

FPT INDUSTRIAL BRINGS FARMERS' DREAMS OF ENERGY INDEPENDENCE TO THE WORLD BIOGAS EXPO 2022

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FPT Industrial paves the way for **farmers' energy independence** at **The World Biogas Expo 2022**, the world's leading trade show dedicated to the biogas industry, held at the National Exhibition Centre (NEC) in Birmingham, UK on June 15 and 16.

On stand D503, the brand showcased **its solution for Power Generation fueled by renewable resources**: the **Smart Hybrid Hub powered by FPT Industrial**, the **world's first variable speed low-pressure natural gas, hybrid, multi-mode, genset concept entirely by FPT Industrial**.

Visitors were able to see "inside" the genset concept and, through the LED walls, follow the full cycle from agricultural production, through electricity generation right up to its use on or outside the farm. The concept is based on the **first F28 variable-speed, low-pressure biomethane engine for power generation**, with all the fuel deriving from anaerobic digestion of agricultural waste and cattle slurry. The engine is coupled to an **FPT Industrial Hybrid Control Management system**, featuring an open configuration with batteries and inverter equivalent circuit, depending on the mission profile.

PRESS RELEASE



*“Our aim is to create a virtuous, sustainable, carbon-net-zero cycle, to allow ‘energy independence’ for farmers,” says **Andrea Ercolino**, Product Portfolio & Marketing Manager Power Generation at FPT Industrial, “as well as to generate additional revenue opportunities deriving from sales of surplus biomethane. Another step forward for FPT Industrial in the energy transition path.”*

In addition to fueling the genset, the biomethane produced on site can even be used to fuel natural gas-powered tractors and commercial vehicles such as lorries and trucks, while the surplus of both electricity and biogas can be fed into the national grid. FPT Industrial's **partner in this project is Bennamann Ltd.**, a fast-growing British agricultural technology company in the field of clean energy, specialized in the supply and production of ‘better than zero carbon’ biomethane sourced from fugitive emissions of decomposing organic wastes, including farm manure slurry.

Speaking at the Expo, Bennamann's Co-founder, Chairman and CTO **Chris Mann** said *“We are proud to be partnering with FPT Industrial to deliver our shared vision of energy independent farming. The Smart Hybrid Hub completes the Bennamann Technology Chain enabling our end-to-end solution from fugitive methane capture, through processing into vehicle grade biomethane, and delivery of fuel, electricity and heat to the farm.”* On receiving the ‘Highly Commended’ for the AD Circular Solutions award at the show, Chris added *“as the ‘new kids on the block’, we were delighted to receive this recognition, which is underpinned by our strong partnerships making scale-up of energy independent farming possible and so exciting, watch this space!”*

One of the many highlights of the concept hybrid multi-mode genset is its capability to meet different customer needs with three main operating modes.

Boosting mode is dedicated to peak shaving with a high load response, with the engine working at full steam and the battery pack stepping in to deliver the needed extra buffer.

Touring mode takes care of all-round durability, with the engine and battery pack alternating operation in order to optimize efficiency and extend the whole system's lifespan.

Full Electric Eco mode is designed with fuel economy in mind and its low-load autonomy can be extended thanks to the modular battery packs.

In comparison to standard gensets, the FPT Industrial Smart Hybrid Hub genset concept delivers a **wider power range with a 30-40-60-80 kVA** standard rating with just one generator, **up to 20% lower fuel consumption, -22% engine displacement, and 2.5 times longer oil change intervals** vs diesel constant speed gensets.

The first Smart Hybrid Hub genset prototype is currently undergoing a series of tests and is being used in training sessions at Chynoweth Farm (Truro, Cornwall, UK), home of Bennamann's on-farm research and testing center. All its working modes and functions - hybrid, full electric and battery charging - have been extensively tested with the F28 NG engine fueled by biomethane produced at the farm.



Bennamann and FPT Industrial team at Chynoweth Farm

The **F28 Natural Gas engine's** versatility extends well beyond power generation usage. It is actually the engine which powers a **New Holland TK Methane Power crawler tractor prototype**, currently working at the award-winning Fontanafredda winery to achieve the first zero-emission Barolo wine by 2025. FPT Industrial's commitment to Natural Gas and sustainable agriculture is further demonstrated by the six-cylinder **FPT N67 NG engine**, with 180 hp and 740 Nm of torque, able to deliver the same performance and durability as its diesel equivalent. This engine powers the **New Holland T6.180 Methane Power**, the one and only mass production biomethane tractor on the market and named "Tractor of the Year" for 2022 in the Sustainable category, which was on display on the New Holland Agriculture brand booth during the World Biogas show.

FPT Industrial is a brand of Iveco Group, dedicated to the design, production and sale of powertrains for on-road and off-road vehicles, as well as marine and power generation applications. The company employs more than 8,000 people, in 11 plants and 11 R&D centers. The FPT Industrial sales network consists of 73 dealerships and about 800 service centers in almost 100 countries. A wide product offering, including six engine ranges from 42 hp up to 1,006 hp, transmissions with maximum torque of 200 Nm up to 500 Nm, front and rear axles from 2 to 32 ton GAW (Gross Axle Weight). FPT Industrial offers the most complete lineup of natural gas engines on the

market for industrial applications, with power that goes from 50 to 460 hp. This extensive offering and a strong focus on R&D activities make FPT Industrial a world leader in industrial powertrains. For more information, go to www.fptindustrial.com.

Bennamann Limited is a small, rapidly growing company developing, manufacturing and deploying innovative technology for viable, small-scale, local production, distribution and use of 'better than zero carbon' biomethane fuel. That is fuel sourced from the fugitive methane emitted by livestock farm manure slurries.

The company's seamlessly integrated Technology Chain includes: novel proprietary lagoon covers for fugitive methane capture and temporary storage; equipment to filter, process and liquify fugitive methane at small-scale locally off-gas-grid and off-power-grid; patented highly innovative fuel tanks for environmentally friendly storage, transport and use of liquid biomethane; satellite and Internet of Things (IoT) enabled technology for optimized methane sourcing, equipment monitoring, control and diagnosis, fuel production metering, and customer billing. Bennamann technologies require no intervention by the farmer and when deployed around the 'Bennamann Cycle'. They create a sustainable circular economy for energy independent farming that provides a wide range of economic, environmental and operational benefits - adding value to farm businesses and delivering a local clean energy revolution. www.bennamann.com

Media contacts

Sara Emilia Benetti, +39 3386674878

Emanuela Ciliberti, +39 3666860754

E-mail: press@fptindustrial.com