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AMFI Newsletter

A European Strategy for Low-Emission Mobilitypublished: read more

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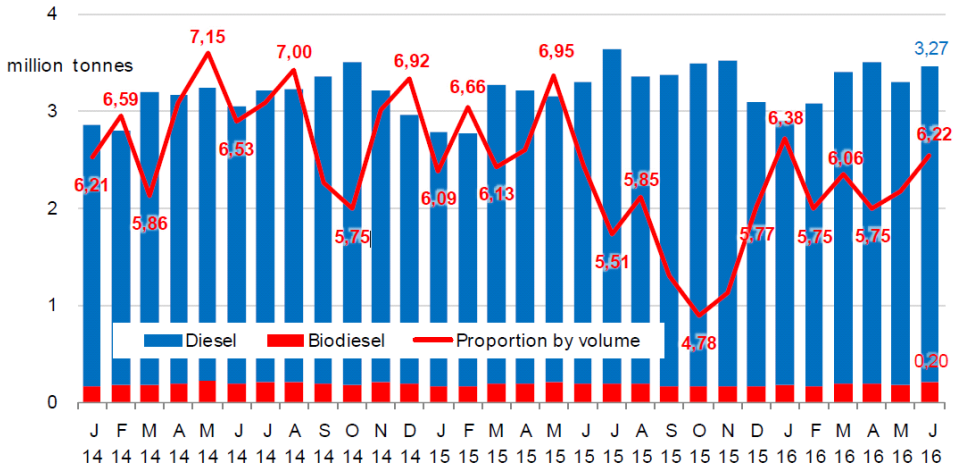
Queensland, Australia: New biofuels mandate

Beginning in January 2017, large service stations in the state of Queensland, Australia, will be required by law to ensure that 3 % of their total regular and ethanol-blended petrol sales are bio-based, such as E10. "Biofuels reduce carcinogenic tailpipe emissions as concluded by the CSIRO/Orbital Research Report (2008), that using E10 decreases the lung embedding particle PM2.5 by 33%. Further focus is supporting Queensland agriculture by investing in our grain and sugar producing regions to produce ethanol domestically. The ethanol mandate keeps Queenslanders dollars in the state, not overseas. It builds regional domestic-sourced fuel security and delivers cleaner air. It is our goal to ensure that motorists are aware of the benefits of biofuels and empowered to make the decision to purchase biofuels at the bowser (pump)," said Larissa Rose, Queensland Renewable Fuels Association managing director.

Source: Queensland Renewable Fuels Association, https://www.qrfa.com.au/publications-view/qld-biofuels-mandate-a-cut-above-the-rest/

Germany: Biodiesel sales increased

In Germany, the comparatively low purchase prices for biodiesel have stimulated demand appreciably. The June 2016 volume of biodiesel in blends surged to 6.22 percent, the highest level since the beginning of the year.



Consumption of biofuel from January 2014 onward: Source: BAFA, AMI

Total June 2016 consumption of diesel fuel shot up by just less than 5 per cent, to 3.3 million tonnes, from the previous month. Consequently, the volume amounted to around 18.6 million tonnes in the first half year. This translates to a 7 percent rise year-on-year. The trend also drove up consumption of biodiesel - to a much lower degree - by one per cent, to 1.1 million tonnes. In other words, the volume of biodiesel in blends remained below the level of 6 percent most of the time. Consumption figures did not rise substantially until June 2016. The Federal Office for Economic Affairs and Export Control (BAFA) reported that demand for biodiesel for blending amounted to 203,223 tonnes that month. That was the largest quantity in more than one year. If demand for mineral diesel continues to rise, it could also support sales of biodiesel.

Source: www.ufop.de, Contact person, Stephan Arens (email: s.arens@ufop.de)

USA: Transport fuel from landfill gas

In November, the US Energy Information Administration reported on the first microchannel gas-to-liquid (GTL) plant in the United States. The new plant, built by ENVIA Energy, is located in Oklahoma and is expected to begin converting landfill gas into liquid petroleum products later this year. GTL plants convert natural gas to liquid fuels, waxes, and chemical feedstocks using the Fischer-Tropsch (F-T) process. Six large-scale F-T GTL plants operate in the world today: two in South Africa, two in Qatar, and one each in Malaysia and Nigeria. These plants have output capacities ranging from 5,600 barrels per day (b/d) to 140,000 b/d. BP operated a smaller, 300 b/d pilot plant in Alaska from 2002 to 2009, but no commercial-scale GTL plants currently operate in the United States.

