ETN Global

Activity Update 2020-2021

Annual General Meeting – 15 March 2021

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ETN Activity Update presents the key activities that have taken place since the last Annual General Meeting, held on 30 June 2020. This document is also available on the ETN website (Virtual AGM & Workshop Week webpage).

The Activity Update from the previous year, as well as our AGM & Workshop 2020 report and other proceedings are also available on ETN's website.

1. ETN Board, Project Board, CAB and Team

ETN Board 2020-2022

The ETN Board of Directors is responsible for preparing ETN's strategy and presenting it to the General Assembly, as well as ensuring efficient and sound governance of the association in line with the strategy and goals adopted by the General Assembly. The Board is elected at the Annual General Meeting every two years.

Pedro Lopez, President
Uniper

Gary Lock
Frazer-Nash Consultancy

Hege Rognø, Vice President
Equinor

Manfred Aigner
DLR - German Aerospace Center

Andy Williams, Treasurer
Chromalloy

John Oakey
Cranfield University

Walt Steimel
Shell

Magnus Genrup
Lund University

Bram Van Cauwenberge
ENGIE

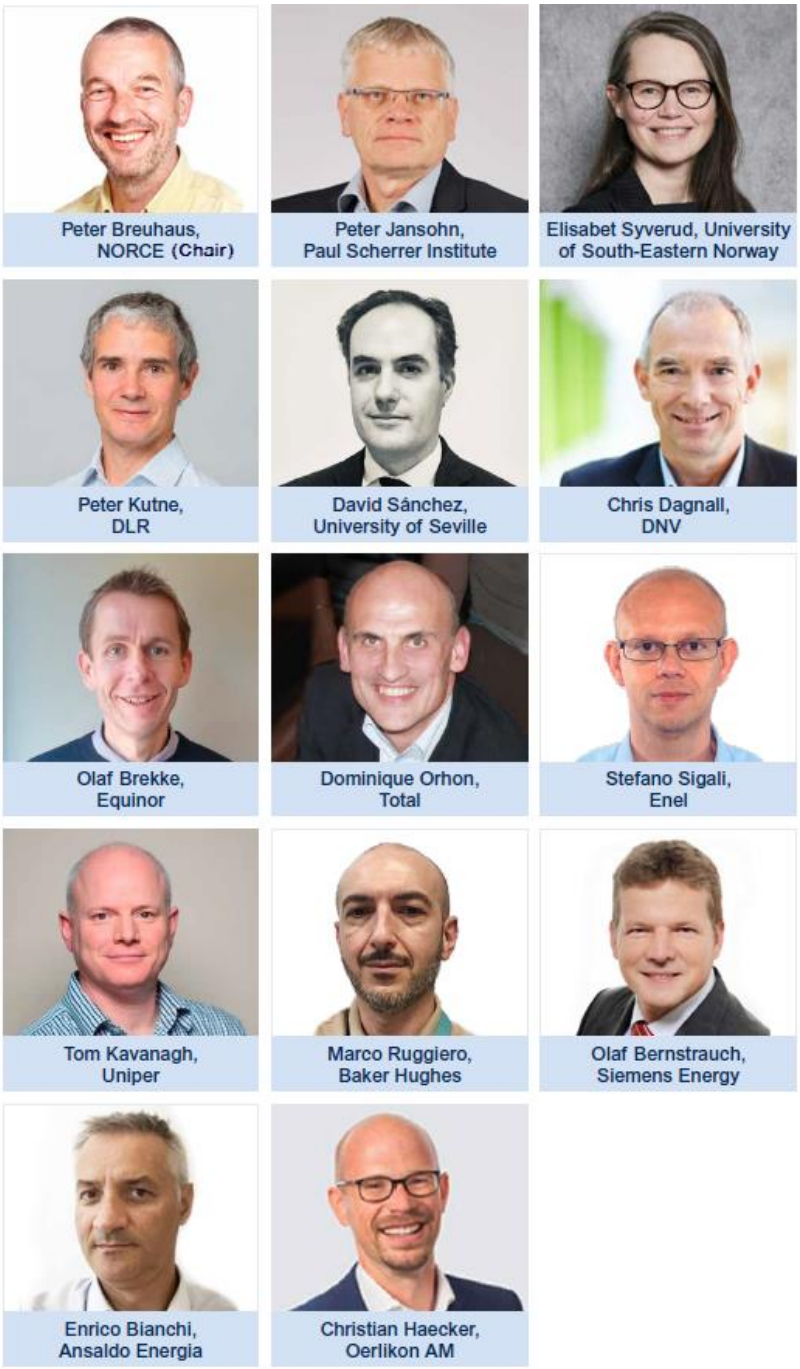
Paul F. Browning
Mitsubishi Power

Mick Conway
RWG Repair & Overhauls

Uwe Kaltwasser
Siemens Energy

ETN Project Board 2020-2022

The ETN Board nominated the new Project Board members for 2020-2022. The Project Board is responsible for bringing in new initiatives and projects and ensuring the progress of the ongoing ETN activities, including all projects and Working Groups.



