

February 2023

Advanced Motor Fuels News



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- First Commercial SAF-powered flight route

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DEMONSTRATION / IMPLEMENTATION / MARKETS

eFuels Pilot Plant Officially Opened

In Chile, a consortium of American, German, Italian, and Chilean energy, powertrain, and technology companies have started the industrial production of synthetic fuels. The ‘Haru Oni’ pilot plant in Punta Arenas (Chile) was officially opened in December 2022.

Haru Oni will produce green hydrogen via electrolysis using renewable energy from the wind. The facility will also capture CO₂ from the atmosphere and use a process of synthesis to combine the CO₂ and hydrogen to produce eFuels, including carbon-neutral methanol (eMethanol); carbon-neutral gasoline (eGasoline); and carbon-neutral Liquefied Gas (eLG).

Source: <https://www.greencarcongress.com/2022/12/haru-oni-e-fuels-demo-plant-in-chile-officially-opens.html>

Synthetic Crude Oil from Landfill Waste

Fulcrum BioEnergy Inc., a waste-to-energy company based in Pleasanton, California, says it has successfully produced a low-carbon synthetic crude oil using landfill waste as a feedstock at its plant in Nevada.

The company is making progress on its planned growth program, which Fulcrum expects will have the capacity to produce approximately 400 million gallons of net-zero carbon transportation fuel annually. The company's development program includes the Centerpoint BioFuels Plant in Gary, Indiana, the Trinity Fuels Plant in the Texas Gulf Coast region and the NorthPoint project in the United Kingdom.

Source:

<https://www.wastetodaymagazine.com/news/fulcrum-bioenergy-produces-low-carbon-fuel-from-landfill-waste/>

Groundbreaking for BioLNG Plant

Construction of the NORDLIQ plant, which is the first of its kind in Denmark, has begun at the Port of Frederikshavn. When summer comes around, passenger and freight ships can bunker at the port with liquid, carbon-neutral biogas. Heavy road traffic can also make use of this green fuel. The plant is a joint project by MAKEEN Energy and Nature Energy.

Source: <https://www.makeenenergy.com/news-from-makeen-energy/nordliq-construction>

Partnership to Convert Ethanol into Hydrogen

Shell Brazil, Raízen, Hytron, University of São Paulo and SENAI CETIQT signed an agreement for the construction of two plants to produce renewable hydrogen from ethanol designed to produce 5 kg per hour of hydrogen and, later, a larger plant capable of 44.5 kg per hour. In addition, the agreement includes a hydrogen refueling station university's campus for fuel cell buses. Hydrogen will be produced from

ethanol from Raízen and a technology developed and manufactured by Hytron.

Source: <https://biomassmagazine.com/articles/19308/shell-announces-partnership-to-convert-ethanol-into-hydrogen>

Demonstration Project for Last Mile

The New Energy and Industrial Technology Development Organization (NEDO) in Japan and the Transport Department, Government of NCT of Delhi in India exchanged letters of Intent (LOI) in December 2022 to carry out a demonstration project, which is called International Demonstration Project on Japan's Energy Efficiency Technologies, on an IT operation support system for e-mobility (electric vehicles) with the aim of improving passenger's convenience and transportation efficiency in last mile transportation. Afterwards, Panasonic Holdings Corporation, a subsidized company for the project, and ETO Motors Private Limited (ETO Motors), a local cooperating company, jointly started the demonstration project for the IT operation support system for e-mobility in last mile transportation.

Source:

https://www.nedo.go.jp/english/news/AA5en_100453.html

POLICY / LEGISLATION / MANDATES / STANDARDS

India's first Green Hydrogen Blending Operation

In India, the country's largest power generator National Thermal Power Corporation Ltd (NTPC) has commissioned the nation's first green hydrogen blending project. Green hydrogen blending has been started in the piped natural gas (PNG) network of NTPC Kawa's township, Adityanagar, Surat in collaboration with Gujarat Gas Ltd (GGL).

The green hydrogen in Kawa is made by electrolysis of water using renewable power from an already installed 1 MW floating solar PV project.

