

Benchmark set by SGD PHARMA in journey towards Net-Zero

In this article, SGD PHARMA CEO Olivier Rousseau explains how his company is leading the glass pharmaceutical packaging industry in decarbonization as it aims to cut Scope 1 and 2 CO2 emissions from its 2020 baseline by 35 percent by 2030 and 65 percent by 2040. Here, supporting global sustainability goals, its strategy includes renewable energy adoption, production process redesign and increased recycled glass use.



INTRODUCTION

The glass manufacturing industry has already taken significant steps towards decarbonization, with companies across the sector under pressure to adopt innovative technologies and sustainable practices to reduce their carbon footprint. FEVE, The Federation of European manufacturers of glass containers, reports that glass is now 30 percent lighter, 70 percent less energy-intensive and emits 50 percent less CO2 than fifty years ago. The glass packaging industry, however, strives to improve performance on these figures,



investing around EUR 600M each year on further enhancing energy efficiency through such measures as plant upgrades. The pharmaceutical glass industry is no exception. Manufacturers in this sector are increasingly adopting new initiatives to reduce carbon emissions and make glass production more sustainable, recognizing the importance of these efforts for producers and consumers alike.

SGD PHARMA'S DECARBONIZATION STRATEGY

SGD Pharma, leader of decarbonization in the glass pharmaceutical packaging industry, subscribes to international decarbonization efforts, such as the United Nations Sustainable Development Agenda and the European Union Climate Law, by implementing a comprehensive decarbonization strategy which aims to dramatically reduce the company's carbon footprint.

SGD Pharma's strategy follows eight main steps, namely mobilise, measure, disclose, set targets, reduce, engage, con-

tribute to neutrality and prepare to adapt. These steps are the product of a collaboration between three levels of decarbonization committees: the PAI Decarbonization Committee Board, the SGD Pharma Decarbonization Committee and the CO2 working groups. The trio of committees meet several times a year to assess the progress of the strategy and mark areas for improvement. Under the decarbonization strategy, SGD Pharma will transition to renewable energy sources, reassess the raw materials used in glass production, redesign production processes, adopt more recycled glass and develop lighter products. An ambitious strategy, it will facilitate the accomplishment of SGD Pharma's company goal of reducing Scope 1 and 2 CO2 emissions by 35 percent by 2030 and by 65 percent by 2040 (compared with its 2020 baseline), in line with the 1.5°C trajectory of the Science Based Targets initiative. Holistic in scope, the strategy also aims to tackle Scope 3 emissions within SGD Pharma but also across the company's suppliers and cus-

tomers by increasing the weight of sustainability criteria in sourcing decisions and decreasing product weight respectively. The strategy has already helped SGD Pharma to become the leader of decarbonization in the glass pharmaceutical packaging industry and achieve recognized successes, including:

- Gold EcoVadis medal for sustainability, with a company total score of 78
- ISO 14001 certification for environmental management of 100 percent of SGD Pharma's global manufacturing sites
- PAI Sustainability Award
- Investments in renewable energy sources, such as solar and wind, at all five of SGD Pharma's global manufacturing sites have provided 6.5 percent of the company's total electricity.

DECARBONIZATION INITIATIVES IN ZHANJIANG, CHINA

At SGD Pharma's Zhanjiang, China manufacturing plant, energy use is a key focus and is regularly reevaluated to ensure

DECARBONIZATION



it meets the highest sustainability standards. Earlier in 2024, SGD Pharma announced a EUR 20M investment in the plant, consisting of a complete rebuild of its furnace and an improvement of the plant's facilities to significantly improve energy efficiency. Prior to this, the Zhanjiang plant had already made considerable advances in its move to greener fuel. In 2018, a switch from heavy oil to liquified natural gas (LNG) saw a ten percent reduction in the site's greenhouse gas (GHG) emissions. Then, in 2023, the site introduced a renewable energy purchasing programme to cover one-third of the plant's electrical consumption.