CAB (Conference Advisory Board of IGTC-21)

At the AGM 2019, ETN launched a call for our members to join the Conference Advisory Board of the next International Gas Turbine Conference (IGTC). The CAB members met in Florence (October 2019) and Brussels (January 2020) and held several teleconferences in 2020-2021.

CAB members:

- Fausto Carlevaro, Baker Hughes
- Jafar Alzaili, City, University of London
- Ionut Porumbel, COMOTI
- John Oakey, Cranfield University
- Jean Louis Meyer, EDF
- Sigrid Gijbels, Engie
- Pooja Suresh, Gastops
- Burak Kaplan, Mitsubishi Power
- Ian Macafee, Oxsensis
- Dan Reitz, Solar Turbines
- Pablo Bellocq, Total
- Geert Laagland, Vattenfall
- Jan Slagter, VBR Turbine Partners

ETN Team

The ETN office acts as a secretariat for the organisation, carrying out the day-to-day running of the association. The role of the ETN office is to implement the strategy set by the General Assembly, facilitate and coordinate the activities of the members, and disseminate the deliverables and results of the initiatives and projects.

Christer Björkqvist
Managing Director

Ilona Kolb
Financial and Administrative Officer

Ugo Simeoni
Senior Research & Innovation Manager
Policy and Projects

Valentin Moëns
Technical Project Officer

Noora Kilpinen
Communications and Events Manager

Elisa Todesco
Project Officer

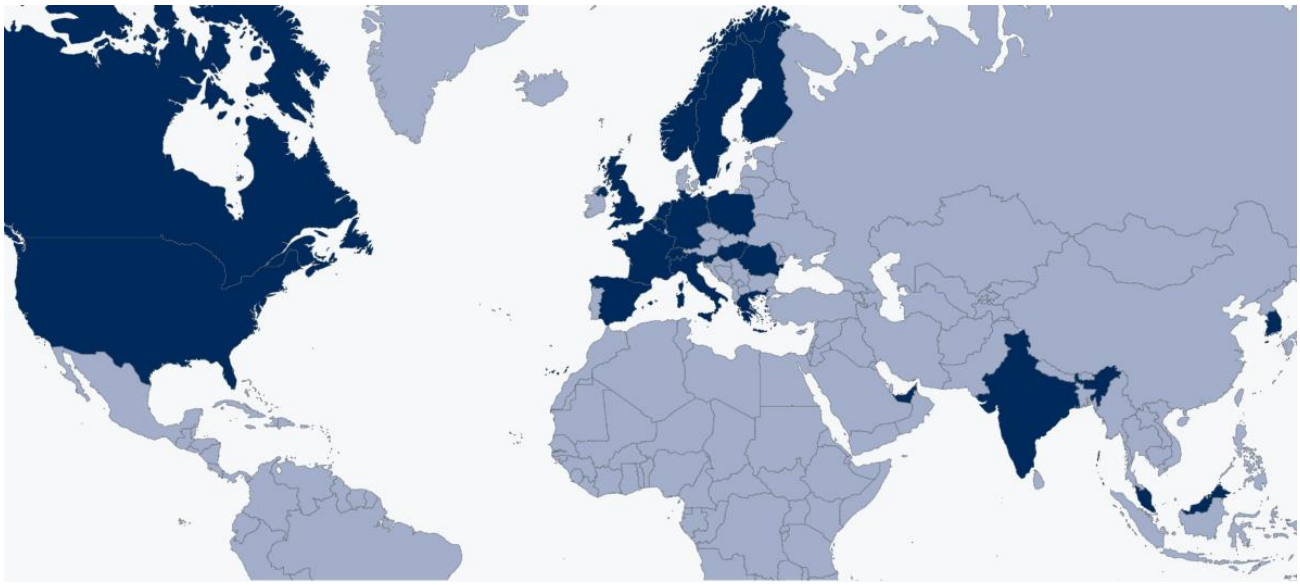
2. ETN network

New members

Since the last Annual General Meeting, held in June 2020, ETN welcomed **7 new members**. ETN has now **110 members** from **22 countries**, covering Europe, Asia, North America and Middle East.