The Petroleum and Natural Gas Regulatory Board (PNGRB), the national regulatory body has given approval for 5 percent by-volume blending of green hydrogen with PNG to start with and the blending level would be scaled phase-wise to reach 20 percent.

Source: <https://bioenergyinternational.com/ntpc-starts-indias-first-green-hydrogen-blending-operation/>

U.S. Law Funds Transportation Decarbonization

The U.S. government passed the Inflation Reduction Act, which includes significant funding a mix of transportation sector decarbonization technologies and strategies in August 2022. The act includes several tax credits supporting alternative fuel vehicles and infrastructure:

- up to \$7,500 per vehicle for new light-duty “clean vehicles” and \$4,000 for used “clean vehicles,”

- up to \$40,000 per vehicle for heavy-duty trucks, buses, and other “qualified commercial clean vehicles” that are powered by batteries or fuel cells,
- up to \$100,000 per property, that can be used for the cost of building alternative fuel refueling infrastructure.

In addition to tax credits, the Act supports fleet acquisition of clean and zero-emission vehicles. Specifically, appropriates \$3 billion to the United States Postal Service to acquire zero-emission delivery vehicles and refueling infrastructure, \$1 billion to the Environmental Protection Agency to implement a grant and rebate program for clean heavy-duty vehicles, and a \$3 billion grant fund that port operators can use to reduce air pollution by developing logistical and climate change abatement plans and by deploying new “zero-emission port equipment”.

The Act also provides funding to support domestic manufacturing activities of clean vehicles and their battery supply chain. This includes \$10 billion for manufacturing facilities, including those for PEVs, FCVs, and associated infrastructure, \$3 billion for direct loans for manufacturing of low- or zero-emission vehicles, and \$2 billion to provide grants for production of PEVs, FCVs, and other efficient vehicles

Source:

<https://crsreports.congress.gov/product/pdf/IN/IN12003>

<https://www.catf.us/2022/08/on-the-road-inflation-reduction-act-jumpstarts-us-transportation-sector-decarbonization/>

California Regulations Sets 100% ZEV Sales

The California Air Resources Board (CARB) has approved the Advanced Clean Cars II rule that establishes a year-by-year roadmap so that by 2035, 100% of new cars and light trucks sold in California will be zero-emission vehicles (ZEV). The regulation applies to automakers and covers only new vehicle sales. The regulation requires automakers deliver an increasing number of ZEVs beginning in model year 2026 with sales starting at 35% that year, up to 68% in 2030, and reaching 100% in 2035.

Plug-in hybrid, battery electric and hydrogen fuel cell vehicles count toward an automaker’s requirement. PHEVs must have an all-electric range of at least 50 miles under real-world driving conditions, while EVs and FCVs will need a minimum range of 150 miles to qualify. By model year 2030, the rules require the vehicle to maintain at least 80% of electric range for 10 years or 150,000 miles, which is phased in from 70% for 2026 through 2029. In addition, \$3.9 billion over three years will be invested in ZEV adoption, as well as clean mobility options for California’s disadvantaged communities.

Source: <https://ww2.arb.ca.gov/news/california-moves-accelerate-100-new-zero-emission-vehicle-sales-2035>

Indonesia Raising Mandatory Biodiesel Blending

Indonesia is set to raise mandatory biodiesel blending to 35% starting January 1, 2023, to reduce fuel imports amid high global energy prices and to shift to cleaner energy, the energy ministry said. The estimated demand for biodiesel to support B35 implementation is 13.15 million kiloliters, or around a 19% increase compared to 2022 allocation of 11.03 million kiloliters. The energy ministry also set a new specification to improve the standards for biodiesel to assure consumers that higher biodiesel blending would not affect engine performance.

