

The Interview

EnerSys



Samuel Shiroff
Senior Director, Global Sustainability at EnerSys

Energy efficiency with EnerSys

EnerSys is the global leader in stored energy solutions for industrial applications and designs, it manufactures, and distributes energy systems solutions and motive power batteries, specialty batteries, battery chargers, power equipment, battery accessories and outdoor equipment enclosure solutions to customers worldwide.

The company goes to market through four lines of business: Energy Systems, Motive Power, Specialty and New Ventures. Energy Systems, which combine power conversion, power distribution, energy storage, and enclosures, are used in the telecommunication, broadband and utility industries, uninterruptible power supplies, and numerous applications requiring stored energy solutions. Motive power batteries and chargers are utilised in electric forklift trucks and other industrial electric powered vehicles. Specialty batteries are used in aerospace and defence applications, portable power solutions for soldiers in the field, large over-the-road trucks, premium automotive, medical and security systems applications. New Ventures provides energy storage and management systems for various applications including demand charge reduction, utility back-up power, and dynamic fast charging for electric vehicles. EnerSys also provides aftermarket and customer support services to its customers in over 100 countries through its sales and manufacturing locations around the world.

Sustainability at EnerSys is about more than just the benefits and impacts of our products. Our commitment to sustainability encompasses many important environmental, social and governance issues. Sustainability is a fundamental part of how we manage our own operations. Minimising our environmental footprint is a priority. Sustainability is our commitment to our employees, our customers and the communities we serve. Our products facilitate positive environmental, social and economic impacts around the world.

Samuel Shiroff, Senior Director, Global Sustainability at EnerSys speaks to Warehouse & Logistics News.



How is EnerSys providing energy efficiency, reliability, and sustainability within UK manufacturing? (Newport plant improvements? Other LOBs?)

EnerSys is focused on driving energy efficiency and sustainability across its operations, including our Newport plant in the UK. Through its award-winning EnerSys Operating System (EOS), employees have implemented lighting upgrades, optimised equipment, and integrated solar panels, leading to energy savings and reduced costs. This is part of a broader commitment to improving energy efficiency, reducing emissions, and investing in renewable energy technologies across all lines of business. Specific examples include:

- **Lighting assessment.** We kicked off a survey at the start of 2023 to assess lighting usage and discover replacement opportunities throughout the whole plant. The survey will determine potential reductions in both kWh energy used in Newport and in costs. To date, we were able to replace lighting throughout the plants leading to an estimated annual savings of £13,440 GBP (about \$17,200 USD) with more opportunities to be had.
- **Smart inverter.** We installed new inverters and motors to control fan speeds throughout the manufacturing process at the Newport factory (rather than relying on a one-size-fits-all fan speed). This will reduce the amount of kWh used in the plant because they are now able to customise the speeds needed for each process, rather than having high fan speeds for all purposes.

- **Efficiency upgrades.** We have also made multiple upgrades to the gas-powered, drying ovens in Newport. One of the ovens used to dry plates has reached the end of its life after decades of use and is scheduled to be converted to electric, reducing natural gas usage. For other gas-powered ovens in Newport that are not yet ready for replacement, we ensure that the seals are maintained, and the doors are replaced as needed, in order to trap as much heat as possible within the system rather than letting heat escape.
- **Solar power.** Our team installed a small 6.5kW solar array in Newport. The solar array produces on average 23 kWh in 24 hours and is used to power lights, computers and fans throughout the plant.

How do EnerSys products help address challenges such as efficient and affordable distribution of goods, grid reliability, telecommunications, medical safety, and climate change?

EnerSys products, including advanced energy storage solutions, address critical challenges in various industries. For example, its batteries support grid reliability, enabling continuous power supply for telecommunications and medical equipment during outages. In logistics, its motive power products for electric forklifts improve distribution efficiency while reducing carbon emissions. Additionally, EnerSys contributes to climate change solutions by integrating its products



into renewable energy systems, which store and manage intermittent energy from sources like wind and solar.

How are EnerSys batteries and energy storage solutions part of building a resilient, low-carbon future?

EnerSys batteries play a key role in decarbonisation efforts by providing reliable energy storage for renewable energy sources. They help balance power grids by storing excess energy during low demand and supplying it when needed, reducing reliance on fossil fuels. EnerSys also supports clean transportation through its motive power products, which enable zero-emission forklifts, further contributing to a low-carbon future.

How is EnerSys minimising its environmental footprint?

EnerSys is actively working to minimise its environmental impact by reducing energy and water consumption, improving waste management, and cutting emissions. We aim for net zero Scope 1 carbon emissions by 2040 and Scope 2 by 2050. We have also set goals to reduce water use intensity by 25% by 2030 and energy intensity per kWh of storage by the same margin. Our facilities are increasingly powered by renewable energy, and the company is committed to recycling programs and reducing waste reduction throughout its operations. While we do not have a major impact on biodiversity, we nevertheless have a biodiversity policy which guides our decision making when it comes to nature.

How much are the avoided emissions associated with the use of EnerSys batteries in electric forklifts?

The avoided emissions from using EnerSys batteries in electric forklifts are significant. Depending on the battery model and the cleanliness of the grid where they are used, the avoided emissions are estimated to range from 5 to 10 times the emissions generated during the mining, manufacturing, and shipping of the batteries. In some locations, this benefit can reach up to 20 times the emissions saved. I can provide more details based on comparisons with Diesel or LPG as desired.

By how much have you cut your Scope 1 emissions?

EnerSys has reduced its Scope 1 emissions by 25% since 2019. This reduction is part of the company's broader commitment to achieving carbon neutrality for Scope 1 by 2040.

By how much have you reduced your water use?

EnerSys has improved water use efficiency by approximately 6% since 2020 and aims to reduce water use intensity by 25% by 2030. This is part of its broader environmental sustainability goals.

How is EnerSys helping combat climate change and achieve net-zero emissions by 2050?

EnerSys is contributing to the fight against climate change through several initiatives, including reducing greenhouse gas emissions across its operations, improving energy efficiency, and supporting renewable energy projects. The company has set targets to achieve net-zero Scope 1 emissions by 2040 and Scope 2 by 2050. Additionally, EnerSys is committed to helping our customers reduce their emissions through the use of advanced battery technologies and energy storage solutions.

