

ADVANCED MOTOR FUELS

Technology Collaboration Programme

August 2024

WHO WE ARE

The Advanced Motor Fuels Technology Collaboration Programme (AMF TCP) is one of the actors putting transport on track to sustainability and reducing the impacts of transport on the environment. Established in 1984, AMF has a strong international network that serves to foster collaborative research, development, and deployment (RD&D) and provide unbiased information on clean, energy-efficient, and sustainable fuels and related engine and vehicle technologies.

OUR VISION

Advanced motor fuels, applicable to all modes of transport, significantly contribute to a sustainable society around the globe.

OUR MISSION

The mission of AMF is to advance the understanding and appreciation of the potential of advanced motor fuels towards transport sustainability. We provide sound scientific information and technology assessments to facilitate informed and science-based decisions regarding advanced motor fuels at all levels of decision-making.

HOW TO JOIN AMF

Participation in one of the International Energy Agency's (IEA) technology collaboration programmes, such as the AMF TCP, is based on mutual benefit to the program and to the interested newcomer.

Each contracting party is represented by a delegate and an alternate delegate. The respective [contact details](#) are listed on the AMF [website](#).

The Secretary will provide details on the AMF and invite newcomers to attend an Executive Committee (ExCo) meeting as observers. By attending or even hosting an ExCo meeting, interested newcomers will become familiar with our organization.

Please visit output products like the [AMF Annual Report](#), [Project Reports](#), and [Fuel Information](#) on the AMF [website](#), and follow the AMF on [LinkedIn](#).

OVERVIEW OF ACTIVITIES

AMF examines transport fuel issues in a systemic way, taking into account production, distribution, and end-use aspects. AMF liaises with other IEA technology collaboration programmes (such as IEA Bioenergy and IEA Combustion) and works in close collaboration with important players in the field of AMF (for example, the International Transport Workers' Federation and the Methanol Institute). Because fuels, engines, and exhaust after-treatment systems must be considered as interactive systems, AMF's scope also covers propulsion systems that use advanced motor fuels.

MOST RECENT PROJECTS (TASKS)

Work within AMF is carried out in individual projects (known as Tasks). Detailed information on each of the projects can be assessed on the AMF [website](#).

Task 28 Information Service and AMF Website

Task 62 Wear in Engines Using Alternative Fuels

Task 64 E-fuels and End-use Perspectives

Task 65 Powertrain Options for Non-Road Mobile Machinery

New Task Exhaust After-Treatment Systems (EATS)

New Task Recent Progress in SAF Research

CONTACT

AMF Secretary

Mrs. Dina Bacovsky

+43 5 02378 9435

secretariat@iea-amf.org

AMF Chair

Mr. Jesper Schramm

+45 4525 4179

jessc@dtu.dk



Technology Collaboration Programme on
Advanced Motor Fuels



SCAN ME

PARTICIPANTS

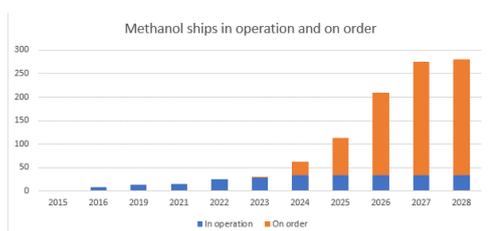
Currently AMF has 16 contracting parties from 14 countries worldwide. Japan has designated three contracting parties.



PROJECT HIGHLIGHTS

Task 60 – The Progress of Advanced Marine Fuels

This Task has recently published its final report, covering marine engine technology; emission regulations; solutions for emission control and advanced fuel options for fishing, short sea shipping/inland waterways, and global freight shipping.



One of the trending options for large vessels is methanol dual-fuel

Task 65 – Powertrain Options for Non-Road Mobile Machinery

This Task explores the potential of various energy and powertrain options and their feasibility for non-road mobile machinery (NRMM) applications in different use cases. NRMM encompasses a wide variety of machinery operating in different environments. The Task explores what kinds of powertrain and energy options offer the best fit for each operation without risking the productivity, usability, and security of supply.

The Task aims to answer the following questions and objectives:

- Energy and powertrain options for NRMM
- Implications of new carbon-neutral and low-carbon powertrains for the security of supply/productivity
- End-use perspective of alternative powertrains (fuels and other energy carriers)
- Local air pollutant emissions of NRMM, especially NRMM operating in urban areas
- Perspectives for CO₂ regulation in different countries

The Task will provide a synthesis of the potential of different energy/fuel options and powertrains for NRMM applications.

STRATEGIC WORK PLAN 2025–2030

To facilitate informed and science-based decisions regarding advanced motor fuels, AMF has identified three priority research areas in which we will provide sound scientific information and technology assessments. To learn more about AMF and see the 2024 Strategic Work Plan, please visit the [About AMF](#) page.

Requirements for supplying sufficient advanced motor fuels

- Potential volumes that can be supplied and potential demand
- Addressing regions for which it is beneficial to continue to rely on fuels as the main means of providing transport services
- Strategies for the fueling of legacy vehicles

Social, environmental, and economic impacts

- GHG emissions of advanced motor fuels
 - Recommended LCA methodologies and relative merits of different motor fuels
 - Assessment of critical issues affecting sustainability performance of different fuels
- Air pollutant emissions and control strategies of use of advanced motor fuels
- Factors influencing the affordability of fuels

R&D on production, properties, and applicability of advanced motor fuels, with a focus on on-road long-haul and non-road sectors

- Hydrogen application in ICE engines
- Low-carbon fuels for non-road mobile machinery
- Biomethane application in ICEs
- Biodiesel and renewable diesel application in ICEs
- Ammonia application in ICEs
- Exhaust aftertreatment systems
- Fuels for marine and stationary engines
- Sustainable Aviation Fuels