SGD Pharma's Zhanjiang plant also supports mangrove conservation in China through its partner-

ship with the Zhanjiang Nature and Resource Bureau. Mangroves are central to the plant's decarbonization efforts as a single tree can absorb up to 12 kg of car-

bon annually. In 2022, the team in Zhanjiang planted 1,000 mangroves, achieving an estimated carbon sink of 10,000 kg. Expanding upon these efforts, the site launched its 'The Future is Green' campaign at the 27th China Beauty Expo in Shanghai which included the planting of 168 mangroves also in the Xiashan Sea Corridor Landscape. With the help of its customers and suppliers, the Zhanjiang site aims to plant an additional 10,000 trees in 2024 and to reach a total 1,000,000 mangroves planted by 2030.

Relationships between the Zhanjiang plant and its wider community have been essential in establishing these sustainable practices. A delegation, led by Zhanjiang Mayor Mr Zeng Jinze, visited the factory last year to learn about its dedication to sustainable energy. Following discussions with CEO Olivier Rousseau and other key executives, both the Mayor and Vice Mayor Mr Zhang Renjian expressed support for the plant's green energy solutions, which include wind and solar power.

FURNACE REBUILDS AT SAINT-QUENTIN-LAMOTTE (SQLM), FRANCE

One of the two furnaces at SGD Pharma's SQLM plant has





been 100 percent electric since 2015 but has recently undergone a rebuild for improved efficiency. The second furnace has also been rebuilt to increase electricity use and to halve gas consumption in the forehearths. Oxy-fuel combustion has been trialed in this furnace and has led to the production of glass with lower carbon emissions. Both furnace rebuilds have been supported by the French government which has provided partial funding under the France 2030 initiative, operated by ADEME, France’s environmental and energy agency. Partnerships such as these help to expedite the progression of environmentally friendly glass production.

At the start of 2024, SQLM also successfully trialed hydrogen burners with the help of Air Liquide, paving the way for the use of hydrogen in future industrial-scale glass production. During the trial, up to 50 percent of the burners at SQLM were converted to operate using a combination of hydrogen and oxygen combustion instead of the previously used Oxygas. The hydrogen burners contrib-

uted to around 75 percent of the total volume of combustion gases, confirming the possibility of using hydrogen to further decarbonate glass production.

RENEWABLE ENERGY GLOBALLY

Across SGD Pharma’s other glass manufacturing plants, in Vemula (India), Kipfenberg (Germany) and Sucy (France), there has been a shift towards adopting renewable energy sources which has contributed to the 6.5 percent of electricity generated by renewable sources company-wide. At the Vemula plant, solar panels have been installed across the entire facility’s rooftop which have generated around 1.5 GWhs of energy, decreasing dependence on other fuel sources. Alongside this, heat recovery units are minimising energy use by capturing waste heat from industrial processes and reusing it elsewhere on the site, for example for air conditioning. Combined, the installations have achieved a significant reduction in carbon emissions which the plant hopes to increase by purchasing renew-

able energy from external sources in the future.

SGD Pharma’s Kipfenberg plant has replaced all combustion engine company cars with either hybrid or fully electric models. In an effort to encourage the use of cleaner fuel, the site has also installed electric car charging stations which can be used by all employees at a discounted rate. Meanwhile, in Sucy, a furnace rebuild has resulted in a 13 percent reduction in energy consumption as well as a significant reduction in NOx emissions. These initiatives illustrate SGD Pharma’s commitment to renewable energy through a diverse range of means across all its global manufacturing plants.

CONCLUSION

Building upon the decarbonization initiatives already in place, SGD Pharma has set both short- and long-term goals in line with international targets. Perhaps most significantly, the company aims to meet its target of reducing CO2 emissions by 65 percent by 2040, but in the short-term it plans to both achieve a 90 percent EHS (Environmental, Health and Safety) maturity matrix and ensure that all its sites are ISO 50001 energy management certified by 2025. With these clear objectives, SGD Pharma demonstrates its commitment to a sustainable future and a safer and healthier global environment. ■



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