Source: <https://biofuelscentral.com/indonesia-implement-mandatory-35-biodiesel-blending-starting-jan-1-2023/>

SPOTLIGHT SHIPPING

First LNG Container Ship on U.S. West Coast

Pasha Hawaii’s new container ship MV George III is being supplied liquified natural gas (LNG) fuel for bunkering at the Port of Long Beach by Clean Energy Fuels Corp. This was the first LNG bunkering of a container ship on the U.S. West Coast. The 774-foot container ship is the first of three LNG-powered ships that the shipping company is putting into service that operates between Hawaii and California. The second and third are expected in late-2022 and mid-2023, respectively. The three ships are expected to consume 100 million gallons of LNG fuel over the next five years. The LNG is supplied by a Clean Energy plant in Boron, California.

Source: <https://www.cleanenergyfuels.com/press-room/clean-energy-supplied-fuel-for-inaugural-bunkering-of-first-maritimelng-powered-ship-deployed-on-us-west-coast>

SPOTLIGHT ELECTRIC VEHICLES

Purchase of 4,500 EVs for Last-Mile Deliveries

Walmart has signed an agreement with Canoo to purchase 4,500 all-electric “last-mile” delivery vehicles, with the option to purchase up to 10,000 units. The vehicles will be used to deliver online orders and expected to begin full operation in 2023. However, test vehicles were already deployed in Dallas to refine and finalize vehicle configuration. The vehicle is designed for high frequency stop-and-go deliveries with 250-mile range, 1,500 lb. payload, and a cargo volume of 120 cubic feet.

Source: <https://electrek.co/2022/08/23/canoo-ldvs-take-flight-walmart-inhome-deliveries/>

New Electric SUVs presented at Expo

Tata Motors New Delhi unveiled two electric sport utility vehicles as India’s largest EV maker rushes to extend its lead in a hotly contested sector. It will hit the

streets by 2025. These launches pave the way for Tata Motors to build a robust electric fleet that will account for one-fourth of its portfolio by 2025 and 50% by 2030.

Source: <https://asia.nikkei.com/Business/Automobiles/India-s-Tata-Motors-debuts-2-new-electric-SUVs-at-expo>

Subscription Fleet Orders 23,000 EVs

Autonomy, a U.S. EV subscription company, placed a \$1.2 billion order for 23,000 EVs with 17 automakers to expand its subscription fleet. The order represents 1.2% of the projected U.S. EV production through the end of 2023. The consumer light-duty vehicle service allows month to month subscriptions after a three-month minimum hold period. Autonomy partners with Autonation to perform maintenance, repair, and reconditioning services for their fleet of electric vehicles.

Source:

<https://www.businesswire.com/news/home/20220809005495/en/Autonomy-Places-23000-Electric-Vehicle-Order-With-Automakers-to-Expand-and-Diversify-Subscription-Fleet>

SPOTLIGHT AVIATION

Partnership on SAF-powered flight route

With two departures per week between Gothenburg Landvetter Airport (GOT), Sweden, and Lyon-Saint Exupéry (LYS), France, Volvo Group starting in autumn 2022 decided to fly their employees with Braathens Regional Airlines (BRA) aircraft using 50 percent sustainable aviation fuel (SAF).

Through this first flight route with the highest possible amount of SAF, the companies hope that together they can be a large inspiration for other companies to change their ways into a more sustainable way of traveling.

Currently, the maximum SAF permitted in commercial traffic is 50 percent. BRA is running a project in collaboration with aircraft manufacturer Avions de Transport Regional (ATR) and fuel producer Neste aiming to speed up the process of certifying 100 percent fossil-free flights.

Source: <https://bioenergyinternational.com/bra-and-volvo-group-partner-on-the-worlds-first-saf-powered-flight-route/>

Sustainable Aviation Fuel Coalition

As of November 2022, Qantas launched the Sustainable Aviation Fuel Coalition (SAF Coalition) program, with Australia Post, Boston Consulting Group, KPMG Australia, Macquarie Group and Woodside Energy signing on as foundation members. Members will pay a premium to reduce around 900 tonnes of their air carbon emissions each year by contributing to the incremental cost of SAF rather than using traditional carbon offsets. By doing so, they send a clear message that there is significant demand for SAF, the key driver towards decarbonization of the aviation industry.