Since June 2020, the following members have joined ETN:

- University of South-Eastern Norway (Norway)
- GE Gas Power
- Stadtwerke Münster (Germany)
- ADNOC (United Arab Emirates)
- Finno Exergy (Finland)
- Rey Juan Carlos University (Spain)
- Politecnico di Milano (Italy)



3. Projects, Working Groups and other activities

New publications and website features

ETN R&D Recommendation Report

ETN's new R&D Recommendation Report will be published at the end of March 2021. A preview of the report will be presented during our AGM & Workshop closing session on 22 March.

ETN vision document

ETN is working on a new Vision document that will be published after the AGM at the end of March 2021.

Business case for sCO_2 Waste Heat Recovery System

ETN's *"Business case for sCO_2 Waste Heat Recovery System"* report was published in October 2020 as part of the activities within the new ETN sCO_2 Working Group. The report can be downloaded here.

New website sections

During the last few years ETN has published several interesting R&D reports and publications, covering topics such as micro gas turbines, digitalisation, additive manufacturing, hydrogen and supercritical CO_2. We have now made these publications more easily accessible through our website. You can find all of them here.
We have also published a new calendar on our website which lists the confirmed meetings and events for 2021 and is updated regularly.

Working Groups

Supercritical CO_2 Working Group

Following ETN's Technical Committee session on supercritical CO_2 at our October Workshop in Florence (Italy) in 2019, the involved ETN members decided to start a study on the economic feasibility of the deployment of sCO_2 cycle in the heavy industry sector. Plans to create a new ETN Working Group were announced during ETN's virtual AGM and Workshop last year, and the Supercritical CO_2 Working Group was officially launched with the following objectives:

Develop, enable and optimise the use of supercritical CO_2 power cycles by:

- Highlighting potential use, applications and benefits.
- Paving the way for funding opportunities by highlighting the research needs on sCO_2 based power cycles, to contribute to their deployment in the future energy system
- Addressing operational issues/effects on components (turbomachinery, heat exchangers and combustion systems) related to the use of sCO_2
- Exploring market opportunities
- Assessing and addressing operational safety aspects of sCO_2-cycles based power plants

- Fostering the use of sCO_2 as working fluid for power generation
- Creating a database of European open test beds

The sCO_2 Working Group is currently working on producing an ETN white paper highlighting a development roadmap of sCO_2 power cycle technologies. The document shall comprise an sCO_2 state-of-the-art inventory, as well as a collaborative review of applications and challenges. More information on this Working Group is available on our website.

Hydrogen Working Group

Main activities of ETN's Hydrogen Working Group are currently led by two subgroups, whose work is regularly reviewed by the wider Working Group.

Hydrogen combustion

This subgroup is drafting a collaborative paper addressing the combustion challenges of hydrogen addition to natural gas. The aim is to provide funding opportunities for research and demonstration projects and emission target recommendations. These recommendations shall be backed by relevant background information on fundamentals parameters and how they impact flame characteristics, and a review of practical considerations related to combustion behaviour.

Techno-economic study

This subgroup is composed of members of ETN's Young Engineers Committee, who are supported and guided by ETN's Hydrogen Working Group. The group is working on the evaluation of the technical feasibility and economics of hydrogen utilisation for large-scale, centralised power generation, to deliver a business case to Hydrogen WG members and to inform the European Commission about hydrogen strategies. The document will develop case studies for open- and combined-cycle gas turbine plants, supported by data provided by ETN members, and a literature review of relevant economic and technical aspects.

Both subgroups will present their latest updates during the upcoming AGM & Workshop. More information on Hydrogen Working Group is available on our website.

Air Filtration Working Group

ETN's *"Water/Salt test procedure for Gas Turbine/Compressor Air Inlet Filter Systems"* document was submitted to the ISO/TC 142 WG 9 last year. The ISO/TC 142 approved the activation of a New Work Item with the following title: *Air intake filter systems for rotary machinery — Part 4: Test methods for static filter systems in marine and offshore environments*.

