to cap crop-derived biofuel production and accelerate the shift to alternative sources was voted by the EU Parliament on 28 April. It aims to cut GHG emissions caused by the growing use of farm land for biofuel crops.

Current legislation requires EU member states to ensure that renewable energy accounts for at least 10% of energy consumption in transport by 2020. The new law says that:

- first-generation biofuels should account for no more than 7% of energy consumption in transport by 2020,
- fuel suppliers must report to EU countries and the EU Commission the estimated level of GHG emissions caused by "indirect land-use change" (ILUC),
- the Commission must report and publish data on ILUC-related emissions, and
- the Commission must report back to the European Parliament and the Council of Ministers on the scope for including ILUC emission figures in the existing sustainability criteria.

The new law also says that EU member states will have to set a national target, no later than 18 months after the EU directive enters into force, for the share of advanced biofuels, e.g. those sourced from certain types of waste and residues and new sources such as seaweed, in total transport consumption. The indicative target for advanced biofuels is a share of 0.5%.

Source: *www.europarl.europa.eu/news/de/news-room/content/20150424IPR45730/html/Parliament-supports-shift-towards-advanced-biofuels*

Renewables successfully driving down carbon emissions in Europe

Without the deployment of renewable energy since 2005, greenhouse gas emissions in 2012 could have been 7% higher than actual emissions, according to the EEA report 'Renewable energy in Europe'. Renewable energy most substituted coal, where consumption would have been 13% higher, while natural gas use would have been 7% higher. Renewable energy has not been the only factor

reducing Europe's greenhouse gas emissions. Policies and measures designed to reduce emissions, improve energy efficiency and stimulate the deployment of renewable energy have all played a role.

Source: www.eea.europa.eu/highlights/renewables-successfully-driving-down-carbon

US: Renewable Fuel Standard volumes released

In Washington, the Environmental Protection Agency (EPA) released its proposed standards for 2014, 2015, and 2016 volumes for renewable fuels. EPA is proposing to set the renewable fuel standards for 2014 at the levels that were actually produced and used as transportation fuel, heating oil or jet fuel in the contiguous U.S. and Hawaii. For 2015 and 2016, EPA is proposing ambitious increases in both advanced biofuel and total renewable fuel in comparison to 2014 levels. This proposed rulemaking also provides an evaluation of the expected volumes of cellulosic biofuel for 2015 and 2016, and proposes annual increases in the required volume of biomass-based diesel for 2015, 2016, and 2017. The volumes used to determine the proposed percentage standards are shown in Table 1.

Proposed Volumes	**2014**	**2015**	**2016**	**2017**
Cellulosic biofuel	33 mill gal	106 mill gal	206 mill gal	n/a
Biomass-based diesel	1.63 bill gal	1.70 bill gal	1.80 bill gal	1.90 bill gal
Advanced biofuel	2.68 bill gal	2.90 bill gal	3.40 bill gal	n/a
Total renewable fuels	**15.93 bill gal**	**16.30 bill gal**	**17.40 bill gal**	**n/a**

Table 1: Volumes Used to Determine the Proposed Percentage Standards

Four separate percentage standards are required under the RFS program, corresponding to the four separate volume requirements shown in Table 1. The percentage standards represent the ratio of renewable fuel volume to non-renewable gasoline and diesel volume. Thus, in 2016 about 10% of all transportation fuel used would be from renewable sources. The proposed standards are shown in Table 2.

Proposed Percentage Standards	**2014**	**2015**	**2016**
Cellulosic biofuel	0.019%	0.059%	0.114%
Biomass-based diesel	1.42%	1.41%	1.49%
Advanced biofuel	1.52%	1.61%	1.88%
Total renewable fuels	**9.02%**	**9.04%**	**9.63%**

Table 2: Proposed Percentage Standards

The proposal is open for public comment until July 27, 2015.

Source: United States Environment Protection Agency (EPA)
Link: http://www.epa.gov/otaq/fuels/renewablefuels/documents/420f15028.pdf

East Asia countries biofuels database

The Biofuels Database Project in East Asia Countries is one of the activities identified under the Japan Cooperation Initiative for Clean Energy and Sustainable Growth. The project is under the Energy Biofuels for Transport and Other Purposes Work Stream of the East Asia Summit-Energy Cooperation Task Force (EAS-ECTF). The objective of the project is to develop and establish the East Asia Biofuels Cooperation Website by collecting information on current policies and situations of biofuels in East Asian countries. The Philippines is the lead country for the project with support from Asia Biomass Energy Cooperation Promotion Office (New Energy Foundation (NEF), Japan) that shall establish the website. The proposed database contents include the respective countries' basic energy information, biofuels policy, biofuels and feedstock supply potential, present status of utilization, markets and future outlook, among others.

