

Turntide Technologies Climate Pledge Update

| Sustainability Report 2023



OUR MISSION

Invent and scale breakthrough technologies to optimize how humanity uses energy

About Turntide Technologies

Turntide invents and scales breakthrough technologies to optimize how the world uses energy and accelerate the transition to 100% clean energy. These breakthrough technologies accelerate electrification and sustainable operations for energy-intensive industries including commercial and industrial electric vehicles, building operations, and agriculture.

We offer next-generation, high-efficiency technology solutions for electric motors, vehicle powertrains and barn ventilation systems.

Our goal is to increase energy efficiency, thus accelerating the world's transition from fossil fuels and leaving them in the ground where they belong.

Turntide has been recognized around the world for outstanding sustainability solutions. This includes being named one of Fast Company's Most Innovative Companies, a World Changing Idea and the Next Big Thing In Tech. Additionally, our Smart Motor System was named as a Top Product of the Year from the elite Environment + Energy Leader Awards program three years running and our electric battery system was bestowed the Queen's Award for Enterprise.

Because of Turntide's vision and outstanding sustainability solutions, Breakthrough Energy Ventures, Robert Downey Jr.'s FootPrint Coalition Ventures, Amazon Climate Pledge Fund, Keyframe Capital, Fifth Wall's Climate Technology Fund have all invested in the company that is helping to turn the tide on climate change.

Awards



Global Clean Tech 100
Company



Environment + Energy
Leader 100



World Changing Ideas Award



Next Big Thing in Tech



Top Product of 2022



Sustainability Partner Award

Our Climate Commitment

In late 2021, we signed The Climate Pledge.

As a signatory, we committed to:

- Measure and report greenhouse gas emissions on a regular basis.
- Implement decarbonization strategies 10 years earlier than The Paris Agreement through real business change and innovations, including efficiency improvements, renewable energy, materials reductions, and other carbon emission elimination strategies.
- Take actions to neutralize any remaining emissions with additional, quantifiable, real, permanent, and socially beneficial offsets to achieve net-zero annual carbon emissions by 2040.

**THE Paris...
CLIMATE 10 years
PLEDGE Early**

This report is our first update on efforts and progress made to date.

A Note from Our CEO, Ryan Morris

At Turntide, we seek to change the momentum of climate change at scale. The world has just one decade remaining to radically reduce carbon emissions to avoid catastrophe, and Turntide is poised to be a vital part of this strategy. Our mission is to transcend technology barriers to make every watt worthwhile for humanity and to help accelerate the transition to 100% clean energy.

By developing sustainable operations technologies, including high-efficient electric motors and electrification solutions for commercial real estate, agriculture, and transport, we will help impact the world's energy consumption and decarbonize some of the most challenging industries. To date, Turntide's technologies are in more than 300K electric vehicles, 5,000 buildings, and 1100 dairy farms around the world.

As a mission-driven organization, we are looking across our business units, workforce, and value chain partners to reduce carbon emissions while publicly advocating for climate action in society and within the industries we serve.

Climate change demands urgent and universal action. Turntide Technologies is proud to sign The Climate Pledge. We stand with Amazon, Global Optimism, and the other signatories of The Climate Pledge in a commitment to being net-zero carbon by 2040 — ten years ahead of The Paris Agreement.

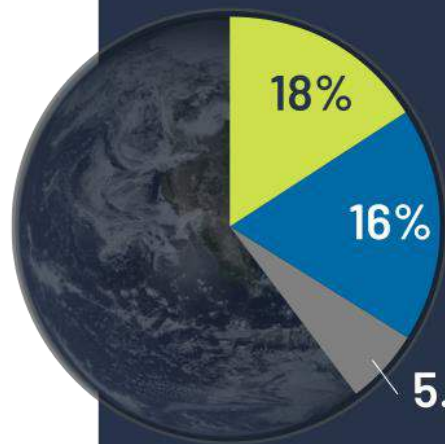
**- Ryan Morris, Chairman & CEO
Turntide Technologies**



Impacting Climate Challenge at Scale

By developing technology to accelerate the decarbonization and electrification of energy-intensive industries like transport, buildings, and agriculture which are responsible for over half of emissions, we are providing a path for companies and the world to reach net zero.