ETN's Air Filtration Working Group is also cooperating with KREAB, discussing the PFHxA Restriction Proposal, as well as providing feedback on the revision of the ISO29461-1 "*Air intake filter systems for rotary machinery —Test methods —Part 1: Static filter elements*". All documents and more details about the work within this Working Group can be found here.

Additive Manufacturing Working Group

The current focus of ETN's Additive Manufacturing Working Group is on the following three areas: AM equipment and process database, product quality and control, and R&D roadmaps.

During the ETN Additive Manufacturing Working Group teleconference meeting in October, the members of the AM WG discussed the final frame of the ETN AM Equipment Evaluation initiative, evaluating the current state of Laser-based Powder Bed Fusion (L-PBF) technology, with special focus on productivity of the equipment and quality aspects for energy-related components. A summary presentation, explaining the key points of this project, is available on ETN's website.
The AM Working Group is also following up on discussions regarding the prioritisation of collaborative best practices topics related to additive manufacturing, to be developed within ETN.
More information about the Working Group is available on our website.

Exhaust Systems Working Group

Last year the International Organization for Standardization (ISO) published a new standard *"ISO 21905:2020 Gas turbine exhaust systems with or without waste heat recovery"*, based on the work carried out by the ETN Exhaust Systems Working Group. Following the publication of the ISO standard, the ETN Project Board decided to launch a consultation among the ETN members to agree on the future activities of the ETN Exhaust Systems Working Group. As no further input was received from the ETN members, the activities of the Exhaust Systems Working Group are currently on hold. More details on earlier activities are available here.

Micro Gas Turbine Working Group

ETN's Micro Gas Turbine Working Group reviewed the ISO 19372:2015 – *Microturbines applications – Safety* and the comments were sent to the ISO/TC 192. However, a revision of the standard is not foreseen before 2022. Further information about the Working Group may be found here.

GT Component Life Assessment Task Force

Following the Technical Committee 4 session at ETN's October Workshop in Florence in 2019, ETN organised several teleconference meetings on component life assessment. The objective of these calls was to discuss the involvement of ETN members in the cost-benefit analysis on GT component life extension. As a result, the University of Salerno started working on a study in cooperation with the other ETN members. This study will be presented at ETN's IGTC in October 2021. Other activities within this task force are currently on hold.

Hot Corrosion Working Group

The objective of ETN's Hot Corrosion Working Group is to understand the likely causes of hot corrosion and to address hot corrosion damages on the hot gas path parts of the gas turbine. The users who are experiencing hot corrosion issues are invited to fill in the ETN survey, and, if possible, to send affected parts to ETN for metallurgical analysis. In 2019 ETN's Project Board decided that the Working Group activities would be on hold until additional samples are collected. More information about the Working Group is available here.

Other activities

ETN Young Engineers Committee

ETN's Young Engineers Committee (YEC) was officially inaugurated at ETN's virtual AGM in June 2020. The objectives of YEC are to bring together the future generation of enthusiastic engineers and to provide them opportunities to share experiences, develop skills, and build network, in order to provide valuable contributions supporting the development of carbon-neutral technology solutions. YEC members are currently working on a strategic paper developing these objectives. The first part of the paper will be addressing the role of early-career engineers and low-carbon turbomachinery technologies in the transition to net-zero.
In addition to this, a subgroup of the YEC is leading an activity under the Hydrogen Working group to provide a techno-economic study on hydrogen deployment in centralised power generation, which will be presented to ETN members during our upcoming AGM & Workshop.

European Clean Hydrogen Alliance

ETN joined the European Clean Hydrogen Alliance, which brings together industry, national and local public authorities, civil society and other stakeholders, and aims to establish an investment agenda and support the scaling up of the hydrogen value chain across Europe. The alliance is open to all public and private actors with activities for renewable or low-carbon hydrogen. ETN is monitoring the developments within this network, reporting about activities of interest to ETN members.