Source: *http://www.asiabiomass.jp/biofuelDB/k/index.php*

Black Carbon Shipping Emissions in the Arctic

Ship emissions are anticipated to increase with the expected rise in commercial shipping, particularly in the Arctic, if preventive actions are not implemented. Shipping represents 9% of the global SOx emissions and 18-30% of the global NOx emissions. Share of shipping in the global black carbon (BC) emissions is less than 2%, however, in the north of 70° latitude BC mostly originate from shipping. BC increases global warming and ice melting through deposition to ice and snow. The international maritime organization (IMO) limit for BC is anticipated, however, BC measurements and its definition are known to be challenging. For example, results from different experimental techniques differ from each other, but only a few studies provide detailed insight on the BC emissions from ships. One of the projects, called "SEA-EFFECTS BC", started in Finland in 2015 in co-operation with research organizations and industrial partners. The SEA-EFFECTS BC project aims at establishing a more reliable and unequivocal basis of BC emission evaluation to shipping environment, and towards new options for on-line monitoring techniques.

Source: https://tapahtumat.tekes.fi/uploads/f29c2613/Paivi_Aakko_Saksa_Poster-1765.pdf

ALCOHOLS AND (BIO)GASOLINE

Methanol and DME plant for Trinidad Tobago

Mitsubishi Gas Chemical Company Inc., Mitsubishi Corporation and Mitsubishi Heavy Industries Ltd. have signed an agreement with state-owned National Gas Company of Trinidad and Tobago Ltd. and Massy Holdings Ltd. for the construction of a methanol and dimethyl ether (DME) plant in Trinidad and Tobago, and have concluded contracts for engineering procurement and construction, gas supply, and relevant land leases.

Source: http://www.mgc.co.jp/php/files_en/150413e.pdf

U.S. ethanol exports in 2014 reach highest level since 2011

According to EIA monthly supply data through December 2014, which EIA released in late February, U.S. exports of fuel ethanol in 2014 reached their second-highest level at a total of 826 million gallons. This level was second only to the 1.2 billion gallons exported during 2011 and 33% more than exports of fuel ethanol in 2013. Similarly, U.S. imports of ethanol, which totaled approximately 377 million gallons during 2013, fell by 81% to a total of 73 million gallons in 2014, their lowest

annual level since 2010. As a result, the United States was a net exporter of fuel ethanol for the fifth consecutive year and exported the fuel to 37 different countries in 2014.

Source: www.eia.gov/todayinenergy/detail.cfm?id=20532&src=email

Alcohols from natural gas - easier to transport and store

Refining natural gas into an easy-to-transport, easy-to-store liquid so far has been a challenge. But now, a new material, designed and patented by researchers working at the Molecular Foundry nanoscience research center, is making this process a little easier.

Natural gasses, like ethane and methane, are hard to store and transport. However, by converting them to liquids specifically, liquid alcohols, they could be more easily stored, transported and used as fuels. Ethanol, the liquid form of ethane, is a particularly attractive form of liquid fuel because it burns cleaner and provides greater energy than its alternatives. Unfortunately, current methods for making ethanol from ethane require extreme heat (approximately 400-600 °F), making it a very expensive fuel.

To lower the temperature, and thus lower costs, a research team at the Molecular Foundry created a collection of tiny cages, a metal-organic framework (MOF) which speeds the chemical reaction that turns ethane into ethanol. By using a specially designed MOF the researchers were able to reduce the need for extreme heat, converting ethane to alcohol at just 167°F. This reduces costs involved in making the preferred form of fuel.

Source: http://www.sciencedaily.com/releases/2015/04/150408124512.htm

BIODIESEL ESTERS

Biodiesel is getting us where we need to go

The National U.S. Biodiesel Board launches new ad campaign showcasing biodiesel success from Coast to Coast.

Produced by Northern Virginia, a leading provider of creative communications services for Fortune 500 corporations, national associations, and federal agencies, the campaign recognizes biodiesel's role as an important transportation fuel - an advanced biofuel impacting people in every walk of life, throughout the country.