ENVIA Energy's plant will have a capacity of 300 b/d. For comparison, a petroleum refinery may have a capacity of tens or hundreds of thousands of barrels per day. The project is a joint venture between four companies that plan to build more microchannel GTL plants at landfill sites. Small-scale F-T GTL plants can use microchannel reactors (diameters of one millimeter or less) to optimize their operation.

Source/ read more: www.eia.gov/todayinenergy/detail.php?id=28752&src=email

Predicted growth in EV sales

Navigant Research predicts that sales of hybrid, plug-in hybrid, and all-electric light-duty vehicles will go from 3 percent in 2016 to 9 percent of worldwide sales in 2025. For all of what the firm calls "EV" sales that consists of all three electrified vehicle powertrain types, Navigant forecasts plug-in hybrids will make up 72 percent of the total.

The trend toward plug-in hybrid electric vehicles (PHEVs) making the lion's share of EV sales started this year as the Chevy Volt sales have been leading the U.S. market and the Mitsubishi Outlander PHEV has done so recently in Europe. In 2017, Navigant expects PHEVs will make up more than 36 percent of EV sales. More of that market dominance should come from expanding automaker applications of the powertrain, into new, larger vehicle body types. BEVs aren't typically designed for these vehicle types as much as PHEVs, according to the Navigant study.

Source: Hybrid Cars, http://www.hybridcars.com/electrified-vehicles-will-make-up-nearly-10-percent-of-global-vehicle-sales-by-2025-study-says/

Tesla sales top expectations

Tesla Motors announced better-than-expected sales numbers for the third quarter of 2016. The company produced 25,185 vehicles, 37% more than in the second quarter. It is increasing production at its Fremont, California, factory with an eye toward making 500,000 cars a year by 2018, a goal that also depends on the company's battery factory in Nevada coming online.

Policy is meanwhile evolving to support increasing usage of electric vehicles. California may focus on building more electric-vehicle charging stations and encouraging battery-powered, self-driving cars to reach its mandate for zero-emission autos.

Source: Bloomberg New Energy Finance, https://www.bnef.com/ViewEmail/abae9917-ab91-cd7a-af75-b517fde01a97-2190dc10a717-dfd6f6?e=Week%20in%20Review

POLICY / LEGISLATION / MANDATES / STANDARDS

EPA's 2017 RFS volumes

The Environmental Protection Agency (EPA) in the US published the final ruling covering renewable fuel volume requirements for 2017 under the Renewable Fuel Standard (RFS) program on 23 November 2016. The final rule calls for further increases in the volumes requirements above those in proposed rule published on 18 May 2016 and includes an increased volume requirement for biomass-based diesel for 2018.

Renewable Fuel Volume Requirements for 2014-2018					
	2014	2015	2016	2017	2018
Cellulosic biofuel (million gallons)	33	123	230	311	n/a
Biomass-based diesel (billion gallons)	1.63	1.73	1.9	2.0	2.1
Advanced biofuel (billion gallons)	2.67	2.88	3.61	4.28	n/a
Renewable fuel (billion gallons)	16.28	16.93	18.11	19.28	n/a

For 2017, the EPA sets volume requirements of 4.28bn gallons for advanced biofuels and 19.28bn gallons for all renewable fuels. In addition for 2018, the Agency sets the volume requirement for biomass-based diesel to 2.1bn gallons.

Source/read more: https://www.epa.gov/renewable-fuel-standard-program/final-renewable-fuel-standards-2017-and-biomass-based-diesel-volume#rule-summary

EC releases proposal for RED II

The European Commission has released its long-awaited revised Renewable Energy Directive (RED) and proposed the phase-out of food crop-based biofuels from 2021. The EC also wants to simultaneously introduce a sub-mandate for advanced biofuels. It also proposes to introduce a new sustainability criterion on forest biomass. It proposes an obligation on European transport fuel suppliers to provide an increasing share of renewable and low-carbon fuels, including advanced biofuels, renewable transport fuels of non-biological origin (e.g. hydrogen), waste-based fuels and renewable electricity.

