

## ETN - the gas turbine industry response to the REPowerEU Plan and the Winter Preparedness Package

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**The intention of this document is to support EC ambitions and to expand the available options to meet the urgent short-term power and heat needs, while maintaining progress on the long term 'net-zero' priorities to make European energy systems and industry more resilient and efficient.**

Recent events, most notably the war in Ukraine, have led to a seemingly permanent shift in the world context for energy supply, with the potential to become a global energy supply crisis. Security of supply has become the near-term priority for most of the governments, especially in Europe, due to the dependency of many EU states on Russian energy imports, the impact of the geopolitical uncertainty and international sanctions in response to the war in Ukraine and the urgent need to ensure adequate supplies for the upcoming winter.

In response, decisive actions and regulatory changes for the energy sector have been taken by the governments in recent months with four clear objectives:

- i) to increase security of supply resilience
- ii) to increase energy independency from Russia
- iii) to save natural gas by reducing its demand for the upcoming winter, and
- iv) to constrain the rise in energy prices.

These actions and regulatory changes are reflected in the [REPowerEU Plan](#) published on 18 May 2022, as well as in the [Winter Preparedness Package](#), published on 20 July 2022: outlining available tools and strategic measures to reduce the dependency of European nations on Russian-supplied fossil fuels, mainly natural gas.

**As an established association representing the entire gas turbine value chain including end-users in the power and industrial sectors, ETN Global has reviewed these plans and considers that our industry can play a significant role in supporting the strategic objectives** (i.e. the provision of new gas imports and the associated impacts on existing infrastructure or new infrastructure requirements; fuel diversification; setting minimum mandatory gas storage levels; as well as accelerating the implementation of renewable energy supplies and energy efficiency measures). **However, as we believe that such role is not fully reflected in the Plan, we call on the European Commission and Member States to take into consideration** the following measures to provide additional contributions and savings:

- Natural gas and other suitable fuels identified for power generation and heat should first be focussed on the plants that provide critical energy services (i.e., grid stability, critical heat supply, critical infrastructure, essential transport services), and then on the most efficient power plants (e.g., those which can be incentivised to operate at full capacity/maximum efficiency in combined cycle configuration) to ensure the maximum output for the minimum fuel used. This could save 2-5 bcm p.a. compared to current practice.
- The gas turbine and end-user community could incrementally save a further 0,1- 0,2 bcm p.a of gas by improving the efficiency (e.g., through equipment upgrades) of the existing gas turbine fleets for power generation, heat and industrial processes. These upgrades are achievable in scheduled maintenance cycles if appropriate regulatory mechanisms are adopted to incentivise them. This will also bring a CO<sub>2</sub> saving benefit to support European decarbonisation ambitions.
- To further reduce the dependence on Russian natural gas, beyond that possible through the expansion of indigenous conventional/unconventional sources and increased imports, the gas turbine community could reduce its dependence on natural gas supplies, saving 5 bcm natural gas

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p.a., if alternative fuels are used in the short term. This would exploit the fuel flexibility of gas turbines, either through their existing dual-fuel capabilities or by retrofitting them for the use of liquid fuels, biogas or other process-derived gases. These solutions can be implemented quickly where alternative fuels are available and any necessary operating permit amendments are applied.

Beyond those urgent short-term measures which will save a significant amount of natural gas, the gas turbine community can and must also play a strategic role in the decarbonised energy future, providing carbon-neutral dispatchable power by using H<sub>2</sub> and other clean gases for power generation, heat and industrial processes. The existing gas turbine fleet can be retrofitted to use high levels of these clean gases with the natural gas supply being completely replaced in some cases; in 2030 this could potentially save a further 30 bcm p.a. while delivering 150 TWh electricity per year. For this, 'H<sub>2</sub> to Power & Heat' and 'Clean Gases to Power & Heat' projects need to be incentivised in addition to incentives for the production and transport of these clean gases. Only when clean gas production and demand are well coordinated and balanced, can the EU start to take advantage of this new clean and innovative energy industry. Additionally, post-combustion carbon capture and -storage (CCS) might be fitted to gas power plant to provide energy efficient, clean power in the short- to medium term.

The current energy supply crisis has shown that focusing on conventional renewable growth alone is insufficient for the EU to create a resilient and carbon-neutral energy future due to the intermittency of most renewable energy technologies and the slow growth of large-scale energy storage options. If rapid progress is to be delivered, more carbon-neutral dispatchable power & heat production is required to balance electricity grids, to meet demand peaks and to offset the intermittency and supply variability of most renewable options. To achieve this, we need a diversified clean fuel production portfolio to reduce excessive dependence on single energy sources in the future. Such clean fuels, along with all additional indigenous conventional and unconventional gas supplies are also essential for the rapid scale-up of hydrogen production through steam methane reforming combined with CCS which is essential to meeting European net-zero targets.

For the gas turbine community to deliver these solutions, the required regulatory framework needs to be a priority for the current and future actions of EU policy makers, if the proposed sustainable energy solutions are to become a reality.

The gas turbine community recognises that the short-term urgency to ensure security of supply will require the rapid deployment of available, more polluting options, such as coal-fired generation. While this is a necessary emergency response to protect EU economies and societal well-being, we cannot afford this to continue beyond the early stages of the response due to the well-established climate impacts. It is essential that our future climate is not penalised by this crisis. The rapid provision of a fit-for-purpose regulatory and incentivisation framework is required for the faster development of carbon-neutral dispatchable energy solutions. This will enable the EU to bring forward its carbon neutral targets by some years, so that the absolute CO<sub>2</sub> emissions over the period to 2050 remain as set out in the plan established prior to the Russian/Ukraine war or may even be further reduced.

ETN is available to provide supporting information on the short-term impact as well as further information on the wide and important contributions that gas turbine technology could provide in a net-zero society (referencing [ETN Global vision paper](#)).

Yours sincerely,



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