CEN SFGAS Working Group on Gas Quality

The Working Group "*Pre-normative study of H-gas quality parameter"* under the CEN Sector Forum on Gas Infrastructure and Utilisation was launched in 2016. It is led by CEN (European Committee for Standardization), with the support of the European Commission, and its objective is to study and evaluate possible WI ranges for distributed H-gas in view of the future revision of the EU gas quality standard EN 16726:2015. A report containing recommendations with consensual statements from involved stakeholders of the gas sector will be published this year. ETN has been actively involved in this group for several years and will monitor any follow-up actions or initiatives coming out after publication of the final report. Previous documentation and more details are available on ETN's website.

Prime movers' group

Last year ETN was invited to represent the interests of gas turbine users at the Prime movers' group on gas quality and hydrogen handling, which was initiated by the European gas TSOs and DSOs and is supported by the European Commission. This group, involving stakeholders of the gas value chain, was launched to assess the main challenges related to the handling of gas quality in fluctuating blends and pure hydrogen grids in the future gas system. The initiative connects with the broader context of the EU Green Deal and the pathway to achieve 2050 decarbonisation targets, and aims to report to the European Gas Regulatory Forum (also known as the Madrid Forum) with a clear definition of the problems foreseen and the framework rules required to handle gas quality variations. This is a necessary step before deciding whether any update to the existing EU legislative framework is needed.

As part of this initiative, the involved stakeholders collaborate on defining the framework requirements associated with the possible revision of the EU gas quality standard. This revision would be based on recommendations from the CEN Sector Forum on Gas Infrastructure and Utilisation Working Group *"Pre-normative study of H-gas quality parameter"*.
The ETN office is monitoring the developments within the Prime movers' group and will share the meeting proceedings with ETN's Hydrogen Working Group via our website.

IED Forum

The European Commission will propose a revision of EU measures addressing pollutant emissions from large industrial installations by the end of 2021. The aim of the revision is to progress towards the EU's zero pollution ambition for a toxic-free environment and to support climate, energy and circular economy policies. The Industrial Emissions Directive (IED) has played an important role in reducing emissions of pollutants from industry, especially to air, but has made a more limited contribution to decarbonisation and the circular economy. It is the governance model, which is based on co-creation of environmental standards with EU member states, industry and environmental NGOs that the European Commission would like to see a wider use of. The revision will explore opportunities to improve and further develop the IED for a wider scope and impact in line with the European Green Deal, and is expected to be finalised in the last quarter of 2021.
As a member of the IED Forum's *"Expert Group on the exchange of information on Best Available Techniques related to industrial emissions",* ETN is attending the meetings and monitoring the developments, informing our members about the latest updates, and providing opportunities to share input.

Methane emissions

ETN is cooperating with GIE and MARCOGAZ, who lead a Joint Task Force with the objective to explore ways to reduce methane emissions. Following the recent publication of the EU strategy to reduce methane emissions, ETN attended an industry meeting in November, where different stakeholders shared their views on the European Commission's new strategy, followed by a panel discussion with the invited industry experts. ETN was represented in the panel by David Graham, Uniper, who is attending the meetings related to methane emissions in the gas sector on behalf of ETN. Presentations are available on our website (login required). As a next step, ETN is verifying interest to have dedicated discussion on the subject with ETN members.

Educational courses

ETN collects information about open technical gas turbine courses, given by our members, to promote and share the knowledge and experience of our community. The list of courses is available on the ETN website.

EU-funded projects

ROBINSON (2020-2024)
Smart integration of local energy sources and innovative storage for flexible, secure and cost-efficient energy supply on industrialized islands

ROBINSON aims to help decarbonise islands through a smart modular energy management system (EMS), as well as innovative storage and energy technologies. The EMS will ensure an efficient and smart integration of all distributed energy resources, coupling locally available energy sources, electrical and thermal networks. ROBINSON's integrated system will ensure a reliable, cost-efficient and resilient energy supply contributing to the decarbonisation of European islands by helping to decrease CO_2 emissions. The ROBINSON system will be demonstrated on the island of Eigerøy in Norway. ETN is the coordinator of this project, leading the consortium of 18 project partners.

FLEXnCONFU (2020-2024)
Flexibilize combined cycle power plant through power-to-X solutions using non-conventional fuels

The FLEXnCONFU project aims to develop and demonstrate innovative, economically viable and replicable power-to-X-to-power solutions. FLEXnCONFU combines all available options for the effective and flexible use of surplus power, from renewable energies to levelling the power plant load by converting electricity into hydrogen or ammonia, prior to converting it back to power. This will enable the design and operation of an integrated power plant layout that can untap additional combined cycle flexibility. ETN is a partner of this project and responsible for communication and dissemination activities.