The level of this obligation will progressively increase from 1.5% in 2021 (in energy terms) to 6.8 % in 2030, including at least 3.6% of advanced biofuels. Preferential rules apply to advanced aviation fuels in order to support their deployment in the aviation sector (e.g. their energy content is accounted 20% more), the EC said in a statement. To minimise the Indirect Land-Use Change (ILUC) impacts, RED II will introduce a cap on the contribution of food-based biofuels towards the EU renewable energy target, starting at 7% in 2021 and going down progressively to 3.8% in 2030.

Source/ read more: http://biofuels-news.com/display_news/11444/ec_releases_red_ii_proposes_firstgeneration_biofuels_phaseout_and_new_sustainability_criterion_for_forest_biomass/

Major cities commit to low-carbon transport

Diesel vehicles will be removed from Paris, Mexico City, Madrid and Athens by 2025, as part of unprecedented effort by mayors to improve the quality of air for their citizens. These pioneering cities also pledged to incentivize alternative fuel vehicles, as well as promote walking and cycling infrastructure. The market-shifting commitment was made at the C40 Mayors Summit in Mexico City and reads as follows:

- We commit to remove all diesel vehicles from our cities by 2025.
- We commit to do everything in our power to incentivies the use of electric, hydrogen and hybrid vehicles to replace more polluting vehicles. We call on car, bus and lorry manufacturers to follow our lead and prioritize the development of these vehicles.
- We commit to invest in the sustainable infrastructure that will make it easier for citizens to choose healthier, more sustainable and low carbon means to move around the city. This will include more bike lanes, bus rappid transit lines, fleets of clean buses and investment in metro and tram infrastructure.

C40 is a network of the world's megacities committed to addressing climate change. C40 supports cities to collaborate effectively, share knowledge and drive meaningful, measurable and sustainable action on climate change. The global campaign will support city governments to reduce harmful emissions from the transport, waste and energy sectors, as well as mobilizing citizen action to reduce air pollution while also slowing climate change.

Source: C40, *http://www.c40.org/press_releases/daring-cities-make-bold-air-quality-commitment-to-remove-all-diesel-vehicles-by-2025*

SPOTLIGHT ASIA

Indonesia: Biofuel use on truck despite filth

The Indonesian government and palm oil stakeholders still believe that the biodiesel consumption target will be achieved by year-end despite Pertamina's recent move to temporarily halt sales some area around Jakarta. The state-owned oil and gas firm found out that some of its biodiesel distributed from the Plumpang fuel terminal in North Jakarta was contaminated by water. The ministry's secretary for the new and renewable energy directorate general Ministry Energy and Mineral Resources, Dadan Kusdiana, said the halt would likely impact only on a small portion of all biofuel sold nationwide. He remained confident that the full year sales would still likely to be between 3 million and 3.2 million kl. This reaffirms the Indonesian commitment to the mandatory biodiesel mix to increase the use of non-fossil fuels, from 10 percent in 2013 to 15 percent last year and to 20 percent this year. Such a measure is expected to reduce the country's high levels of carbon emissions and its heavy dependence on petroleum-based fuel.

Source : The Jakarta Post, http://www.thejakartapost.com/news/2016/11/23/biofuel-use-track-despite-filth.html
Source: http://www.ies.be/files/IES%20Policy%20Brief%202016-19_Will%20Bio-Jet%20Fly.pdf

Thailand: Integrated Energy Plans

The Thai Energy Policy and Planning Office (EPPO) recently presented Thailand's new five integrated energy plans in a special edition of the Energy Policy Journal. These five national energy plans have

been established by the Ministry of Energy as a framework to achieve national energy security, in line with the government policy and readiness for the ASEAN Economic Community (AEC). The five integrated energy plans are the Power Development Plan of Thailand (PDP 2015), the Energy Efficiency Plan (EEP 2015), the Alternative Energy Development Plan (AEDP 2015), the Natural Gas Supply Plan (Gas Plan 2015), and the Oil Supply Management Plan (Oil Plan 2015). Details and integration among five plans can be explored in this special edition of the Journal.

