

WTZ Roßlau gGmbH and MWM research the use of hydrogen for energy generation

Dessau-Roßlau, 18.11.2022

The German Federal Ministry of Economics and Climate Protection is funding a two-year research project between WTZ and MWM.

The core of the future-oriented project is to use the electricity generated by renewable energies for hydrogen production in electrolyzers. The green hydrogen produced in this way is temporarily stored and, when needed, used for decentralized electricity and heat generation by combustion in the hydrogen engine with high efficiencies.

Hydrogen protects the climate through low CO2 emissions

"Gas engines will play a central role in the conversion from a fossil-based to a lower carbon energy supply. The goal here must be to switch to CO2-neutral energy sources as quickly as possible. The foundation for this must be laid now by offering gas-fired power plants with the possibility of being converted to new fuels during their operating life through admixtures (keyword: H2-Ready) or even completely," says Dr.-Ing. Christian Reiser, Managing Director of WTZ Roßlau gGmbH.

MWM gas generator sets are already capable of operating with a hydrogen mixture of up to 25 percent and stand out with their high efficiency in distributed energy generation.

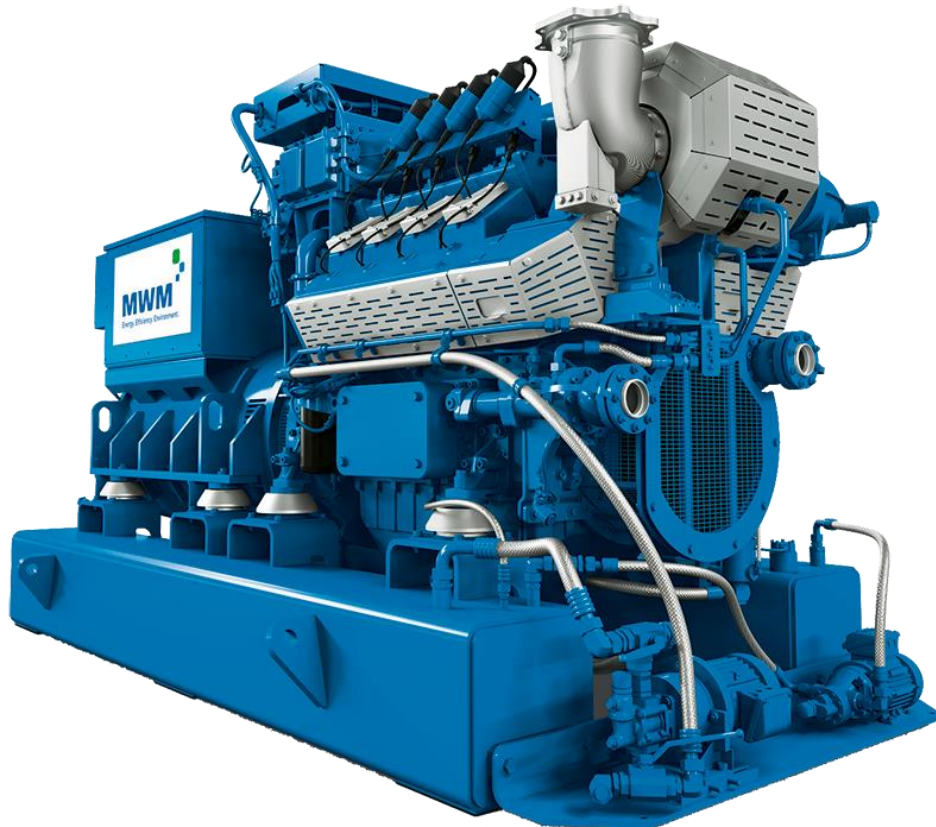
The project partners are analyzing the development of further generator set improvements and optimizations. The research spectrum covers the topics of carbon reduction, efficiency increase, use of alternative fuels, reduced emissions, use of exhaust heat, useful life, and hydrogen-only operation.

Producing clean energy with hydrogen

The project partners are analyzing the effects of different levels of hydrogen admixtures in the natural gas network as well as the consequences about the maintenance intervals of the engine components and the service life. Suitable long-term tests will be carried out for this purpose.

"Distributed energy generation with gas engines is already playing a key role in attaining the federal government's climate targets. In a reliable and flexible way, it balances fluctuations in

the availability of wind and solar energy. By using hydrogen, our industry will deliver an even more significant contribution to the reliable supply of clean energy", says Will Easley, Engineering Manager at MWM.



Source: Caterpillar Energy Solutions GmbH

Supported by:



Federal Ministry
for Economic Affairs
and Climate Action

on the basis of a decision
by the German Bundestag

PTJ
Projekträger Jülich
Forschungszentrum Jülich

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