NEXTOWER (2017-2021)
Advanced materials solutions for next generation high efficiency concentrated solar power tower systems

The objective of NEXTOWER is to introduce a set of innovative materials to boost the performance of atmospheric air-based concentrated solar power (CSP) systems to make them commercially viable. ETN is providing support in the modelling and market analysis for the gas turbine sector and supporting dissemination of the project results.

PUMP-HEAT (2017-2021)
Performance Untapped Modulation for Power and Heat via Energy Accumulation Technologies

The aim of the PUMP-HEAT project is to increase the flexibility of the combined-cycle (CC) power plants and the operation of gas turbines. The innovative concept is based on the coupling of CC power plants with a fast-cycling highly efficient heat pump equipped with thermal energy storage. ETN is providing support for PUMP-HEAT's dissemination activities.

4. ETN events

LM2500 and SGT-A35 User Group Meetings

ETN's virtual LM2500 User Group Meeting was held on 29 September - 1 October 2020, and was supported by GE Aviation, Baker Hughes, Aero Alliance, MTU and TransCanada Turbines.

Our virtual SGT-A35 User Group Meeting took place on 6-8 October 2020, with the support of Siemens Energy, TransCanada Turbines and RWG Repair & Overhauls.

The objective of each ETN User Group is to bring together and coordinate the user community's voice, while providing a continuous and focused dialogue between end-users, OEMs, service providers and suppliers, in order to define and develop solutions.

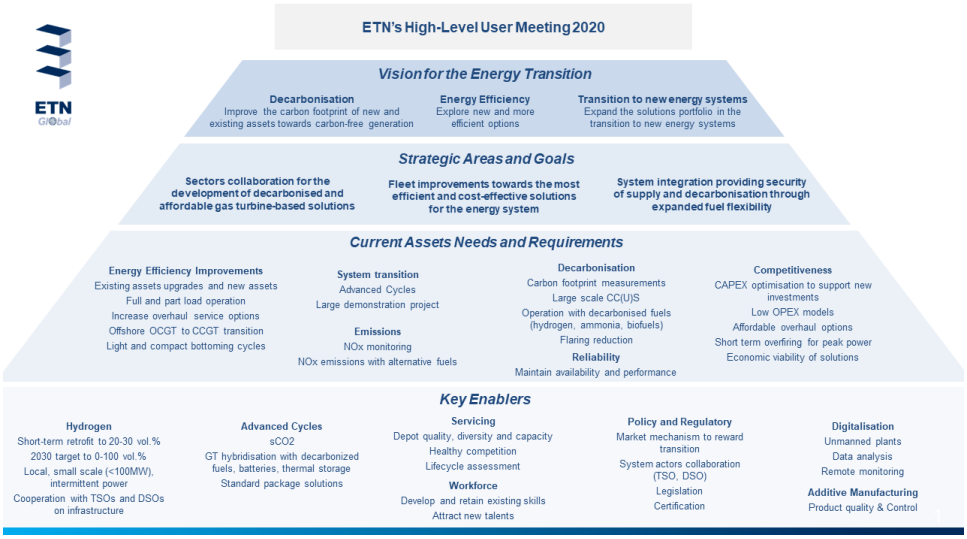
During these meetings, focused technical discussions, on the topics of highest importance to the user community, provide an opportunity to present the latest technical developments and to address prioritised topics, collected by ETN through our online platforms dedicated to the LM2500 and SGT-A35 engines.

The ETN office is now following up with the reported issues and actions that came out of last year's meetings. A continued collection process is taking place as we prepare for the upcoming LM2500 and SGT-A35 User Group Meetings, and the users of LM2500 and SGT-A35 engines are invited to submit new topics for the upcoming meetings.

More information about ETN's User Groups is available on our website: SGT-A35 User Group and LM2500 User Group.

High-Level User Meeting

ETN's High-Level User Meeting *"Operational optimisation and technology development needs for the transition to a carbon-neutral society"* took place virtually on 13 October 2020 and was very well attended by the utilities and oil & gas companies. As the decarbonisation trend has accelerated, it has become a key priority for all ETN users, requiring high efficiency and low-carbon fuel flexibility with carbon-neutral solutions available by 2030. The key message of the meeting was: ETN's users call OEMs and the R&D community to join forces, contribute and continue enabling cost-efficient operations of the current asset base, while investing in solutions to respond to the decarbonisation challenge. Read more about the outcomes of this meeting here.