Sources: http://www.eppo.go.th/images/Infromation_service/journalissue/ISSUE-SPECIAL2559.pdf#search='EPPO+Journal+Thailand

Japan: First LNG tank truck

In a region of the Kansai district in Japan, Niyac Corporation started tank truck-based distribution of Liquefied Natural Gas (LNG) with a dedicated CNG powered tank truck in November 2016. This demonstration project is subsidized by the Japanese Ministry of Environment for the purpose of reducing CO2 emissions from road vehicles. Niyac Corporation, Osaka Gas Co., Ltd. and Organization for the promotion of low emission vehicles (LEVO) participate in this project.

Source of Photo: http://www.niyac.co.jp
Sources: http://www.niyac.co.jp/newsrelease/newsrelease_2016.html

Philippine Energy Plan 2012 - 2030

Guided by the overall vision of providing "Energy Access for More," the 2012-2030 Philippine Energy Plan (PEP) seeks to mainstream access of the larger populace to reliable and affordable energy services to fuel, most importantly, local productivity and countryside development. The energy sector, mindful of its role in promoting better quality of life for the Filipino people, will ensure the delivery of secure, sustainable, sufficient, affordable and environment-friendly energy to all economic sectors. In pursuit of this goal, the government will mobilize private sector participation and involvement of other stakeholders to make power of choice a reality.

The Energy Reform Agenda has outlined the following major pillars as its overall guidepost and direction: (a) Ensure energy security through the development of indigenous energy such as renewable energy and hydrocarbon fuels (oil, gas, and coal); (b) Achieve optimal energy pricing in electricity and oil; and, (c) Develop a sustainable energy system through the formulation and update of national plans and programs on energy development, which are consistent with the country's economic development plans.

Source: https://www.doe.gov.ph/pep

AMF ExCo 52 in Vienna

The 52nd meeting of the AMF Executive Committee took place in Vienna, Austria, 19-21 October 2016. 13 of 17 contracting parties, and operating agents of all annexes participated in the meeting. As an observer, AMF could welcome a delegation from India.

A proposal on "Methanol as Motor Fuel" was kicked-off as an annex, with Denmark, Finland, Germany, Israel, Japan and Sweden as participants and the Methanol Institute as a sponsor, and Israel and Finland as the operating agents. Phase 1 of this annex will cover a literature review with the purpose of highlighting the potential as well as the challenges of methanol as a transportation fuel. Applications to be covered are heavy-duty and light-duty road vehicles, and especially the marine sector with its challenges to meet current and anticipated regulations on GHG, SOx, NOx and evaporative emissions. The review shall identify possible technological, economic and societal gaps to serve as a starting platform for future projects on methanol within AMF.

Current AMF Annexes / Projects

Annex 28: Information Service & AMF Website (AMFI)

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

Annex 51: Methane Emission Control

Annex 52: Fuels for Efficiency

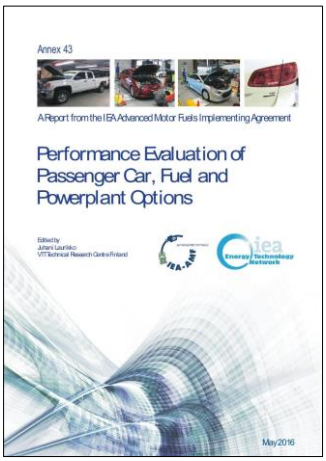
Annex 53: Sustainable Bus Systems

Annex 54: GDI Engines and Alcohol Fuels

Annex 55: Real Driving Emissions and Fuel Consumption

New Annex: Methanol as a Transport Fuel

Key messages for Annex 43 (Passenger Cars)



The objective of Annex 43 "Performance Evaluation of Passenger Car Fuel and Powerplant Options" was to provide unbiased data on the performance (energy use and emissions) of new powertrain and fuel alternatives for passenger cars. Institutes in Canada, China, Finland, Japan, Sweden and the USA conducted chassis dynamometer tests on 26 different cars with different powertrains and fuels, at various temperatures and in the most relevant driving cycles. The most important conclusion from the extensive testing is, that the use of sophisticated fuels in internal combustion engines is well-justified, as they

- help to reduce tailpipe emissions, in spite of effective emission control technology employed in all cars, and
- fuels with high amounts of renewable contents help to reduce well-to-wheel (WTW) CO_2 emissions in a meaningful way.