The television ads focus on biodiesel in motion, fueling various vehicles in a wide range of settings across the nation. The online and radio ads echo the theme of biodiesel at work today from coast-to-coast. The print ads showcase several personal success stories with biodiesel. In addition to offering basic biodiesel information, the microsite dives in to feature unique stories in video form from biodiesel users, suppliers and distributors. It lets them tell their unique biodiesel story and shows biodiesel is an effective, renewable alternative.

Funding for the campaign is provided by the United Soybean Board, State Soybean Checkoff Boards, U.S. Canola Association, and the National Biodiesel Board.

Source: *http://nbb.org/news/nbb-press-releases/2015/05/18/biodiesel-is-getting-us-where-we-need-to-go*

Biodiesel for US Defense Logistics Agency

The US Defense Logistics Agency took a major step forward in ensuring high quality biodiesel can be

used seamlessly in military bases across the country. DLA, the Department of Defense's largest logistics support agency, recently added a biodiesel fuel quality clause in their procurement contracts that says suppliers of biodiesel shall be certified as either BQ-9000 Producers or BQ-9000 Marketers.

"As the US military continues to move towards more sustainable, American-made fuels, it's extremely important that they purchase the highest quality fuel possible," said National Biodiesel Board Technical Director Scott Fenwick. "The inclusion of the BQ-9000 requirement ensures our military bases and others DLA supplies will be able to use biodiesel seamlessly in their operations."

As America's combat logistics support agency, DLA provides the Army, Marine Corps, Navy, Air Force, other federal agencies and partner nation armed forces with a full spectrum of logistics, acquisition and technical services. DLA sources and provides nearly all of the consumable items America's military forces need to operate – from food, fuel and energy to uniforms, medical supplies and construction material. In 2014, they supplied 100 million barrels of fuel.

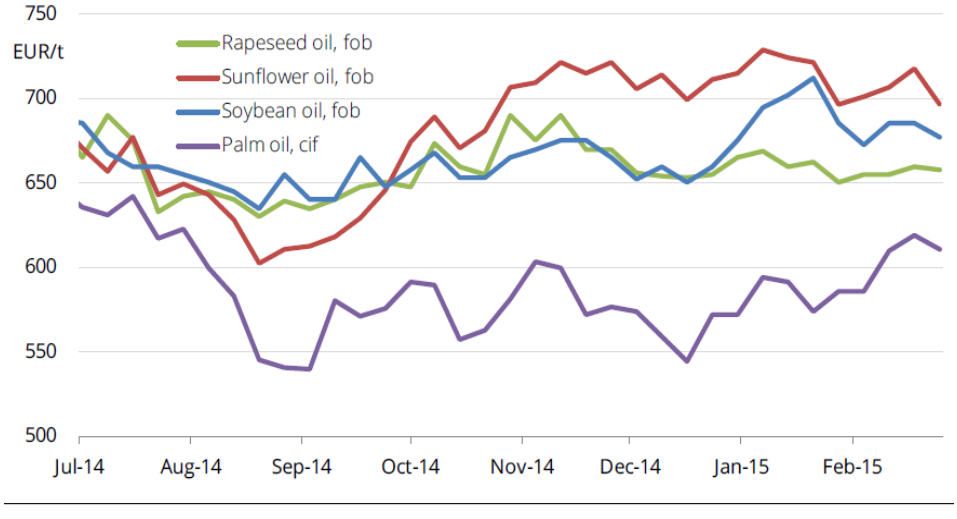
DLA also leads the Department of Defense's efforts to supply the military services with alternative fuel and renewable energy solutions.

Source: http://nbb.org/news/nbb-press-releases/2015/05/18/dla-adds-biodiesel-quality-requirement-to-fuel-contracts

Weak mineral oil prices beat down prices of vegetable oil

Vegetable oil prices dropped at the end of February 2015. The slide was driven by falling mineral oil prices and scant demand. Mineral oil traded on the NYMEX continued its downward trend as supply exceeded demand. In the wake of weak reference prices on the futures markets, vegetable oil prices were reduced considerably on the European cash market. However, demand has not been generated, because buyers still find current prices hardly financially appealing. Sales of rapeseed oil continue sluggish because falling mineral oil prices reduce the competitive advantage of biodiesel and, consequently, the interest in feedstock. Rapeseed oil currently stands at 657.5 €/t fob Hamburg, 20 €/t below the level of soybean oil. At 696 €/t, sunflower oil continues to be the most expensive vegetable oil.