Virtual IGTC keynote sessions

As ETN's International Gas Turbine Conference was postponed to October 2021 due to COVID-19, ETN organised two virtual IGTC keynote sessions as "bridging events" ahead of this year's conference. ETN President Pedro Lopez presented the key messages from the ETN user community during the first IGTC session *"Technology needs and developments for a low-carbon society"* on 15 October 2020. The OEM panellists acknowledged the users' requests and delivered a very clear message: the OEMs are committed and prepared to do the required investments to enable these requests. All presentations from this session are available on our website.

During the second session *"Gas turbines in a carbon-neutral society"* on 20 October, an introduction presentation by the IEA provided the latest global energy outlook and policy requirements for a sustainable energy transition to a carbon-neutral society, followed by the presentations and discussions on the EU and US hydrogen strategies and supportive programmes. Presentations from this session can be accessed here.

Flexible Power Generation webinar series

Last year ETN launched a new webinar series on Flexible Power Generation. Our first episode, *"Challenges and opportunities for flexible power generation in the future energy scenario",* was held in September 2020, with speakers from the European Commission, Uniper and Ansaldo Energia, gathering over 120 participants. The following episodes presented five EU-funded Horizon 2020 projects: FLEXnCONFU, HYFLEXPOWER, PUMP-HEAT, sCO2-flex and TURBO-REFLEX. Full recordings and all webinar presentations are available on ETN's website:

- 1st episode: Opening of the webinar series
- 2nd episode: FLEXnCONFU project
- 3rd episode: HYFLEXPOWER project
- 4th episode: PUMP-HEAT project
- 5th episode: sCO2-flex project
- 6th episode: TURBO-REFLEX project

Our final episode, *"R&D for flexible power generation: today's and tomorrow's challenges and pathways*", will be held on 20 April 2021.

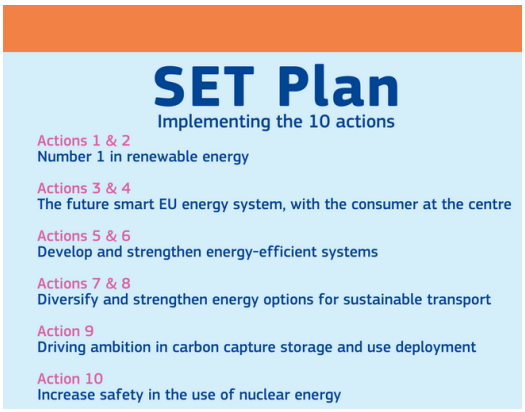
Networking Coffee Break

ETN's first Networking Coffee Break took place on 26 November 2020 and included two short presentations from CECO Environmental, addressing the question: How to increase operational flexibility and efficiency while meeting current and future emission legislation? The presentations were followed by questions and "coffee break discussions" with the call participants. The slides presented during this session are available on ETN's website. We plan to organise more sessions in the upcoming months – please contact us for any topic ideas.

5. EU Energy and R&D policies

SET Plan

In 2007, European Union launched a research and development strategy targeting the energy sector, the Strategic Energy Technology (SET) Plan, which was updated in September 2015 and integrated to be part of the five pillars of the EU's Energy Union, aiming at achieving the 2050 energy and climate targets: energy market, security of supply, energy efficiency, greater inclusion of renewables and research & innovation.



SET-Plan identifies 10 focused research and innovation actions. ETN is involved in the following working groups and European Technology and Innovation Platforms:

SET Plan Action 5: New materials and technologies for buildings

High potential of energy savings in buildings and highly efficient technologies for heating and cooling are in the centre of the work of the SET Plan Temporary Working Group 5: Energy Efficiency Solutions for Buildings. The Temporary WG was divided into two subgroups to address these topics: *"New materials and technologies for energy efficiency solutions for buildings"* and *"Cross cutting heating and cooling technologies for buildings".*
Following the approval of the Implementation Plan of the Temporary WG 5 in 2018, representatives of the EU Member States and industry stakeholders discussed the KPIs related to the increase of efficiency of heating and cooling technologies for buildings
ETN has participated in teleconferences held within the Working Group, providing input for the implementation of future steps.