These solutions drive sustainability across business models, empowering businesses to optimize resources, minimize waste, and reduce costs while boosting profits and strengthening their brands. Our technology delivers immediate ROI, giving customers the confidence to "go green" and making it an easy, profitable business decision.



Buildings

Buildings account for nearly 18% of all greenhouse gas emissions (GHGs)

Transport

The transportation industry accounts for 16% of global CO₂ emissions from direct fuel consumption

Livestock

5.8% of global GHG emissions are from livestock food production

Our Impact



300K

Electrified Vehicles

Turntide Electrification

Turntide Electrification aims to revolutionize the carbon-intensive transportation industry by simplifying and de-risking how vehicle manufacturers redesign their legacy internal combustion systems. Turntide for Electrification brings together electrification and drivetrain components for optimal efficiency, safety, and performance.



12,000

Motors Installed

Turntide for Buildings

Turntide for Buildings is a flexible, intelligent building solution that can dramatically improve energy efficiency and building operations while lowering maintenance costs. Centered around its Smart Motor System, this holistic and open building solution transforms how organizations track, manage, and quantify their progress in running more sustainable commercial building operations.



1100

Dairy Farms

Turntide Intelligent Barn

Turntide powers smart barn systems for dairy farms worldwide. Their Intelligent Barn solution uses the Smart Motor System and scientifically designed environmental systems to optimize cow health, comfort, and productivity. Turntide's innovative technology optimizes cooling, lighting, and ventilation for improved animal wellbeing, production, and operational efficiency.

How We Impact Our Customer's Carbon Emissions

Turntide's mission is to transcend technology barriers to make every watt worthwhile, accelerating our global transition to 100% clean energy. Tackling energy efficiency and waste in our key focus industries will significantly impact the world's goal of achieving net zero by 2050.



If all the world's motors were replaced with Turntide's technology, we could reduce annual global carbon emissions by 2,300 megatons - equivalent to adding seven new Amazon rainforests.

Case Study: Ivanhoe Cambridge Reduces Energy Consumption by 35%

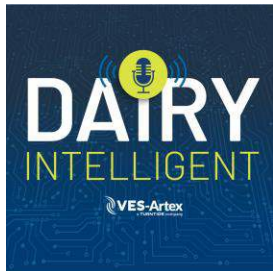
With ambitious climate goals and plans to reduce the overall carbon intensity of its real estate holdings by 35% by 2025 and achieve net-zero carbon by 2040, global real estate company Ivanhoe Cambridge initiated a multi-prong carbon reduction strategy.

Because 40% of commercial real estate's emissions footprint comes via aging and inefficient HVAC systems, this strategy included retrofitting HVAC motors in shopping mall locations with Turntide's highly efficient Smart Motor System.

A pilot program was launched in two locations to test the energy savings. Turntide's motors yielded more than 35% energy savings in each location. This equals 39 metric tons of CO₂. In real terms, this equates to:

- Saving greenhouse gas emissions from driving 96K thousand miles by your average gasoline-powered passenger vehicle
- Carbon sequestration of 46 acres of forests for one year
- Saving CO₂ emissions from charging nearly 5 million cell phones

Our Advocacy



Dairy Intelligent Podcast

Acknowledged as one of the best podcasts for the industry, Dairy Intelligent interviews industry experts on innovation, operational efficiencies and sustainability.

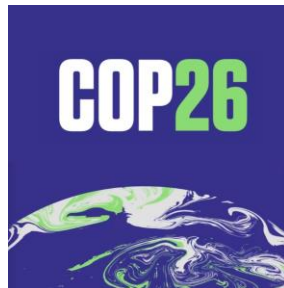
NetZero Action Heroes

Turntide's NetZero Heroes podcast is a series of episodes that explores the stories of people and companies that are driving the world towards a more sustainable future. Each episode features a different guest who shares their experiences and insights on topics ranging from renewable energy and circular economy to sustainable agriculture and conscious consumption.



Turntide Hosts Zero Carbon Battle Bus Headed to COP26

Two weeks before COP26, the Planet Mark Zero Carbon Battle Bus visited Turntide's Gateshead location in the UK during its Carbon Zero Tour. During the visit, Planet Mark and Turntide met with business and council leaders to highlight actions they can take to address the climate crisis.