The Coalition will initially contribute to the incremental cost of up to 10 million liters of SAF sourced by Qantas at London's Heathrow Airport, which represents around 15 per cent of the fuel Qantas ordinarily consumes on flights out of London, and from 2025 to a further 20 million liters each year sourced out of Los Angeles and San Francisco.

Source:

<https://www.qantas.com/agencyconnect/au/en/agency-news/agency-news-november-22/sustainable-aviation-fuel-coalition.html>

SAF Delivery to Brussels Airport via CEPS Pipeline

Brussels Airlines, has started the New Year by being the first airline to receive delivery of "Neste MY Sustainable Aviation Fuel" at Brussels Airport (BRU) for the first time using the NATO Central European Pipeline System (CEPS).

Aviation fuel is supplied by CEPS to commercial airports in Europe, and as of January 1, 2023, these airports can also receive sustainable aviation fuel (SAF) via the pipeline system.

The delivery of Neste's SAF via the CEPS pipeline contributes to Brussels Airlines' sustainability goals by enabling the airline to operate its first flight using SAF already at the start of 2023.

Source: <https://bioenergyinternational.com/brussels-airlines-first-to-take-delivery-of-saf-to-brussels-airport-via-ceps-pipeline/>

SPOTLIGHT METHANOL

CO₂-to-methanol Plant started Production

The world's first commercial scale CO₂-to-methanol plant has started production in Anyang, Henan Province, China. The cutting-edge facility is the first of its type in the world to produce methanol — a valuable fuel and chemical feedstock — at this scale from captured waste carbon dioxide and hydrogen gases.

The plant's production process is based on the Emissions-to-Liquids (ETL) technology developed by Carbon Recycling International (CRI) and first demonstrated in Iceland. The new facility can capture 160,000 tonnes of carbon dioxide emissions a year, which is equivalent to taking more than 60,000 cars off the road. The captured carbon dioxide is then reacted with the recovered hydrogen in CRI's proprietary ETL reactor system with the capacity to produce 110,000 tonnes of methanol per year.

This flagship plant represents the achievement of an important milestone in the ongoing development of carbon capture and utilization (CCU) technology as well as the progression in industry towards a circular carbon economy.

Source: <https://www.carbonrecycling.is/news-media/worlds-largest-co2-to-methanol-plant-starts-production>

Strategic Green Methanol Deal

Under the deal, green methanol will be produced at several facilities that will be developed by SunGas in the US.

Maersk will offtake full volumes of green methanol from these facilities.

With an annual production capacity of around 390,000 tonnes, the first facility is anticipated to commence operations in 2026.

Source: <https://www.ship-technology.com/news/maersk-green-methanol-partnership-sungas/>

AMF NEWS

ExCo 6 Meeting

The 6th AMF ExCo meeting was held as a hybrid meeting in Denmark and online. Delegates from 12 contracting parties participated in the formal meeting, and had also joined the information exchange and discussion meetings on the previous days.

The meeting also included study tours to Alfa Laval, Foulum, Aalborg University, Blue World Technologies and the Osterild Wind Power Test Center.



Task 63: Sustainable Aviation Fuels

This is the first project of AMF dealing with sustainable aviation fuels, and it aims at establishing contact with relevant researchers and industry, providing an overview on current activities, and identifying research needs and implementation barriers. The project conducted two workshops and 3 web seminars, with recordings and presentations available at https://iea-amf.org/content/projects/map_projects/63.

Current AMF projects

The full list of ongoing AMF projects includes:

- Task 64: E-fuels and End-Use Perspectives
- Task 63: Sustainable Aviation Fuels
- Task 62: Wear in engines using alternative fuels
- Task 61: Remote Emission Sensing
- Task 60: The Progress of Advanced Marine Fuels
- Task 28: Information Service & AMF Website

PUBLICATIONS

IEA World Energy Outlook 2022

With the world in the midst of the first global energy crisis the World Energy Outlook 2022 (WEO) provides indispensable analysis and insights on the implications of this profound and ongoing shock to energy systems across the globe.

