

# How Leading CDMOs Are Driving A Greener Future For Pharma

Singota Solutions



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As climate change's impact looms large, industries are navigating how to reduce their CO2 emissions to minimize contributions to global warming, and the pharmaceutical manufacturing industry is no exception. In 2023, CEOs from leading pharma companies authored the [Open Letter on Supplier Targets from Members of the Sustainable Markets Initiative Health Systems Task Force](#), which calls on suppliers and CDMOs to examine how their processes are contributing to high CO2 emissions, identify how to adapt these processes to reduce said emissions, and commit to achieving sustainable targets in the coming years. In response, CDMOs are determining where they can make meaningful change.

In a recent webinar hosted by Singota Solutions, Senior Director of Business Development William Powers highlighted the current state of climate change, including global CO2 emissions, rising sea levels, and increased air pollution, as well as how these factors stand to impact global quality of life. Powers discussed the targets set forth in the Open Letter and the 2016 Paris Agreement and dove into how CDMOs might approach implementation of said targets to build a more eco-friendly pathway for pharma manufacturing. In the following post-webinar Q&A session, Powers answered attendee questions on strategies for reaching these green goals.

**Q: Most industries, including CDMOs, have been working to improve their sustainability practices. Do you think the requests and targets from the Open Letter differ significantly from the current sustainability goals that individual CDMOs have been working on?**

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**William Powers:** Not really, apart from asking for specific timing and public commitment. The targets that center around reducing waste are typical across industries and can actually have a positive effect on the bottom line. The target of reaching a renewable energy amount of 80% by 2030 is eye catching, significant, and very recent. This target could be extremely difficult to reach for some CDMOs.

**Q: Do you think that these initiatives will have a major impact on the cost of outsourcing?**

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**Powers:** If we do it smartly, I think we can reduce costs somewhat. For example, by reducing waste, you get more bang for your buck. You reduce waste, you reduce cost, and you reduce your global impact. In the case of using 80% or more renewable energy, these solutions

likely will be more costly. Some of the technologies utilized have decreased in price over time. For example, the cost of solar panels and battery systems has come down dramatically. There are grants and government funds that can be applied to help minimize the impact.

**Q: What is Singota doing to reduce emissions? What sustainability initiatives are you working on right now?**

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**Powers:** Being a smaller CDMO, we start off with some basics and opportunities that can immediately make an impact on some of the most accessible initiatives. Doing things right the first time and avoiding repeat activities is huge for saving materials and resources and has an impact in all aspects of the business. Recycling is a big one as well. We are trying to use reusable shipping materials, including controlled temperature containers with reusable foam and gel packs. To help with costs of return transportation, the best option is to have our clients return materials in bulk, which consists of accruing a month's worth of shipment materials, palletizing them, and sending them as one shipment. This is a more cost-effective and sustainable option.

**Q: Are there any challenges you are seeing for bioprocessing companies that are trying to reach net zero emissions? If so, what are they doing to overcome them?**

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**Powers:** The major challenge is reaching the 80% renewable energy target in five years and doing it with some positive ROI. This requires not only a renewable energy source but also the accompanying battery and power conditioning systems, which must accommodate

different power scales depending on facility power demands. These systems are not cheap. Identifying and implementing the right system specific to one's manufacturing and holistic energy needs will require up-front investment.

CDMOs are commercial companies that need to turn a profit to stay in business year over year, and there will be a cost impact. This includes the cost to design, build, maintain, and operate an on-site power generation system. Consideration should be given to exploring green power initiatives with local municipalities or other firms in surrounding industrial parks to possibly share in the investment and operation of such renewable facilities. Another major challenge for CDMOs is the use of single-use materials. Transitioning away from these materials that are so important for contamination control requires a major shift and isn't something that can happen overnight. Product and patient safety are always a major concern. Consideration for using reusable materials (e.g., stainless-steel tubing) needs to be carefully evaluated. Does the resulting cost and carbon footprint from energy expended for cleaning processes help toward a net emissions reduction?

**Q: What steps have you seen CDMOs take to ensure that sustainability is a focus all the way down the supply chain, including for raw material and third-party suppliers?**

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**Powers:** As we know, the transportation sector is a significant contributor to carbon emissions. This is a major hurdle, and transportation vendors as well as the entire industry are working on it but struggling with some of the challenges. While tandem trailers on a tractor trailer rig

may not be the most appealing thing to see on large highways, they are the more cost-effective option in terms of mileage and fuel consumption. The potential to use biofuels for aircraft is huge but not yet ready for prime time. I think we'll start to see more electric vehicles used in this manner. It's just going to take time.

**Q: How do you ensure transparency in your sustainability practices for your stakeholders, your customers, and the public? Is it conducting webinars and writing reports or something else entirely?**

**Powers:** Talking about it, explaining it, and making it visible are a big part of it for us. At Singota, we've been publishing our metrics monthly in terms of supply chain and distri-

bution shipping on time, temperature excursion, and right-first-time initiatives. It has been an effort to publish these findings and hold ourselves publicly accountable. We have our own internal sustainability policy and SOPs [standard operating procedures]. We will continue to forge ahead.

*Interested in learning more about how CDMOs are implementing more sustainable practices? You can watch the full webinar [here](#) or read an article summary [here](#).*



## About Singota Solutions

Singota Solutions is a contract development and manufacturing organization (CDMO) focused on helping clients in the pharmaceutical and biotechnology industries move their products through the drug development pipeline faster by being agile, accountable, and transparent.