HYDROGEN GAS TURBINES & THRUST GENERATION

Roadmap



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CFD – Computational Fluid Dynamics HP/HT – High Pressure/High Temperature HPC – High Powered Computing MTO – Maximum take off thrust MCL – Maximum climb thrust



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Figure 1 – Technology has been assessed against the NASA Technology Readiness Level (TRL) scale

Aerospace Technology Institute - FlyZero - Hydrogen Gas Turbines & Thrust Generation - Roadmap



Aerospace Technology Institute -- FlyZero -- Hydrogen Gas Turbines & Thrust Generation -- Roadmap



*Ref - Sustainability Technical Report **Ref - Advanced Materials





ABOUT FLYZERO

Led by the Aerospace Technology Institute and backed by the UK government, FlyZero began in early 2021 as an intensive research project investigating zero-carbon emission commercial flight. This independent study has brought together experts from across the UK to assess the design challenges, manufacturing demands, operational requirements and

market opportunity of potential zero-carbon emission aircraft concepts.

FlyZero has concluded that green liquid hydrogen is the most viable zero-carbon emission fuel with the potential to scale to larger aircraft utilising fuel cell, gas turbine and hybrid systems. This has guided the focus, conclusions and recommendations of the project.

This report forms part of a suite of FlyZero outputs which will help shape the future of global aviation with the intention of gearing up the UK to stand at the forefront of sustainable flight in design, manufacture, technology and skills for years to come. To discover more and download the FlyZero reports, visit **ati.org.uk**

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These roadmaps have been developed with a view to accelerate zero-carbon technology development and maximise the potential future value for the UK. They are unconstrained by the availability of funding.

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