Based on the latest energy data and market developments, this year's WEO explores key questions about the crisis: Will it be a setback for clean energy transitions or a catalyst for greater action? How might government responses shape energy markets? Which energy security risks lie ahead on the path to net zero emissions?

Link: <https://www.iea.org/reports/world-energy-outlook-2022>

ERTRAC: Mapping of technology options

ERTRAC has published a Mapping of technology options for Sustainable Energies and Powertrains. It provides the perspective of the research community to address the environmental and energy challenges of road transport.

The Energy & Environment Working Group prepared this document, gathering during two years input and expertise from the diversity of research stakeholders present in ERTRAC. It provides research recommendations for all technology options and is structured along the fields of energy carriers, powertrain options, and supporting infrastructures.

Link: <https://www.ertrac.org/news/ertrac-has-published-a-mapping-of-technology-options-for-sustainable-energies-and-powertrains-for-road-transport/>

New Data Visualization Tool

For the past 25+ years, Argonne has been assessing the impact of advanced technologies on vehicle energy consumption, performance, and cost. As the number of advanced technologies and their system simulation capabilities have grown, so have the number of individual vehicles considered. Argonne's most recent report includes over 2500+ light duty and 1500+ medium and heavy-duty vehicles.

To facilitate the analysis of those large databases, Argonne has released a new data visualization tool to help engineers and researchers examine how the component sizes, vehicle cost, energy consumption and total cost of ownership will vary for different vehicles, powertrains and technology. The data, already available in EXCEL files, can now be easily analyzed and specific plots downloaded.

Link: <https://vms.taps.anl.gov/research-highlights/u-s-doe-vto-hfto-r-d-benefits/>

Study: Soybean oil for US biofuels

According to the study "Food and Fuel: Modeling Food System-Wide Impacts of Increase in Demand for Soybean Oil", a 20 % increase in the quantity of soybean oil demand for use in biofuels generates the following price impact breakdown (all else equal):

The United States Department of Agriculture's (USDA) Economic Research Service estimates that for every US\$1 consumer spends on food, only about US\$0.14 is a result of the cost of raw farm commodities, implying US\$0.86 is a result of other post-farm factors such as transportation, processing, packaging, and retail costs.

Link: https://ag.purdue.edu/cfdas/wp-content/uploads/2022/12/report_soymodel_revised13.pdf

Report: Carbon Pricing in Shipping

The report "Carbon Pricing in Shipping" reviews the effectiveness of carbon pricing, how it might be applied to the shipping sector and with what effects. It also evaluates recent proposals by countries to introduce a price on shipping's carbon emissions and examines related policy issues. The analysis draws on interviews and exchanges with stakeholders and experts who participated in the ITF's (International Transport Forum) Common Interest Group on Decarbonizing Shipping from June 2021 to Nov. 2022.

According to this case-specific policy analysis, full decarbonization of maritime shipping by mid-century will require building a substantial number of vessels capable of operating on zero-emission energy sources in the coming years. To stay on a clear decarbonization pathway, an immediate transition to zero-emission ship fuels is preferable to including an intermediary phase in which vessels run on low-emission fuels before switching to zero-emission propulsion systems. Carbon pricing mechanisms could encourage such leapfrogging through adequate support for emission-free fuels or other clean energy sources.

Link: <https://www.itf-oecd.org/sites/default/files/docs/carbon-pricing-shipping.pdf>

Future Fuels Study

Following the results of the FVV study IV "Transformation of Mobility to the GHG-neutral Post-fossil Age" FVV has asked Frontier Economics to expand the analytical framework in a follow-up study. This study includes four important features:

- a more pronounced focus on the road sector
- the addition of new energy carriers/ powertrains (plug-in hybrid electric vehicles and Methanol-to-Gasoline drop-in fuel)
- explicit considerations of the technical ramp-up potential of defossilised transportation pathways ("technical bottlenecks"), as well as
- allowing for a combination of different energy carriers/powertrains to achieve GHG neutrality as early as possible.

