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# Carbon Reduction Plan

Supplier name: Meticuly

Publication date: 13.02.2024

## Commitment to achieving Net Zero

METICULY is committed to achieving Net Zero emissions by 2050.

## Baseline Emissions Footprint

Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured.

Meticuly Company Limited is a patient-specific implant manufacturer specialised in 3D printing. Our main locations including office and manufacturing site are located in Bangkok, Thailand. The products are produced in a clean area according to ISO13485. The current factory does not need to use a power generator and the manufacturing process generates ultra-low waste and only slightly releases GHGs into the atmosphere. Therefore, our process estimated ultra-low emissions in scope 1 of carbon reduction under the Environmental Reporting Guidelines (March 2019).

Scope 2 emissions refer to the electricity purchased. In 2022, our baseline year, we purchased 100,589.10 kWh in Thailand. Using the 0.451 kgCO<sub>2</sub>/kWh emission factor to calculate the carbon dioxide equivalent this comes out at 45.37 tons of carbon dioxide equivalent for scope 2 emissions.

For Scope 3, we have Business travel to America, Europe, and Asia including the delivery of the product to some Asian countries. the overall emission is approximately 17.65 tCO<sub>2</sub>e).

Baseline Year: 2022	
Additional Details relating to the Baseline Emissions calculations	
<p>Our manufacturing site is built in a limited area in the capital of Thailand and we utilise highly effective manufacturing processes. Therefore, there are no identified scope 1 emissions in the baseline year.</p> <p>Scope 2 emissions are related to the electricity we buy. It's around 100,589.10 kWh in 2022, The consumption is electricity for production, and office utilisation with 60 employees.</p> <p>Scope 3 emissions are calculated based on business travel for market expansion and the carbon dioxide equivalent from exporting our produce to other countries.</p>	
Baseline year emissions:	
EMISSIONS	TOTAL (tCO <sub>2</sub> e)
Scope 1	N/A
Scope 2	45.37
Scope 3 (Included Sources)	17.65 - business travel - downstream transportation and distribution
<b>Total Emissions</b>	<b>63.02</b>

## Current Emissions Reporting

Reporting Year: 2023	
EMISSIONS	TOTAL (tCO <sub>2</sub> e)
Scope 1	N/A
Scope 2	69.90
Scope 3 (Included Sources)	13.12 - business travel - downstream transportation and distribution
<b>Total Emissions</b>	<b>83.02</b>

## Emissions reduction targets

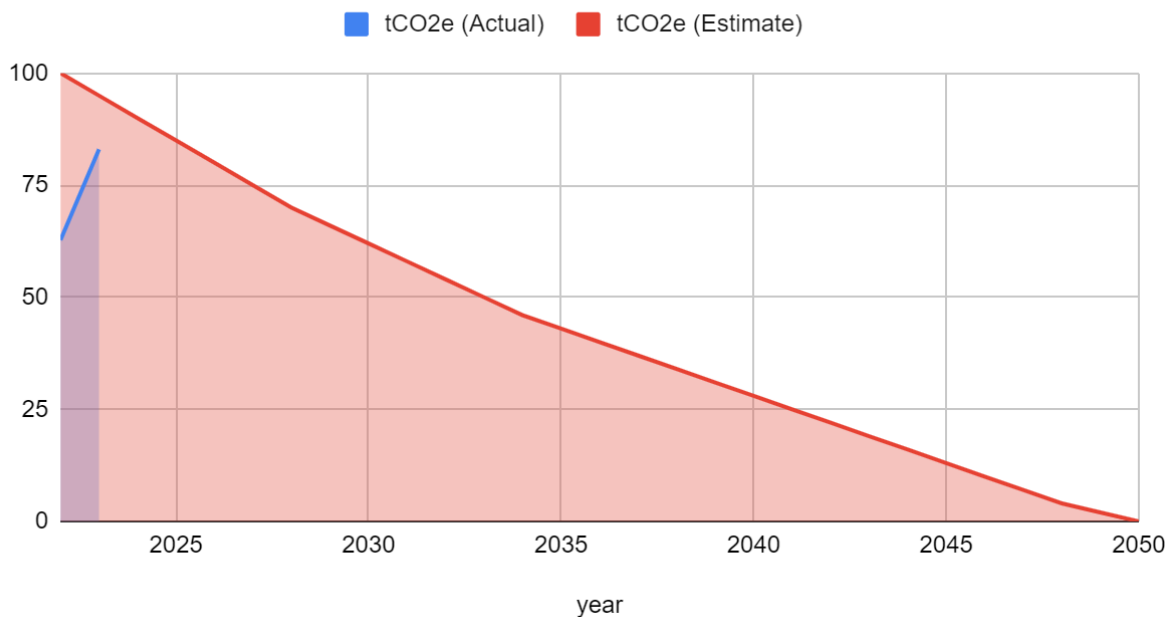
At present, we have estimated that carbon emissions start at 100 tCO<sub>2</sub>e to achieve Net Zero in 2050. We use our 2022 emissions as the first record that already has low carbon emissions when compared to other medical manufacturing companies. However, our company is at a high growth rate and is scaling up in order to deliver more products to customers that increase with every year. In 2023, the company's employees increased to 80 people making the company need to extend the office space causing the increase of carbon emission in scope 2. This might have a further impact on carbon emissions in the future but we will consider processes that are high-releasing and plan to reduce the carbon to net zero in 2050.