Showcase with Hitachi Rail at Cop26

Building the low-carbon economy of the future requires collaboration among government, civil society, and private companies. We are very proud that our partner Hitachi Rail showcased Turntide's Hyperdrive Battery System, which powers their electric trains coming to market.

Approach & Methodology to Calculate Carbon Emissions

Our Approach

The data used in this report is comprised of actual figures from FY '21 and FY '22 where possible. Turntide uses GHG definitions for identifying Carbon Scopes and Operational Control for assessing carbon emission ownership. In cases where actual figures are unavailable, we have made reasonable estimations or assumptions. Where estimations have been made, we have indicated so in the text.

Through the data collection process, we occasionally identify better quality historical data. We are continuously working to improve our data quality, which remains one of our biggest challenges despite significant improvements. The information presented in this report represents the best information available at the time of publication.

GHG Corporate Protocol

Trust is an integral part of our culture at Turntide and we will be open and honest about our progress. This report is the first of its kind for Turntide and signals our intention to communicate regularly about our decarbonization efforts.

Demonstrating our commitment to clear and comprehensive disclosure, the content of this report has been informed by leading disclosure frameworks and standards, including the GHG Protocol.

GHG Protocol supplies the world's most widely used greenhouse gas accounting standards. The standards are designed to provide a framework for businesses, governments, and other entities to measure and report their greenhouse gas emissions in ways that support their missions and goals.

Our Journey Begins

In our efforts to reach net zero by 2040, we needed to start at square one. This means we had to get our arms around our global operations and start taking stock of the data we had and the data we needed. After acquiring six businesses in 2020 and 2021, this was no small feat.

Where we started

- FY '21 and FY '22 laid the foundation for building a sustainable and efficient carbon accounting program.
- Focused on Scope 1 & Scope 2 data collection about our energy consumption for the 13 office locations we own or lease.
- We selected Salesforce Net Zero Cloud as our carbon accounting tool and began to assemble data across all of our locations.

While we are well underway, we still have more work to do to develop our processes.



Office Locations



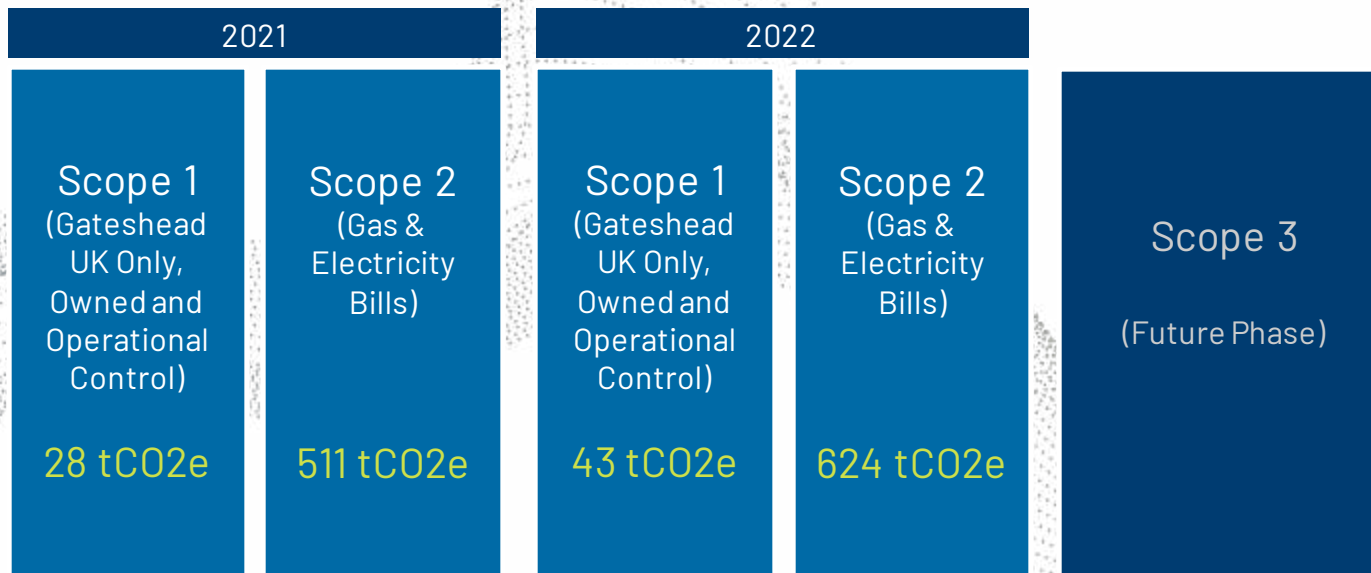
*Omissions – In FY '21 Turntide occupied offices in San Francisco USA, Santa Barbara USA, and Abbotsford ,CAN. These offices are not included in the carbon calculations.

