

***ceEntek's* NET ZERO PLAN**  
**for**  
**ACHIEVING CARBON NEUTRALITY**

January 17, 2022

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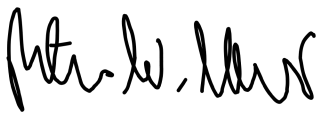
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## INTRODUCTION & BACKGROUND

To meet the widely accepted target of limiting the global temperature rise to 1.5°C above pre-industrial levels and reach net-zero CO<sub>2</sub> emissions by 2035, ceEntek is immediately implementing this Net Zero Plan. ceEntek recognizes that climate change is already affecting every region on Earth and its impacts are increasingly visible in the form of extreme weather, worsening droughts, and heightened risk of forest fires.

ceEntek's Net Zero Plan is prepared in accordance with the Net Zero Standard (Version 1.0) published by the Science Based Targets Initiative (SBTi), dated October 28, 2021.

This plan covers ceEntek's near-term and long-term targets, action plans to achieve these targets, the process to measure success, auditing, and communication of the progress.



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Peter W. Weber, CEO



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Val Iukin, Environmental Director

## MITIGATION PATHWAYS FOR ACHIEVING NET ZERO

ceEntek's pathways to achieve Net Zero can be categorized as follows:

- 1) Reducing the embodied carbon of all raw material inputs.
- 2) Reducing the carbon emissions in the transportation and supply chain of all materials and services.
- 3) Capturing global CO<sub>2</sub> and sequestering it into ceEntek's products.
- 4) Carbon off-sets.

Each of these categories have near-term and long-term impact on ceEntek's business practices and achieving its Science Based Targets (SBT).

### ***Reduction of Embodied Carbon in Raw Materials:***

ceEntek will step by step reduce the amount of cement in its binder and use alternative pozzolanic industrial byproducts to lower the embodied CO<sub>2</sub>.

Many of ceEntek's raw material suppliers (i.e. Cement Industry) have already committed to achieving Net Zero by 2050. ceEntek will pro-actively work with selected cement producers to achieve this target for UHPC suitable cement earlier and change its purchasing policies to only purchase cement from suppliers who have put in place a Net Zero Plan in accordance with the SBTi Standard.

ceEntek is working with Universities and construction materials suppliers to facilitate the use of solid waste materials in UHPC. The results will allow to replace sand with recycled solid waste materials.

### ***Reduction of Carbon Emissions in the Transportation of materials and services:***

- ceEntek's two phase technology allows the reduction of weight for its long-distance shipments to a max. of 1% of the total mass of its UHPC. The bulk of material is blended and supplied as close to the construction site as possible.
- Services – ceEntek will pursue and implement renewable energy sources to run its equipment on project sites. This includes but is not limited to electric power packs recharged with renewable energy sources or other forms of green energy.

### ***Reduction of Carbon Emissions in the Production of Carbon nanofibers.***

- Natural Gas and electricity are the two key elements for the production of ceEntek's Carbon nanofibers. ceEntek will switch over to the use of renewable energy in the form of solar panels to eliminate the use of electricity from coal or gas fired power plants.
- In addition, the exhaust gas from the production process will be separated into two: hydrogen (H) and carbon (C). Hydrogen will be used or sold as carbon offset while carbon will be captured and sequestered as part of the UHPC production process.
- ceEntek is currently developing processes to manufacture Carbon-Nano Fibers (CNF) from CO<sub>2</sub>. The manufacturing of CNF from CO<sub>2</sub> will enable ceEntek to remove atmospheric CO<sub>2</sub> and permanently sequester it into ceEntek's UHPC products.

### ***Capturing global CO<sub>2</sub> and sequestering into ceEntek's products:***

- CO<sub>2</sub> Curing – the addition of CO<sub>2</sub> to UHPC has been proven to have some beneficial effects on the properties of the products. ceEntek will pursue methods to add CO<sub>2</sub> to the batching of UHPC and thereby permanently sequester CO<sub>2</sub> into the hardened UHPC.