The full report is available at *http://iea-amf.org/content/projects/map_projects/43*.

Key results of Annex 47 (DME Fuel Specifications)

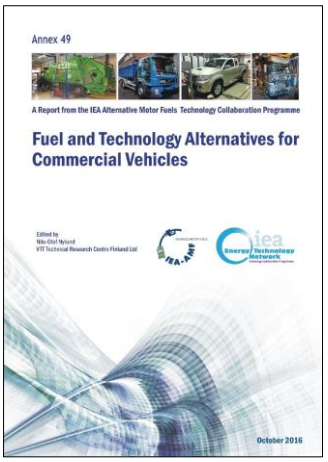
The objective of Annex 47 "Reconsideration of DME Fuel Specifications for Vehicles" was to contribute to the development of ISO standards for DME fuel specifications, and by this to support the DME fuel market development. Focus was on investigating the effect of fuel impurities and additives (lubricity improver, odorant) on DME diesel engine systems.

With the support of Annex 47, the following ISO DME fuel specifications for basic fuel and the test methods were published in 2014 and 2015:

- ISO16861:2015, "Petroleum products -- Fuels (class F) -- Specifications of dimethyl ether (DME)", 15.5.2015
- ISO17196:2014, "Dimethyl ether (DME) for fuels -- Determination of impurities -- Gas chromatographic method", 15.11.2014
- ISO17197:2014, "Dimethyl ether (DME) for fuels -- Determination of water content -- Karl Fischer titration method", 15.11.2014
- ISO17198:2014, "Dimethyl ether (DME) for fuels -- Determination of total sulfur, ultraviolet fluorescence method", 15.11.2014
- ISO17786:2015, "Dimethyl ether (DME) for fuels -- Determination of high temperature (105o C) evaporation residues -- Mass analysis method", 1.5.2015

See *http://iea-amf.org/content/projects/map_projects/47* for details.

Key Messages Annex 49 (Commercial Vehicles)



The objective of Annex 49 "COMVEC – Fuel and Technology Alternatives for Commercial Vehicles" was to provide information on alternative fuels and vehicle technologies well-to-wheel energy consumption, emissions and costs for commercial heavy- and light-duty vehicles, as to allow for optimum allocation of alternative fuels and technologies for road transport.

The key messages derived from the extensive analysis of 9 different fuels in three categories of commercial vehicles are:

- As to significantly reduce regulated emissions from commercial vehicles, it is not sufficient to go from Euro II or Euro III to Euro IV or Euro V, but instead one should "leapfrog" directly to Euro VI or US 2010 as to achieve real-life low emissions.
- The regulated emissions of a vehicle are first and foremost determined by the emission control technology, not the fuel.
- The carbon intensity of the fuel or the energy carried is decisive for well-to-wheel CO2 emissions, not vehicle technology.
- The CO2 assessment should be carried out on a well-to-wheel basis, not looking at tailpipe CO2 emissions only.
- Electrification with low-carbon electricity is a good option for local emissions as well as WTW CO2 emissions (but one should keep in mind that not all applications are suitable for electrification).
- Euro VI (alternatively US 2010) in combination with a renewable fuel is a good option for the local environment as well as the climate.

See *http://iea-amf.org/content/projects/map_projects/49* for details.

Next ExCo Meetings

ExCo 53 will be held 29 May to 1 June 2017 in Helsinki, Finland.

ExCo 54 will be held 30 October to 2 November 2017 in Tsukuba, Japan.

PUBLICATIONS

AEBIOM 2016 report

The European Biomass Association (AEBIOM) is the common voice of the bioenergy sector with the aim to develop a sustainable bioenergy market based on fair business conditions. AEBIOM is a non profit Brussels based international organisation founded in 1990 that brings together around 30 national associations and 90 companies from across Europe thus representing more than 4000 indirect members including mainly companies and research centers. The 2016 report includes topics related to bioenergy statistics, EU28 support schemes and market forecasts.