Wholesale prices of vegetable oils



Source: AMI

Source: http://www.ufop.de/english/news/chart-of-the-week/

European biomethane roadmap

In the course of the "GreenGasGrids" project, a consortium consisting of 13 European agencies and associations has reviewed the present market status and has thoroughly looked at the obstacles hindering the broader production and application of biomethane. The Roadmap which was produced indicates, that - if the necessary actions will be taken - the level of biomethane production could reach 18-20 million m3, about 3% of the European natural gas consumption by 2030 and biomethane could provide min. 10% of total gaseous vehicle fuel consumption. Whether this role of biomethane would be reached is not a technical or raw material availability question – this is essentially the question of willingness, determination and consequent support by the political decision makers.

The key pre-conditions of realizing the full biomethane potential are:

- the national renewable energy support/incentive schemes should treat the "green gas" (biomethane) equally with "green electricity";
- the National Renewable Action Plans should be extended with a specific biomethane section to quantify the targets and determine the needed measures for achieving them;
- imported biomethane (if properly certified) should receive equal treatment (same support/incentives) with domestic production;
- national/domestic biomethane registries should be established in every biomethane producing country;
- the national/domestic biomethane registries should develop a Europe-wide cooperation aimed at coordination and harmonisation of their activities;
- the European natural gas network should be declared as a single, closed mass-balance unit

Source:
www.greengasgrids.eu/fileadmin/greengas/media/Downloads/Other_Downloads/D5.3_Publishable_Report.pdf

The US Cellulosic-RIN Revolution

Expanded cellulosic fuel pathways have led to a surge of biogas-based fuel credits, and producers are taking advantage of a significant boost to project economics.

Traditionally, the biogas project end market has been the sale of power to the grid, but transportation fuel may become the new end use of choice. Conversion of biogas into compressed natural gas (CNG) and liquefied natural gas (LNG) is now frequently considered when penciling out project financials, and not without reason. The volume of biogas-based transportation fuels used for compliance with the renewable fuel standard (RFS) has increased. As a recap, last July the U.S. EPA expanded cellulosic fuel pathways to include CNG and LNG from biogas created in landfills, municipal wastewater treatment plant (WWTP) digesters, agricultural digesters and separated municipal solid waste (MSW) digesters. A booming volume of cellulosic renewable information numbers (RINs) from renewable CNG and LNG pursued the ruling, and as a result has increasingly shown the potential for biogas as a source of transportation fuel.

Source: http://biomassmagazine.com/articles/11571/the-cellulosic-rin-revolution

15 energy infrastructure projects receive EU funding

The EU's Innovation and Networks Executive Agency (INEA), the successor of the Trans-European Transport Network Executive Agency (TEN-T EA) has signed 15 grant agreements for priority energy infrastructure projects in Europe. These projects are the first of 34 projects to receive a total of €647 million under the EU's Connecting Europe Facility 2014 call for proposals.

The projects - which are part of one of the 248 Projects of Common Interest selected by the European Commission - aim to upgrade existing energy infrastructure and develop new energy transmission infrastructure of crucial importance to Europe's energy security. They will also support the deployment of large-scale renewable energy.

The majority of projects involve electricity and gas transmission lines. But the list also features electricity storage projects, underground gas storage projects, LNG terminals, and smart grid projects.

Source: http://danube-inco.net/object/news/15344
Link: http://ec.europa.eu/energy/sites/ener/files/documents/20141121_cef_energy_lists.pdf

RENEWABLE DIESEL / JET

Total transforms and upgrades its refineries

An investment of €200 million is being made to transform the La Mède refinery and create France's first biorefinery, which will be one of the biggest in Europe, to meet growing demand for biofuels. In order to sustainably restore the competitiveness of its La Mède refinery site, Total will transform some existing units for activities with strong future prospects. The Group will also maintain certain petroleum product refining operations, but halt processing of crude oil, which is reporting heavy losses, at end-2016.

The site's flagship operation will be a 500,000-ton-per-year biorefinery that will manufacture renewable diesel primarily from used oils, as well as renewable feedstock. The hydrotreated vegetable oil (HVO) process selected by Total is a French technology developed by Axens that produces high-quality renewable diesel that is easily blended into regular diesel in any proportion, with no adverse impact on fuel quality or engines.

An investment of €400 million is being made to upgrade the Donges refinery to capture profitable new markets with low-sulfur fuels that meet the evolutions of European Union specifications. Currently, the Donges refinery lacks desulfurization capacity. That means that a significant proportion of its fuels are exported, because they no longer meet the evolutions of European Union specifications. This situation undercuts the economics of the Donges facility and will be alleviated through the upgrade of the refinery.