In order to continue our progress toward achieving Net Zero, we have adopted the following carbon reduction targets.

We project that carbon emissions will decrease over the next seven years to 62 tCO<sub>2</sub>e by 2030. This is a reduction of 38%.

**Progress against these targets can be seen in the graph below:**

## Carbon Reduction: Projected Vs Actual



## Carbon Reduction Projects

### Completed Carbon Reduction Initiatives

The following environmental management measures and projects have been completed or implemented since the 2022 baseline.

- Reduction of paper usage through implementation of e-signatures
- Recyclable waste collection
- Reduction of energy consumption through installation of LED lights
- Reduction of bottled water through installation of water refill stations

The 2023 carbon emission is still lower than the estimate equating to 83.02 tCO<sub>2</sub>e (12.6% lower than the target) in 2023. The 125% development against the 2022 baseline in scope 3 and scope 2 is related to the number of employees and company growth rate and electrical suppliers in Thailand. For the next year, we plan to implement additional measures to reduce carbon emissions.

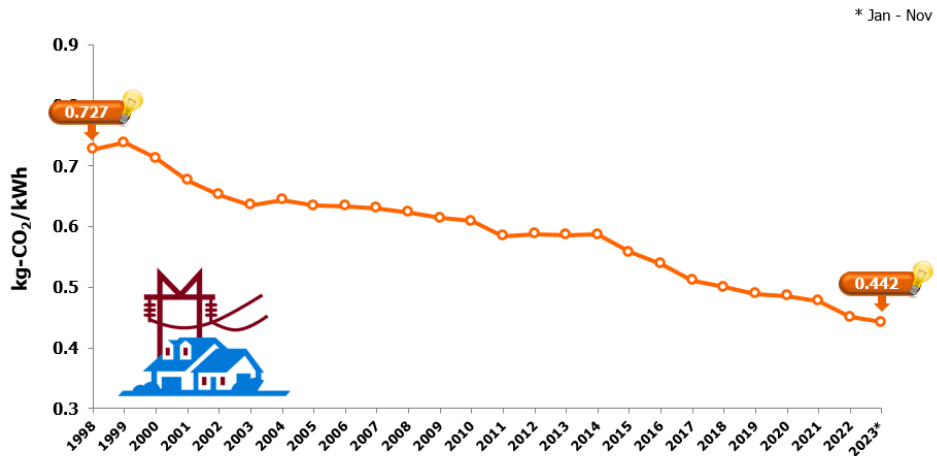
### Planned Carbon Reduction Initiatives

In the future, we hope to implement further measures such as: developing a sustainability delivery plan, reducing the purchasing of electricity, decentralising factories, and upgrading vehicles to ultra-low emissions.

- The delivery plan

- We will use shipping services that have a carbon reduction plan such as UPS which has the commitment to reduce carbon emissions. That company has the target of reducing emission by 50% in 2035.
- Reducing the purchasing of electricity
  - We plan to install more renewable energy at our sites, such as solar panels and others that are suitable for our factory
  - The electrical supplier has the trend to reduce carbon emissions according to the diagram below

### CO<sub>2</sub> Emission per kWh (Consumption)



Unit : kg-CO<sub>2</sub>/kWh

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CO <sub>2</sub>	0.727	0.739	0.713	0.676	0.652	0.636	0.644	0.634	0.634	0.630	0.624	0.614	0.609
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
CO <sub>2</sub>	0.584	0.588	0.586	0.587	0.558	0.538	0.512	0.500	0.489	0.486	0.477	0.451	0.442

Data from the Energy Policy and Planning Office, Ministry of energy, Thailand.

- Decentralising factories
  - We will try to install ultra-low GHG emissions factories in strategic locations in our target countries to reduce the emissions caused by burning fuel for transportation and delivery of our products to the end customers.
- Transportation: Upgrading vehicles to ultra-low emissions
  - We have a plan to use electric vehicles in our manufacturing site. We also have a policy for our employees to use ultra-low emission public vehicles and use public transportation instead of personal combustion vehicles.
  - Reduce air travel by opting for remote meetings whenever feasible, and establishing local offices or employing local staff members.
- Supplier assessment
  - We plan to review the carbon reduction plans and net zero targets of our suppliers

## Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standards for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard<sup>1</sup> and uses the appropriate Government emission conversion factors for greenhouse gas company reporting<sup>2</sup>.

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard<sup>3</sup>.

This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

Signed on behalf of the Supplier:

A handwritten signature in black ink, appearing to be "D.H.", written over a dotted line.

Date: ..... 13/02/24 .....

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<sup>1</sup><https://ghgprotocol.org/corporate-standard>

<sup>2</sup><https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

<sup>3</sup><https://ghgprotocol.org/standards/scope-3-standard>