




Bloomenergy®

Ferrari | Bloom Energy

Parent organization

FERRARI NV

Headquarters

Maranello, Italy 

Industry

Automotive

CEO

Benedetto Vigna

Bloom installation

1 MW, Primary Power solution

Key Values

- Lowest carbon intensity
- Reduction in local air pollution
- Installed in 2 months



Objective

Ferrari's objective is to become carbon neutral by 2030. One of the steps is the exploration of fuel cell technology to power part of the baseload of their Maranello facility.



Ferrari is working harder than ever to achieve carbon neutrality by 2030, through the adoption of leading-edge technologies and of a scientific approach that are written in our DNA. We are thrilled to partner with Bloom Energy, as both our companies are highly committed to a decarbonization path, and proud to host its first European installation.

Benedetto Vigna

CEO, Ferrari





FERRARI MEETS ENERGY GOALS WITH BLOOM ENERGY

Bloom's partnership with Ferrari enabled them to conserve energy amid record-high energy prices, while concurrently reducing carbon emissions with virtually zero harmful air pollutants (NOx, SOx, and particulate matter). Ferrari is one of the few automotive companies that disclose their carbon footprint numbers, with a vision to become carbon-neutral by 2030.

Why Bloom?

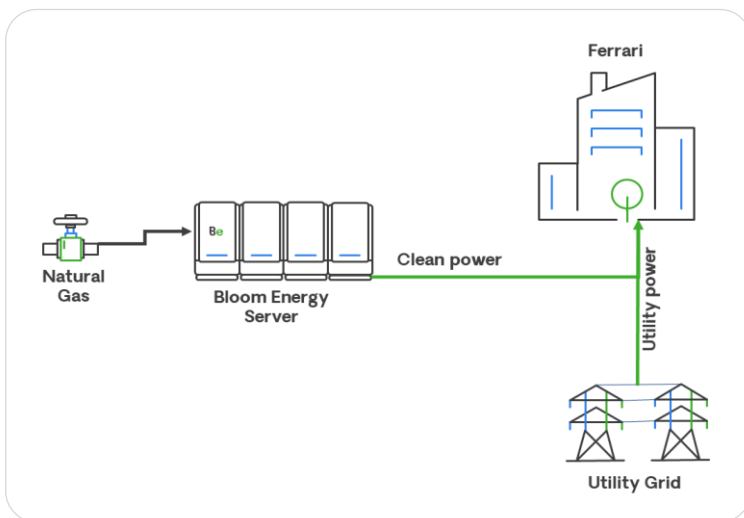
Power Density

In their quest for a solution, Ferrari found that electricity generated through solar cells has a capacity factor (time available) of 1250 hours/year. In contrast, Bloom Energy Server® systems have an average capacity factor of >8700 hours/year or 100% availability and take up much less space. The entire 1 MW installation at Maranello is only 200 m², whereas a solar installation would take up 125x^[1] more space.



Fuel Flexible and Future Proof

Like Bloom, Ferrari is committed to innovation and leadership in technology, constant learning, and pushing boundaries. Through research, they decided that Bloom's solid oxide fuel cell (SOFC) technology as a power source was the ideal match. Ferrari also found Bloom to be flexible with the choice of fuel sources (natural gas, biogas, biomethane, etc.) and future-proof with the ability to blend hydrogen and migrate to 100% hydrogen.