Source: https://form.jotform.com/62301862627959?utm_source=BUSINESS&utm_campaign=1ea542e9a7-EMAIL_CAMPAIGN_2016_12_12&utm_medium=email&utm_term=0_cdb4036610-1ea542e9a7-245749133

Carbon capture and storage technologies

Carbon capture and storage (CCS) technologies are expected to play a significant part in the global climate response. Following the ratification of the Paris Agreement, the ability of CCS to reduce emissions from fossil fuel use in power generation and industrial processes – including from existing facilities – will be crucial to limiting future temperature increases to "well below 2°C," as laid out in the Paris Agreement. CCS technology will also be needed to deliver "negative emissions" in the second half of the century if these ambitious goals are to be achieved.

This IEA publication reviews progress with CCS technologies over the past 20 years and examines their role in achieving 2°C and well below 2°C targets. Based on the International Energy Agency's 2°C scenario, it also considers the implications for climate change if CCS was not a part of the response. It also examines opportunities to accelerate future deployment of CCS to meet the climate goals set in the Paris Agreement

Source: http://www.iea.org/publications/freepublications/publication/20YearsofCarbonCaptureandStorage_WEB.pdf

US: "Biodiesel Handling and Use Guide"

The document is a guide for those who blend, distribute, and use biodiesel and biodiesel blends. It provides basic information on the proper and safe use of biodiesel and biodiesel blends in engines and boilers, and is intended to help fleets, individual users, blenders, distributors, and those involved in related activities. The guideline includes information on Biodiesel basics and specifications, Biodiesel blends and specifications, the BQ-9000 Program for supply chain management, engine and vehicle manufacturer approvals, taxes and incentives, safety, health, and environmental Issues, a checklist for installing B20 dispensing equipment or storage tanks as well as frequently asked questions and further information resources.

Source: http://www.afdc.energy.gov/uploads/publication/biodiesel_handling_use_guide.pdf

US GAO Report on the Renewable Fuel Standard

The Renewable Fuel Standard program calls for greater use of advanced biofuels—fuel made from waste fats and oils or crop residues, for example—in the transportation fuel supply through 2022. Yet, there is not nearly enough of this fuel to meet the program's targets—nor will there likely be enough in the near future. Experts we interviewed cited the high costs of creating advanced biofuel, the relatively low price of fossil fuel, the timing and cost to bring new tech to commercial-scale production, regulatory uncertainty, and other issues as challenges to increased production.

Source: US Government Accountability Office, http://www.gao.gov/products/GAO-17-108

A European Strategy for Low-Emission Mobility

The global shift towards low-carbon, circular economy has started and its pace is accelerating. To ensure Europe stays competitive and will be able to respond to the increasing mobility needs of people and goods, the Commission's low-emission mobility strategy sets clear and fair guiding principles to Member States to prepare for the future. The Energy Union strategy contributes to this goal.

The main elements of the Strategy that was published in July 2016 are:

- Increasing the efficiency of the transport system by making the most of digital technologies, smart pricing and further encouraging the shift to lower emission transport modes,
- Speeding up the deployment of low-emission alternative energy for transport, such as advanced biofuels, electricity, hydrogen and renewable synthetic fuels and removing obstacles to the electrification of transport
- Moving towards zero-emission vehicles. While further improvements to the internal combustion engine will be needed, Europe needs to accelerate the transition towards low- and zero-emission vehicles.

Source: https://ec.europa.eu/transport/themes/strategies/news/2016-07-20-decarbonisation_en
Link to the document: https://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-501-EN-F1-1.PDF

EU Reference Scenario 2016

The purpose of the report "Energy, transport and GHG emissions: Trends to 2050" is to present the new "EU Reference Scenario 2016" ("Reference Scenario"). This report is an update of the previous Reference Scenario published in 2013. It focuses on trend projections – not forecasts. It does not predict how the EU energy, transport and climate landscape will actually change in the future, but merely provides a model-derived simulation of one of its possible future states given certain conditions

Source: https://ec.europa.eu/energy/sites/ener/files/documents/ref2016_report_final-web.pdf

Europe: Air quality 2016 report

The report presents an updated overview and analysis of air quality in Europe. It is focused on the air quality state in 2014 and the development from 2000 to 2014. It reviews progress towards meeting the requirements of the air quality directives.

Source: http://www.eea.europa.eu/publications/air-quality-in-europe-2016/at_download/file

EU energy in figures - Statistical pocketbook 2016

This publication provides an overview of the most relevant annual energy related statistics for the European Union as a whole and for each of its Member States.