Link: https://www.fvv-net.de/fileadmin/Storys/Wie_schnell_geht_nachhaltig/FVV_H1313_1452_Future_Fuels_FVV_Fuel_Study_IVb_2022-12.pdf

Transport and Environment Report 2021

Decarbonizing road transport — the role of vehicles, fuels and transport demand

Road transport emissions remain primarily driven by an increasing demand for transport. Road transport greenhouse gas emissions increased between 1990 and 2019.

Link: https://www.eea.europa.eu/publications/transport-and-environment-report-2021/at_download/file

Annual EU GHG Inventory

Submission to the UNFCCC Secretariat - The present report is the official inventory submission of the European Union (EU) for 2022 under the United Nations Framework Convention on Climate Change (UNFCCC) and under the Kyoto Protocol (KP).

This report was prepared on behalf of the European Commission (DG CLIMA) by the European Environment Agency's (EEA) European Topic Centre on Climate Change Mitigation and Energy (ETC/CM) supported by the Joint Research Centre (JRC) and Eurostat.

Link: https://www.eea.europa.eu/publications/annual-european-union-greenhouse-gas-1/at_download/file

Bio- and Renewable Diesel LCA of GHG Emissions

Argonne researchers published a study, "Life Cycle Greenhouse Gas Emissions of Biodiesel and Renewable Diesel Production in the United States," in Environmental Science & Technology. The article presents a life cycle analysis of GHG emissions of biodiesel and renewable diesel (RD) production from oilseed crops, distillers corn oil, used cooking oil, and tallow. Life cycle GHG emissions reductions for producing biodiesel and RD from soybean, canola, and carinata oils range from 40% to 69%, compared with petroleum diesel, after considering land use change estimations. Converting tallow, used cooking oil, and distillers corn oil to biodiesel and RD could achieve higher GHG reductions 79% to 86% lower than petroleum diesel.

Link: <https://pubs.acs.org/doi/full/10.1021/acs.est.2c00289>

Citizen Participation in the Energy Transition

Renewable technologies create new opportunities for citizens to become energy producers themselves and to actively contribute to the energy transition. This report provides an overview of the role of renewable energy prosumers in Europe, including case studies on successful initiatives.

Link: https://www.eea.europa.eu/publications/the-role-of-prosumers-of/at_download/file

Analysis of Future Mobility Fuel Scenarios

This report presents the results of future scenario analysis of East Asia Summit (EAS) mobility, which greatly contributes to the Sustainable Development

Goals (SDGs) in view of the balance between transport CO₂ reduction, biofuel use, and mineral resources demand. It provides evaluation results of 'well-to-wheel' CO₂ emissions and reductions for producing and using biofuels, and for implementing xEVs based on the policies of six countries – Indonesia, Malaysia, Philippines, Thailand, Viet Nam, and India.

Link: <https://www.eria.org/publications/analysis-of-future-mobility-fuel-scenarios-considering-the-sustainable-use-of-biofuels-phase-2/>

LNG Marine Fuels in the European Union

The idea that liquefied natural gas (LNG) can help mitigate the climate impacts of the maritime shipping sector rests on the assumptions that ships can switch to bio and e-LNG ("renewable" LNG) in the future and that switching would result in low greenhouse gas (GHG) emissions. For this to happen, there must be enough renewable LNG to meet future demand and using it must result in a substantial reduction in GHG emissions on a life-cycle basis compared to fossil LNG. Understanding whether these assumptions are realistic is important for policymakers, including in the European Union, which has committed to reducing its GHG emissions by at least 55% below 1990 levels by 2030.

Link: https://theicct.org/wp-content/uploads/2022/09/Renewable-LNG-Europe_report_FINAL.pdf

IEA Bioenergy Position Paper – SNG production

Sustainable natural gas (SNG) is methane produced from biogenic feedstocks, also referred to as biomethane. These feedstocks are for instance forest residues, agro residues or waste streams containing plastics (MSW). With Russia's aggression against the Ukraine, the dependency on fossil natural gas is reconsidered. The EU is steering away from natural gas and recently announced their REPowerEU plan, which aims on reducing the use of natural gas as well as replacing it with SNG. Furthermore, SNG is recognized as an important molecule in the transition of fossil natural gas, in a way to de-fossilize existing industries.