Sources: http://www.total.com/sites/default/files/atoms/files/annexes-plan-raffinage-mede-en.pdf,
http://www.total.com/sites/default/files/atoms/files/annexes-plan-raffinage-mede-en.pdf

Gevo sells renewable jet fuel to NASA

Gevo Inc. has announced that the National Aeronautics and Space Administration has purchased Gevo's renewable alcohol-to-jet fuel (ATJ) for aviation use at the NASA Glenn Research Center in Cleveland, Ohio. Gevo's ATJ is manufactured at its demonstration biorefinery located in Silsbee,

Texas, using renewable isobutanol produced at its Luverne, Minnesota, isobutanol plant. The biorefinery, where Gevo also produces bioparaxylene and bioisooctane, is operated in conjunction with South Hampton Resources.

Since its founding, NASA has been dedicated to the advancement of aeronautics and space technologies. Over the past several years, NASA has been studying the effects of alternate biofuels on engine performance, emissions and aircraft-generated contrails at altitudes typically flown by commercial airliners. Results from recent tests showed that a blend of renewable jet fuel and standard jet fuel significantly reduced emissions, as compared to using standard jet fuel alone, while not affecting flight operations.

Source: http://biomassmagazine.com/articles/11642/gevo-sells-renewable-jet-fuel-to-nasa

OTHER FUELS AND VEHICLES

Chevrolet Volt Rolls Off The Assembly Line

The last copy of the world's most advanced plug-in hybrid has rolled off the Detroit-Hamtramck assembly line, paving way for the next-generation 2016 Chevy Volt.

The Volt, along with the Nissan LEAF, are part of what's often considered the first wave of mass-produced electric cars in the modern era.

Though the Volt never achieved the level of sales success that General Motors had targeted, few deny that the Volt was and still is one of GM's crowning achievements.

Till this day, no other plug-in electric car operates in a way comparable to the Volt, meaning no other automaker has tried to mimic the functionality of the Volt's complex operations.

The first-generation Volt will forever be remembered, but the arrival of the next-generation Volt is just around the corner, so it's time to gear up for what's coming next.

Source:http://insideevs.com/end-era-final-first-generation-chevrolet-volt-rolls-assembly-line/

San Francisco gets new biodiesel-electric buses

The San Francisco Municipal Transportation Agency (SFMTA), has taken delivery of its first New Flyer Industries electric trolley and biodiesel-electric hybrid buses. SFMTA has purchased 61 new biodiesel-electric hybrid buses. The new hybrids will run on B20, the new trolleys will operate on 100 % hydro-electric power. The SFMTA has been given notice to proceed with the procurement of 200 standard and up to 163 articulated low-floor biodiesel-electric hybrid buses. The articulated hybrid buses are still undergoing a standard evaluation by Muni Operations prior to acceptance of the vehicles.

Source: www.biodieselmagazine.com/articles/361243/san-francisco-gets-new-biodiesel-electric-bus-many-more-to-come

CO2 based motor vehicle taxes in the EU in 2015

CO_2 taxation is now well established across the European Union. Most EU member states currently apply some form of CO_2 tax to the registration and/or ownership of passenger cars. The 20 EU countries that levy passenger car taxes partially or totally based on the cars' CO_2 emissions and/or fuel consumption are: Austria, Belgium, Croatia, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Latvia, Luxembourg, Malta, the Netherlands, Portugal, Romania, Slovenia, Spain, Sweden and the United Kingdom.

Source: ACEA - Association des Constructeurs Européens d'Automobiles, http://www.acea.be/publications/article/overview-of-co2-based-motor-vehicle-taxes-in-the-eu

New cars' CO2 emissions well below Europe's 2015 target

New cars sold in 2014 emit on average 2.6 % less CO2 than those sold in 2013 and almost 7 grammes of CO_2/km below the 2015 target, according to provisional data published today by the European Environment Agency.

Image © Dirk-Jan Kraan

The average emissions level of a new car sold in 2014 was 123.4 grams of carbon dioxide (CO2) per kilometer, significantly below the 2015 target of 130 g, according to *provisional data* from the European Environment Agency (EEA). Since monitoring started under current legislation in 2010, emissions have decreased by 17 g CO2/km (12 %). Manufacturers will, nevertheless, have to further reduce emissions to meet the target of 95 g CO2/km by 2021.

