

MOOG

Case study

Clear for take-off toward net zero

centrica
Business Solutions



Moog taps Centrica Business Solutions for roadmap to its green ambitions

Moog is an American-based global engineering company that specializes in solving its customers' most technical challenges in 90 locations across 25 countries and nine time zones. The company is an expert in motion control units and its applications feature in spacecraft, aircraft, racing cars, and wind turbines. As such, Moog works in the supply chains of some of the biggest, most recognizable private and public sector businesses in the world.

With the environmental, social, and governance (ESG) framework gaining pace in all business and government sectors, Moog knows it must demonstrate to customers its potential as a "clean" partner that is sustainable and environmentally viable for the long term. Resolved to understanding and tackling its carbon emissions, Moog set about finding a trusted partner to help improve its sustainability and support it on its decarbonization journey.



5

sites consulted on

50%
by 2032

targeted CO₂ reduction
for the sites consulted on

2044

net zero goal year for the
sites consulted on

Solution

Aware of the complexities involved in both its own technologies and in decarbonization, Moog approached Centrica Business Solutions (CBS) to help demystify the process and support its transition toward best practices for all ESG matters.

Centrica's Net Zero Pathway Advisory Services utilizes science-based methodologies to define an actionable pathway of decarbonization activities. This approach aims to fulfill net zero ambitions using a "Plan, Cut, Convert, Complete" framework. Using this methodology, the CBS team completed an audit across five regionally diverse Moog sites and identified a series of measures that would put Moog on the pathway to net zero. The audit was aided by CBS' global coverage footprint, which mirrors Moog's footprint, allowing for local CBS engineers to feed audit data output into the centrally managed CBS Net Zero Advisory Services. The Centrica Business Solutions team was truly across borders, working with various sites and Moog teams across multiple US states and European countries.

The team's dedication and work ethic didn't go unnoticed. "I was drawn to working with the team at Centrica Business Solutions because I felt like I could build a pragmatic, long lasting relationship with them. That's definitely part of the appeal of the relationship, and part of the reason it's been so successful," says Hamish Ferguson, Sustainability and ESG Director at Moog. "They are a good partner to us; they listen to what we're saying, how we're saying it, and what we're trying to achieve. I'm very happy with them."

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Technical overview

Given the global span of its footprint, a unique challenge for Moog toward net zero is the disparity of its sites with the one commonality between them being the lack of a detailed view of energy consumption and data insights for all its facilities.

Therefore, a key recommendation of the CBS Net Zero Advisory Services has been to employ Panoramic Power™—its energy insights solution. When this solution will be enabled, it will allow for a detailed analysis of Moog's energy footprint, taking into account all the relevant factors, including time, machine, department, and many others.

“That recommendation is important, because the more granularity we have, the better we can tailor the solution,” notes Ferguson. “Through the deployment of data insights throughout the factory, you get much more nuanced data: you get the ability to look at your energy footprint a number of different ways, whether it's through time, through machine, through department, through time of the year—you can slice it any number of different ways.” Moog therefore expects Panoramic Power™ will allow it to achieve the type of in-depth analysis it is interested in doing.



Customer results

The pilot studies across the five regionally diverse sites identified how Moog can achieve various near-term ambition scenarios, with a 50% reduction in carbon emissions by 2032 and reaching net zero by 2044 for the specific sites that were reviewed, detailing measures in terms of technology, time, and investment. CBS has also used pilot study strategies to extrapolate the results for the rest of Moog's footprint to understand the overall investment costs and times to reach various ambitions, and eventually achieve net zero.

“My interest in working with Centrica Business Solutions is about working with people you can relate to, that understand, and with whom there's a cultural alignment,” says Ferguson. “Centrica Business Solutions helped us understand these five very different factory situations and what the baseline data looked like for each one. They're experts at knowing the technology and complexities of the field,” he continues. “The data and the presentation material that they put forward has been exceptional. There's a really high standard of analysis and specialist recommendation.”

Solar PV array installation, LED lighting, heat pumps, hydrogen fuel solutions, and data management systems were among the technical solutions recommended, with the specifics of each differing according to site.

Alongside data insight management, other identified key areas through which Moog can unlock its sustainability potential are energy efficiency, on-site generation, and decarbonization of heat.

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This will enable the company to not only become greener but achieve energy security, reducing dependency on the grid through on-site electricity production that will also reduce energy costs.

Its partnership with Centrica Business Solutions' Net Zero Advisory Services has equipped Moog with the knowledge, understanding, and support to move forward on its carbon journey. "If we set a pragmatic, realistic, but ambitious carbon emissions target, then it sets us up for the future, business-wise," concludes Ferguson. "It means we're competing with the very best to provide our solutions. And critically, it makes us a clean solution and a sustainable and viable one for our customers in the long term."

CBS' Advisory Services outputs have included recommendations for:

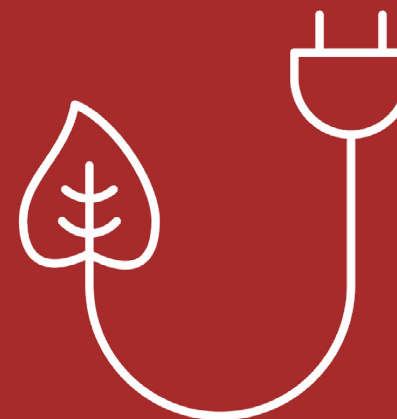
- The target year for net zero corporate commitment
- The short-, medium-, and long-term corporate carbon reduction commitment
- The level of investment required for Moog to fulfill its net zero and carbon reduction commitments and the associated financial returns
- The low carbon technologies required to deliver these commitments and the logical sequencing of their development at site, commercial group, and global levels

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These recommendations have supported the Moog senior management decision-making process for the key corporate strategic decisions related to its net zero corporate position. This will in turn support Moog in:

- Enhancing its company reputation
- Supporting its talent acquisition and retention
- Aligning Moog net zero policies to its key customers' net zero policies
- Enhancing Moog's energy resilience and mitigating energy-related risks
- Improving Moog's operational efficiency
- Mitigating upcoming net zero compliance risks



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