Link: <https://www.ieabioenergy.com/wp-content/uploads/2022/08/Position-paper-Sustainable-Natural-Gas-production-through-gasification-rev.pdf>

European vehicle market statistics

The 2021/2022 edition of European Vehicle Market Statistics offers a statistical portrait of passenger car, light commercial, and heavy-duty vehicle fleets in the European Union from 2001 to 2020. The emphasis is on vehicle technologies and emissions of greenhouse gases and other air pollutants. Brief introductions to each chapter note important trends and provide selected comparisons to other large vehicle markets.

Link: https://eupocketbook.org/wp-content/uploads/2021/12/Pocketbook_2021_Web.pdf

Chilean Fuel Economy Standards and ZEV Targets

This study summarizes the steps taken by Chile related to its new energy efficiency law and its targets for zero-emission vehicles (ZEV), and analyses implications for the decarbonization of vehicles regionally and internationally. The study found Chile's leadership on climate policies to be notable both in Latin America and internationally. Their laws not only set stringent fuel economy standards for light-, medium-, and heavy-duty vehicles, a first for Latin America, but also includes tax incentives for zero-emission vehicles, provides for interoperability of recharging systems for EVs, and designates hydrogen as an official fuel. ZEV sales targets will be in effect for all types of on- and off-road vehicles by 2045. The document describes many of pending tasks on the path to achieving Chile's goals.

Link: <https://theicct.org/publication/lat-am-lvs-hvs-chile-en-aug22/>

Brazilian Coastal Shipping Decarbonization

In 2020, Brazil created a project called BR do Mar that focuses on incentivizing coastal shipping. The study finds that given national and international maritime transport share the same infrastructure and operational profile taking actions that help decarbonize Brazil's shipping can support global decarbonization efforts. The researchers suggest investments in maritime infrastructure that will be spurred by BR do Mar could be focused on developing bunkering facilities for alternative and low-emission fuels that have low or zero life-cycle emissions, building modern and efficient ships, and investing in cleaner port infrastructure, including shore power. However, they found that this transition requires deep infrastructural changes that will not be achieved by private initiative only. Thus, they highlight the need for government support to create institutional and market conditions that provide an attractive environment for such investments.

Source: <https://theicct.org/publication/brazil-marine-brazil-coastal-shipping-new-prospects-growth-decarbonization-jul22/>

Japan's Energy White Paper 2022

The Annual Report on Energy in Japan (Japan's Energy White Paper) summarizes the measures on energy supply and demand that the Government of Japan conducted in 2021 fiscal year. It is submitted to the Diet pursuant to Article 11 of the Basic Act on Energy Policy (Act No. 71 of 2002).