Source: https://ec.europa.eu/energy/sites/ener/files/publication/pocketbook_energy-2016_epub-final_final.pdf

Swedish State Action Plan

This is an update of the "State Action Plan on CO_2 Emission Reduction Activities" in 2016. The plan shows the measures that Sweden is involved in or is related to reduce CO_2 emissions from aviation. The plan consists of a common part of Europe (ECAC area) and a national Swedish part.

Source: *http://www.transportstyrelsen.se/FileDownload.ashx?downloadId=127705*

EVENTS

Symposium On International Automotive Technology 2017, 18-21 January 2017, Pune, India
Conference website: http://siat.araiindia.com/

14th International conference on renewable mobility "Fuels of the Future 2017", 23-24 January 2017, CityCube Berlin, Germany
Conference website: http://www.fuels-of-the-future.com

Indonesia Renewable Power 2017, 27-01 March 2017, Le Meridien Jakarta, Indonesia
Conference website: http://www.cmtevents.com/eventschedule.aspx?ev=170303b&

2nd Integer Emissions Summit & AdBlue Forum Asia Pacific 2017, 5-6 April 2017, Seoul, South Korea
Conference website: https://www.integer-research.com/conferences/ies-apac-2017/

Europe Workshop on Green Freight Programs, 6-7 April 2017, Brussels, Beligum
Conference website: http://www.ccacoalition.org/en/events/europe-workshop-green-freight-programs

38th International Vienna Motor Symposium 2017, 27-28 April 2017, Congress Center Hofburg Vienna, Austria
Conference website: http://www.övk.at/index_en.htm

9th AVL International Commercial Powertrain Conference 2017, 10-11 May 2017, Graz, Austria
Conference website: https://www.avl.com/web/guest/-/9th-international-commercial-powertrain-conference-2017

10th Integer Emissions Summit & AdBlue Forum China 2017, 16-18 May 2017, Beijing, China
Conference website: https://www.integer-research.com/conferences/ies-china-2017/

JSAE Congress (Spring), 24-26 May 2017, Pacifico Yokohama, Japan
Conference website: http://www.jsae.or.jp/2017haru/english/index.html

29th International AVL Conference "Engine & Environment", 1-2 June 2017, Graz, Austria
Conference website: https://www.avl.com/web/guest/-/29th-international-avl-conference-engine-environment

13 Integer Emissions Summit & AdBlue Forum Europe 2017, 20-22 June 2017, Brussels, Belgium
Conference website: https://www.integer-research.com/conferences/ies-europe-2017/

IMPRINT

The **Advanced Motor Fuels Technology Collaboration Programme** (AMF TCP) is one of the International Energy Agency's (IEA) transportation related Technology Collaboration Programmes. These are multilateral technology initiatives that encourage technology-related activities that support energy security, economic growth and environmental protection.

AMF provides an international platform for co-operation to promote cleaner and more energy efficient fuels and vehicle technologies. This newsletter contains news articles on research, development and demonstration of advanced motor fuels, information about related policies, links to AMF projects, and an overview over publications and events.

The newsletter is prepared based on contributions from Ralph MCGILL, FEEC, Werner TOBER and Robert ROSENITSCH, TU Vienna, Shinichi GOTO, AIST, and Manfred WÖRGETTER, BIOENERGY 2020+. It is edited by Dina Bacovsky and Vijay Kumar Verma, BIOENERGY 2020+. The Newsletter is available online at: *www.iea-amf.org*

AMF welcomes interested parties to make contact and to become members of the AMF family. If you wish to get in touch please contact the AMF Secretary, the AMF ExCo Chair or your national AMF Delegate, see contact information below.

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People's Republic of China
CATARC, Donglian Tian

Denmark
DTU, Jesper Schramm

Finland
VTT, Nils-Olof Nylund

France
IFPEN, Jean-Francois Gruson

Germany
FNR, Birger Kerckow

Israel
Ministry of Energy and Water Resources, Bracha Halaf

Japan
AIST, Shinichi Goto
LEVO,Yutaka Takada

South Korea
KETEP, Hyun-choon Cho

Spain
IDAE,
Francisco José Domínguez Pérez

Sweden
Swedish Transport Administration, Magnus Lindgren

Switzerland
SFOE, Sandra Hermle

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PTT, Arunratt Wuttimongkolchai

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