SET Plan Action 6: Energy efficiency in industry

The aim of SET Plan Action 6 is to make EU industry less energy and resources intensive, more carbon-neutral and competitive. Within the SET Plan Action 6 Working Group, ETN is chairing the Heat/Cold Thematic Group, which aims at identifying the challenges and research needs to develop, demonstrate and deploy heat and cold technologies in the industry sector. Four key research areas have been identified in the Heat/Cold Thematic Group:

- Heat upgrade from low to high grade
- Waste heat to power
- Waste heat to cold generation

- Polygeneration (heat, cold, electrical power) and hybrid plants

EU Sustainable Energy Week session

ETN co-organised the webinar *"Energy Efficiency – Unlocking the Potential of Unused Heat & Cold in Industry"* on 26 June 2020 together with EUTurbines, A SPIRE and the EU SET Plan Action 6 Secretariat, as part of the EU Sustainable Energy Week. Presentations are available on ETN's website. Full recording of the webinar can be accessed here.

SET Plan Action 9: Carbon Capture Utilisation and Storage

The SET-Plan Action 9 aims at identifying research and innovation activities required to achieve the ambitious targets for CCS and CCU for 2030 and beyond. ETN has contributed to the draft of the Implementation Plan, which identifies the ongoing activities required to meet the key performance indicators set for 2030.

In 2020 ETN co-organised a webinar series with a focus on capture, with the following objectives:

- Identify industry needs and accordingly define R&I priorities for enabling CO_2 capture
- Update targets of the implementation plan regarding CO_2 capture
- Define roadmaps to reach the updated targets

ETIP SNET

ETN is represented in the European Technology and Innovation Platform Smart Networks for Energy Transition (ETIP SNET) Governing Board by Rob Versteirt (Engie).

ETN is also following the developments within the ETIP SNET Working Group 3: Flexible Generation and receives updates from our representatives Peter Jansohn (PSI), Olaf Bernstrauch (Siemens) and Yiguang Li (Cranfield University).

ETIP SNET R&I Roadmap 2020-2030 was published in January 2020 and updated in June 2020. ETN provided comments on the main research topics of interest to the ETIP SNET Governing Board. The publication is available here.

In May 2020, ETIP SNET published its *R&I Implementation Plan 2021-2024*. This publication addresses short-term key research and innovation priorities and budget estimate needed for the next 4 years to help to achieve the energy sectors' long-term carbon-neutral goals by 2050. The full document can be downloaded here.

ETIP Renewable Heating and Cooling Platform

ETN is a member of the European Technology and Innovation Platform on Renewable Heating and Cooling (RHC-ETIP), which brings together stakeholders from the biomass, geothermal, solar thermal and heat pump sectors (including the related industries such as district heating and cooling, thermal energy storage, and hybrid systems) to define a common strategy for increasing the use of renewable energy technologies for heating and cooling. The platform aims to play a decisive role in maximising synergies and strengthening efforts towards research, development and technological innovation.

ETN is actively involved in the *"100% RE Buildings"* and *"100% RE Industries"* Working Groups, and has been advocating for the inclusion of research activities on micro-CHP and CCHP technologies to be deployed in the buildings.
ETN recently contributed to the *Strategic Research and Innovation Agenda for Carbon-Neutral Heating and Cooling in Europe*.

Zero Emissions Platform

Zero Emissions Platform (ZEP) is the technical adviser to the European Commission on the deployment of CCS and CCU – a European Technology and Innovation Platform (ETIP) under the EU Commission's SET Plan.
ETN follows the developments within ZEP and attends their Advisory Council meetings as an observer.

6. ETN communication channels

ETN Quarterly Newsletter is sent four times a year to more than 1500 contacts (members of ETN and external contacts).

ETN Monthly News Summary is distributed only to our members. It is a way to summarise the latest news items and activities that have taken place during the previous month. This includes new developments within the network, event information, project updates and calls for interest. The Monthly News Summary is sent to 800 contacts at the end of each month.

Website

ETN's website provides a large amount of useful documentation and interesting reports for our members.
Please note that ETN members have the full access to all content after logging in. If you do not have an account yet, it is possible to create one via this link.

Social networks

ETN accounts on Twitter (@etngasturbine) and Linkedin (ETN Global) are regularly fed and used as a way to engage more directly with our members and with the industry stakeholders – make sure to follow us!