Link: https://www.meti.go.jp/english/press/2022/0607_002.html

EVENTS

The Work Truck Show & GreenTruck Summit

7-10 March 2023, Indianapolis, Indiana, USA

<https://www.worktruckweek.com/>

MIA EEMS2023 - Net Zero Motorsport Conference in association with WAE

21 March 2023, Warwick, UK

<https://the-mia.com/events/EventDetails.aspx?id=1694850&group=>

Powertrains and Energy Systems of Tomorrow

28-29 March 2023, Berlin, Germany

<https://www.atzlive.de/en/events/powertrains-and-energy-systems-of-tomorrow/>

Automotive Week 2023

16-19 April 2023, Helmond, The Netherlands

<https://www.automotiveweek2023.com>

WCX SAE World Congress Experience

18-20 April 2023, Detroit, Michigan, USA

<https://www.sae.org/attend/wcx>

Conference on CO₂-based Fuels and Chemicals

19-20 April 2023, Cologne, Germany

<https://co2-chemistry.eu>

Argus Biofuels & Feedstocks Asia Conference

25-27 April 2023, Singapore

<https://www.argusmedia.com/en/conferences-events-listing/asia-biofuels>

International Vienna Motor Symposium

26-28 April 2023, Vienna, Austria

<https://wiener-motorensymposium.at/en/>

IV International Conference on Biofuels

26-28 April 2023, Cali, Colombia

<https://www.conferenciabiocombustibles.com/en/>

Advanced Clean Technology (ACT) Expo

1-4 May 2023, Anaheim, California, USA

<https://www.actexpo.com/>

aireg Sustainable Aviation Fuels Conference 2023

4-5 May 2023, Berlin, Germany

<https://aireg.de/en/home-en/>

Sustainable Aviation Futures APAC Congress

9-11 May 2023, Singapore

<https://www.safcongressapac.com>

International VDI Conference - Electrified Off-Highway Machines

16-17 May 2023, Düsseldorf, Germany

<https://www.vdiconference.com/event/electrified-off-highway-machines/>

Electric & Hybrid Vehicle Technology Expo

23-25 May 2023, Stuttgart, Germany

<https://www.evtechexpo.eu/en/Home.html>

Argus Green Marine Fuels Conference

23-25 May 2023, Amsterdam, Netherlands

<https://www.argusmedia.com/en/conferences-events-listing/green-marine-fuels>

European Electric Vehicle Batteries 2023

6-7 June 2023, London, UK

<https://www.wplgroup.com/aci/event/european-electric-vehicle-batteries-summit/>

Sustainable Aviation Futures Congress

7-9 June 2023, Amsterdam, The Netherlands

<https://www.safcongress.com>

CIMAC Congress

12-16 June 2023, Busan, South Korea

<https://www.cimaccongress.com>

International Fuel Ethanol Workshop & Expo

12-14 June 2023, Omaha, Nebraska

<https://few.bbiconferences.com/ema>

Oleofuels 2023

14-15 June 2023, Seville, Spain

<https://www.wplgroup.com/aci/event/oleofuels/>

Commercial Vehicles 2023 Truck, Bus, Van, Trailer

14-15 June 2023, Baden-Baden, Germany

<https://www.vdiconference.com/event/nutzfahrzeuge/>

Advanced Automotive Battery Conference Europe

19-22 June 2023, Mainz, Germany

<https://www.advancedautobat.com/europe>

Electric and Hybrid Marine EXPO

20-22 June 2023, Amsterdam, The Netherlands

<https://www.electricandhybridmarineworldexpo.com/en/>

iVT ExPo

28-29 June 2023, Cologne, Germany

<https://www.ivtexpo.com/en/index.php>

23rd Stuttgart International Symposium

4-5 July 2023, Stuttgart, Germany

<https://www.fkfs-veranstaltungen.de/en/events/stuttgart-symposium>

Dritev

5-6 July 2023, Baden-Baden, Germany

<https://www.vdiconference.com/dritev/>

Industrial Vehicle & Off-Highway Technology Expo

23-24 August 2023, Chicago, Illinois, USA

<https://www.ivtexpo.com/usa/en/conference.php>

Powertrains, Energy and Lubricants International Meeting

29-1 August-September 2023, Kyoto, Japan

<https://2023pel.jp>

Argus Methanol Forum

18-20 September 2023, Houston, Texas, USA

<https://www.argusmedia.com/en/conferences-events-listing/methanol-forum>

Sustainable Aviation Futures North America Congress

3-5 October 2023, Houston, Texas, USA

<https://www.safcongressna.com>

Aachen Colloquium Sustainable Mobility

9-11 October 2023, Aachen, Germany

<https://www.aachener-kolloquium.de/de/>

Argus Biofuels Europe Conference

11-13 October 2023, London, UK & Online Access

<https://www.argusmedia.com/en/conferences-events-listing/biofuels>

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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 Werner TOBER and Robert ROSENITSCH, TU Vienna, Shinichi GOTO, AIST, and Andy BURNHAM, ANL. It is edited by Astrid Wolfbeisser, A3PS and Dina Bacovsky, BEST – Bioenergy and Sustainable Solutions. 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.

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