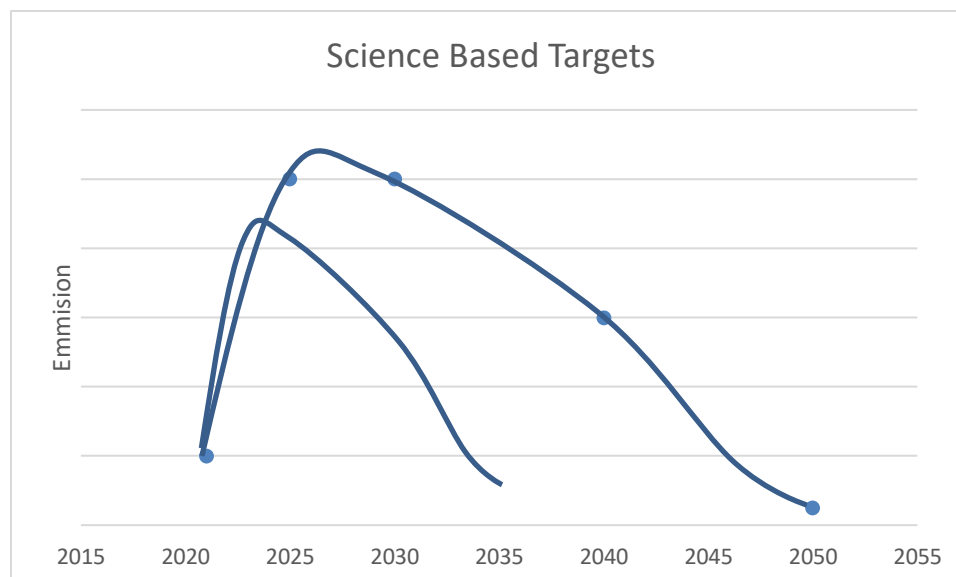
### ***Carbon off-sets:***

In order to fully achieve Net Zero Targets, it will be necessary to use carbon-offsets to achieve the final stages of the long-term targets. The above mentioned concepts will allow ceEntek to offset any remaining CO<sub>2</sub> release by using or selling hydrogen from process gases.

## **ESTABLISHING THE BASELINE YEAR**

ceEntek is a young company in a period of rapid growth and expansion, which means its carbon emissions are bound to increase at a rapid rate. However, ceEntek is committed to balancing both rapid growth and achieving its Science-Based Targets (SBT) by using advanced technologies to meet its capacity expansion targets.

ceEntek will track and determine its emissions while implementing the mitigation pathways to achieve its Science-Based Targets (SBT). ceEntek expects its emissions to increase over the near-term (next five years), by about 50% of the capacity expansion and plateau as further mitigation actions begin to take effect. Carbon emissions will then decrease during the 10 years to reach Net Zero by 2035. The following graph shows a timeline and trend analysis of the emissions.



## NEAR-TERM AND LONG-TERM SBT

Over the next 12 months ceEntek will work on completing a full assessment of its carbon emissions in accordance with the procedures outline in the SBTi Standard, chapter 4 “Setting Near-Term and Long-Term Science-Based Targets”.

## INDEPENDENT ASSESSMENT AND APPROVALS

ceEntek will submit its Net Zero Plan to the SBTi for an independent assessment and approval. The SBTi conducts these assessments to ensure industries are in compliance with the SBTi Corporate Net-Zero Standard.

## UPDATING AND COMMUNICATING THE TARGETS

ceEntek is committed to following the science-based net-zero pathway, and as part of this, ceEntek has identified clear next steps to adjust our current commitment and /or targets to align with this first global science-based Net-Zero Standard of SBTi. ceEntek believes this will help ensure the robustness and impact of our plans and targets.

Over the next 12 months ceEntek will work to document its current carbon emissions, base line and targets, and then update this plan to reflect the information collected. ceEntek is committed to communicating this Net-Zero Plan and any future updates with all stakeholders of the company, on an annual basis.