AMF ExCo 49

The 49th Meeting of the AMF Executive Committee took place 10-13 March 2015, Gwangju, South Korea. There were 18 participants, including the Methanol Institute as Observer and two members of IEA Bioenergy Task 39 (Liquid Biofuels).

The meeting was held in conjunction with the 21st International Symposium on Alcohol Fuels (ISAF 2015), and AMF experts covered an own session within the conference. The respective presentations were:

- The Advanced Motor Fuels Implementing Agreement (Magnus Lindgren)
- Detailed investigations of alcohol fuels in diesel-type combustion (Jesper Schramm)
- Testing of various fuel and additive options in a compression-ignited heavy duty alcohol engine (Nils-Olof Nylund)
- Complex exhaust emission impacts from gasoline, diesel, alcohol and natural gas fuelled cars (Nils-Olof Nylund)
- Non-legislated Emissions of a Passenger Car with Ethanol Blend Fuels (Stephan Renz)

During the informal meeting on the following day, several topics for new annexes were discussed:

- Advanced Fuels in Advanced Engines
- Sustainable Bus Systems
- Fuel Technologies for High Efficiency Engine Operation
- Real Driving Emissions and Fuel Consumption
- Annex 35 Subtask 3: Gasoline Direct Injection (GDI) Engines and ethanol fuels
- Hydrogen Enriched Methane

Work on "Fuels for Efficiency" was started as Annex 52 with Thailand as an Operating Agent.

Current AMF Annexes / Projects

Annex 28: Information Service & AMF Website (AMFI)

Annex 42: Toxicity of Exhaust Gases and Particles from IC-Engines

Annex 43: Performance Evaluation of Passenger Car, Fuel, and Powerplant Options

Annex 44: Alcohol fuels including methanol, by CATARC, China

Annex 45: Hydro-treated vegetable oil, by Germany and Denmark
NEW: Final report available: *http://iea-amf.org/content/publications/project_reports*

Annex 46: Alcohol Application in CI Engines, by DTU

Annex 47: Reconsideration of DME Fuel Specifications for Vehicles

Annex 48: Value Proposition Study on Natural Gas Pathways for Road Vehicles

Annex 49: COMVEC – Fuel and Technology Alternatives for Commercial Vehicles

Annex 50: Fuel and Technology Alternatives in Non-Road Engines

Annex 51: Methane Emission Control

Annex 52: Fuels for Efficiency

Next ExCo Meetings

ExCo 50: 26-30 October 2015 in Jerusalem, Israel

PUBLICATIONS

- **The AMF Annual Report** provides information on the Advanced Motor Fuels Implementing Agreement, on the status of advanced motor fuels in AMF member countries and worldwide, and on the work carried out by AMF in individual projects (Annexes). In addition, the AMF Chairman provides an outlook on advanced motor fuels.
  Link: http://www.iea-amf.org/app/webroot/files/file/Annual%20Reports/IEA-AMF_2014_Annual_Report.pdf
- ***International Energy Agency (IEA) Publications*: Tracking Clean Energy Progress 2015.** Published annually, the Tracking Clean Energy Progress (TCEP) report highlights how the overall development and deployment of clean energy technologies evolve, year on year. Each technology and sector is tracked against the interim 2025 2°C Scenario (2DS) targets of the IEA Energy Technology Perspectives 2015, which lays out pathways towards a sustainable energy system in 2050.
  Link: http://www.iea.org/publications/freepublications/publication/Tracking_Clean_Energy_Progress_2015.pdf
- **International Energy Agency (IEA) Publications: WEO 2015 Special Report on Energy and Climate Change.** The report:
  - Presents a detailed first assessment of the energy sector impact of known and signaled national climate pledges for COP21
  - Proposes a bridging strategy to deliver a near-term peak in global energy-related greenhouse-gas emissions, based on five pragmatic measures that can advance climate goals through the energy sector without blunting economic growth
  - Highlights the urgent need to accelerate the development of emerging technologies that are, ultimately, essential to transforming the global energy system into one that is consistent with the world's climate goals
  - Recommends four key pillars on which COP21 can build success, from an energy sector perspective