[1] 1 MW Bloom Energy = 50m²; 1MW Solar PV = 6,250m²



1 MW Energy Server installation at Maranello (top View)

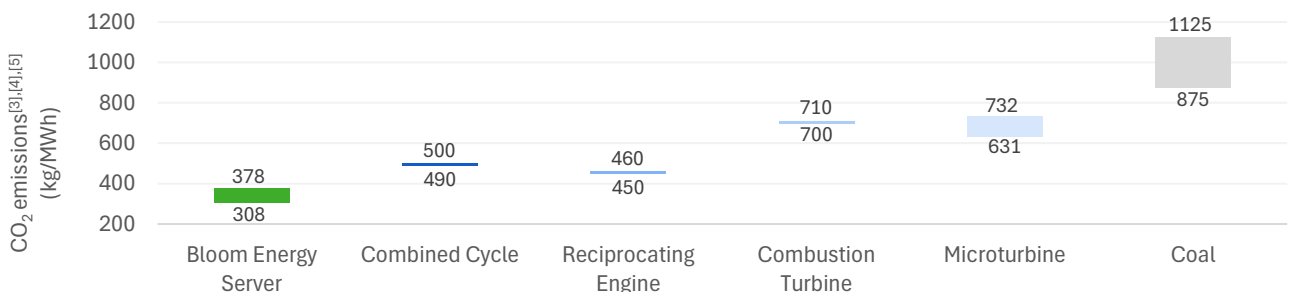
The Environment

Ferrari conducted an energy study of several technologies and found that the Bloom Energy Server reduced gas requirements by 20% with a 99% reduction in the polluting substances that cause smog and particulate matter build-up. Bloom's Energy Server SOFC technology showcases how energy-intensive industries, such as manufacturing, can be decarbonized through clean, reliable energy.

The deployment of onsite, predictable energy generation is a key element to Ferrari's corporate sustainability strategy to operate at everyday low-cost while being a good steward of the environment. They require an energy solution that cannot only contribute to their sustainability targets and reduce energy costs, but also supply continuous power, even when renewable sources are unavailable due to their intermittent output.

	Bloom Energy	Gas Engines ^[2]
Fuel	Natural gas	Natural gas
Efficiency	54%	45-52%
Efficiency w/ CHP	>90%	75-85%
Footprint	100 MW/acre	20-40 MW/acre
Availability	99.999%	92-95%
NOx emissions	0.00078 kg/MWh	0.014-0.1 kg/MWh
Noise level	<65 dBA @ 10 ft	85-90 dBA

The incumbent solution at the facility was a gas engine combined with CHP. It was 25% less efficient and produced harmful emissions, speeding up Ferrari's need to implement the Bloom solution. The carbon emissions from a Bloom Energy Server are superior to any other power-generating technology operating 24/7/365 on natural gas. With carbon credits of the order of €63 per metric ton of CO₂, the savings will compound.



[2] <https://betterbuildingssolutioncenter.energy.gov/resources/combined-heat-and-power-technology-fact-sheet-reciprocating-engines>; [3] <https://www.nrel.gov/docs/fy13osti/57229.pdf>; <https://www.wartsila.com/docs/default-source/investors/financial-materials/annual-reports/2024/>; [4] CO₂ emissions calculated based on U.S. Energy Information Administration estimates of CO₂ emission coefficients by fuel type and the plant heat rates; [5] Lazard's Levelized Cost of Energy Analysis – Version 15.0

Implementation

The Bloom Energy Server was built and installed within two months of placing the order. It provides baseload power to a portion of the energy required for Ferrari's production activities while reducing CO₂ emissions by 26% compared to the grid and nearly eliminating NOx and SOx emissions.



1 MW Energy Server installation at the Ferrari HQ in Maranello (front view)

Summary

The growing concerns of the environmental impact caused by electricity generation from conventional sources have led to a rising demand for clean energy deployments to reduce carbon emissions. Ferrari's commitment to carbon neutrality by 2030 led them to partner with Bloom Energy, where they share a common passion for technology and decarbonization.

By choosing Bloom, Ferrari is getting closer to the 2030 vision and is leading Europe in the emerging green gases and hydrogen adoption race, thanks to the fuel-flexible platform of the Energy Server. Bloom's solid oxide platform is a key step in decarbonization actions, and we expect to witness more such installations in Europe soon.

For More Information about Bloom Energy, contact us:



Energy Server
Data Sheet



Energy Server
Brochure



Impact Report



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Accelerate your path to
a zero-carbon future.