  Link: http://www.worldenergyoutlook.org/energyclimate/#d.en.143801

- ***OECD Publications:*** **Aligning Policies for a Low-carbon Economy.** This report produced in co-operation with the International Energy Agency (IEA), the International Transport Forum (ITF) and the Nuclear Energy Agency (NEA) identifies the misalignments between climate change objectives and policy and regulatory frameworks across a range of policy domains (investment, taxation, innovation and skills, trade, and adaptation) and activities at the heart of climate policy (electricity, urban mobility and rural land use).
  Outside of countries' core climate policies, many of the regulatory features of today's economies have been built around the availability of fossil fuels and without any regard for the greenhouse gas emissions stemming from human activities. This report makes a diagnosis of these contradictions and points to means of solving them to support a more effective transition of all countries to a low-carbon economy.
  Link: http://www.oecd-ilibrary.org/environment/aligning-policies-for-a-low-carbon-economy_9789264233294-en

- **IA-HEV 2014 Annual Report** is now available for download, featuring EV news from 18 member countries and 3 non-member countries. This report describes the major developments in EVs and hybrids during 2014 in 18 IA-HEV member countries in Europe, North America and Asia. The IA-HEV annual report serves as a comprehensive reference work on international approaches to promote hybrid electric vehicles and EVs, with an expert from each member country contributing a chapter on the year's most significant developments. This range of up-to-date information is difficult to find between two covers anywhere else. The new report also describes the activities and results of IA-HEV's active Tasks, where representatives from multiple member countries collaborate on research into EV-related topics of current interest.
  Link: http://www.ieahev.org/assets/1/7/Report2015_WEB.pdf

- ***Stephen J. McPhail, Luigi Leto, Massimiliano Della Pietra,Viviana Cigolotti, Angelo Moreno.*** **International Status Of Molten Carbonate Fuel Cells Technology.** The report has been prepared in support of the International Energy Agency (IEA), Advanced Fuel Cells Implementing Agreement, Annex 23, and it gives an updated overview of the status of deployment of Molten Carbonate Fuel Cells (MCFC) in the world as of 2015.
  Link: http://www.ieafuelcell.com/documents/MCFC_international_status_2015_web.pdf

- **"The Future of Low-Carbon Road Transport: What Role for Second-Generation Biofuels?"** This report reflects the discussion at a recent Harvard workshop on second-generation biofuels, convened by the Energy Technology Innovation Policy group in Dearborn, MI, on April 7-8, 2015. The workshop discussions addressed three broad questions: How do second-generation biofuels compare with other low-carbon transport technologies? How should policy and fuel producers engage with consumers, farmers, retailers, and other key audiences to drive demand for second-generation biofuels? And is there a case for direct government support for second-generation biofuels?
  Link: http://belfercenter.ksg.harvard.edu/publication/25497/future_of_lowcarbon_road_transport.html

- ***European Environment Agency (EEA):*** **Renewable energy in Europe - approximated recent growth and knock-on effects.** This report introduces several methods the European Environment Agency (EEA) has developed for assessing and communicating early RES growth and the important knock-on effects that RES growth has on the energy sector and related areas. The report provides specific information at EU and country level on estimated RES progress in 2013, estimated gross avoided carbon dioxide (CO2) emissions and avoided fossil fuel use due to the additional use of renewable energy since 2005, as well as an assessment of the statistical impacts of growing RES use on primary energy consumption.
  Link: http://www.eea.europa.eu/publications/renewable-energy-in-europe-approximated/at_download/file

- ***European Commission Directorate-General Energy:*** **From the Sugar Platform to biofuels and biochemical.** This study uses literature surveys, market data and stakeholder input to provide a comprehensive overview for policymakers and industry identifying the key benefits and development needs for the sugar platform. The study created a company database for 94 sugar-based products, with some already commercial, the majority at research/pilot stage, and only a few demonstration plants crossing the "valley of death". Case studies describe the value proposition, market outlook and EU activity for ten value chains (acrylic, adipic & succinic acids, FDCA, BDO, farnesene, isobutene, PLA, PHAs and PE). Most can deliver significant greenhouse savings and drop-in (or improved) properties, but at an added cost to fossil alternatives. Whilst significant progress has been made, research barriers remain around lignocellulosic biomass fractionation, product separation energy, biological inhibition, chemical selectivity and monomer purity, plus improving whole chain process integration. An assessment of EU competitiveness highlights strengths in R&D, but a lack of strong commercial activity, due to the US, China and Brazil having more attractive feedstock and investment conditions. Further policy development, in particular for biochemicals, will be required to realize a competitive European sugar-based bioeconomy.
  Link: https://ec.europa.eu/energy/sites/ener/files/documents/EC%20Sugar%20Platform%20final%20report.pdf

- European renewable ethanol industry releases annual **State of the Industry Report**. The annual report offers a comprehensive look at the European ethanol industry, its market and policy environment, and is accompanied by a key facts sheet, which presents a concise overview of industry data, and a map of ethanol biorefineries in Europe.
  Link: http://www.epure.org/sites/default/files/publication/European-renewable-ethanol-industry-releases-annual-State-of-the-Industry-Report.pdf

- ***Navigant Research´s*** **"Advanced Energy Now 2015 Market Report".** The "Advanced Energy Now 2015 Market Report - Global and U.S. Markets by Revenue 2011-2014 and Key Trends in Advanced Energy Growth" is the third annual report of market size, by revenue, of the advanced energy industry, worldwide and in the United States. Advanced energy encompasses a broad range of products and services that constitute the best available technologies for meeting energy needs today and tomorrow.
  Link: http://info.aee.net/hs-fs/hub/211732/file-2583825259-pdf/PDF/aen-2015-market-report.pdf

- The last **annual biofuels report on Mexico** available from USDA was published 2012. It states that Mexican authorities keep postponing the commercial introduction of biofuels and advanced biofuels are still on the drawing board. The report provides details on ethanol, biodiesel, advanced biofuels, bio-jet fuel, and related trade.
  Link: http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Biofuels%20Annual_Mexico%20City_Mexico_7-11-2012.pdf

- ***UBA Deutschland - Federal Environment Agency Germany:*** **Post fossil energy supply options for a greenhouse gas neutral transport in 2050: A multi-modal assessment.** The study shows, which combinations of powertrain and fuel make possible a greenhouse gas neutral traffic in Germany in 2050. Based on existing research and study results, a systematic review of post-fossil fuel options is given. The post-fossil fuels include renewable electricity, fuels such as power-to-gas (hydrogen PtG, PtG methane) and power-to-Liquid (PtL) produced from renewable electricity, and biofuels. The drives include not only internal combustion engines but also electric motors, hybrids and fuel cells, concerning all types of traffic.
  Link:
  http://www.umweltbundesamt.de/sites/default/files/medien/378/publikationen/texte_30_2015_postfossile_energieversorgungsoptionen.pdf

- ***Ecofys- Publications:*** **Country-level assessment of long-term global bioenergy potential.** Most long-term global energy scenarios rely on biomass for a variety of possible uses, but there is unlikely to be enough to replace the majority of fossil fuel use in all sectors. This study presents a comprehensive, country-based, bottom-up assessment of the land-based global biofuel (bioethanol and biodiesel) potential. It takes into account a range of assumptions with varying crop yield improvements, land-use change and technology development, covering energy from both lignocellulosic and food crops as well as residues from agriculture and forestry.
  Link: *http://www.ecofys.com/files/files/ecofys-2015-article-global-bioenergy-potential.pdf*

EVENTS

Green Bus Summit, 29 July 2015, Reno, Nevada, USA
Conference website: http://stnexpo.com/green-bus-summit.html

North American Natural Gas Vehicle Conference, 15-17 September 2015, Denver, Colorado, USA
Conference website: *http://www.ngvshow.com/*

9th Asian DME Conference, 16-18 October 2015, Wuzhen, R.P. China
Conference website: *http://ecovehicle.sjtu.edu.cn/english/introduction.htm*

5th International Conference on Lignocellulosic Ethanol, 15-17 September 2015, Brussels, Belgium
Conference website: https://ec.europa.eu/energy/en/events/5th-international-conference-lignocellulosic-ethanol

Conference "DROP IN Biofuels – International Conference on microbial hydrocarbon production", 25-27 October 2015, Frankfurt/Main, Germany
Conference website: *https://veranstaltungen.fnr.de/drop-in-biofuels/*

IEA Bioenergy Conference 2015 - Realising the world's sustainable bioenergy potential, 27-28 October 2015, Berlin, Germany
Conference website: http://ieabioenergy2015.org/

ANGVA's 6th Biennial International Conference & Exhibition (ANGVA 2015), 4-6 November 2015, Chengdu, China
Conference website: http://www.angva.org/?p=1091

10th A3PS-Conference – "Eco-Mobility 2015", 9-10 November 2015, Sky Stage / Tech Gate Vienna, Austria
Conference website: http://www.a3ps.at/site/de/termin/10th-a3ps-conference-eco-mobility-2015

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