*In FY '22 we omitted Wei Fang, China and Santa Barbara, USA, due to lack of data. These offices will not be included in carbon emissions.

*Note – Turntide acquired UK locations midway through 2021.

Environmental Performance Overview 2021 and 2022

During 2021 as a collective business, we emitted 539 tonnes (t) of carbon dioxide (CO₂) equivalent (e), largely made up of natural gas and electricity consumption through our sites, and included six months of tracking from three new locations added via acquisition in the UK. 2022 includes full-year measures for all locations not noted as omitted on the previous slide.



*For the purposes of this report Turntide uses the GHG Protocol definition which defines Scope 1 as assets which Turntide owns and has Operational Control over that produce tCO₂e emissions.

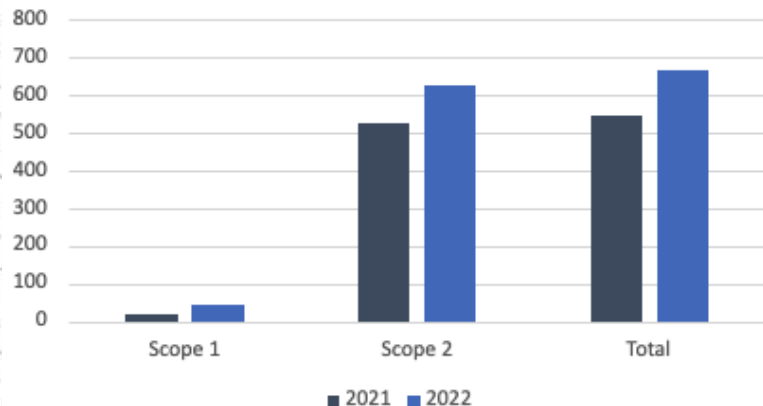
*Scope 2 is defined as assets which Turntide Leases that produce tCO₂ emissions.

Scope 1 & 2

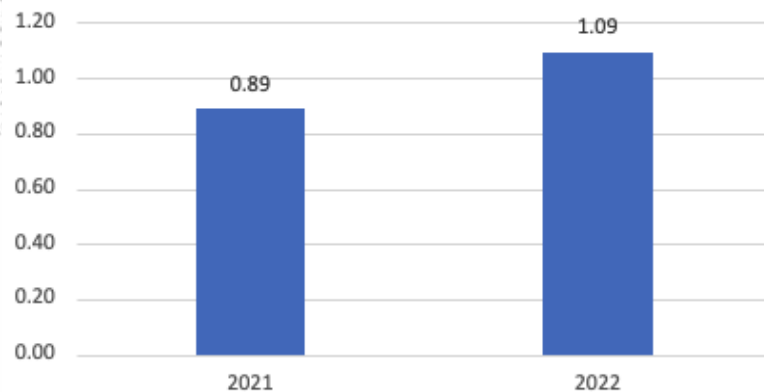
Total Carbon Emissions per Employee

Turntide calculated emissions per employee based on Scope 1 & 2 emissions for 2021 and 2022. In 2021, only six months were factored in for UK locations and employees due to acquisitions.

YoY Scope 1 & 2 tCO2e Emissions



tCO2e / Employee



Scope 1 & 2

Total CO2 Emissions by Location

Turntide converted natural gas and electricity consumption data sourced from local utility providers to tCO2e (tonnes carbon dioxide equivalent) for the purpose of quantifying our greenhouse gas emissions. 2021 numbers include six months of UK location data.

2021



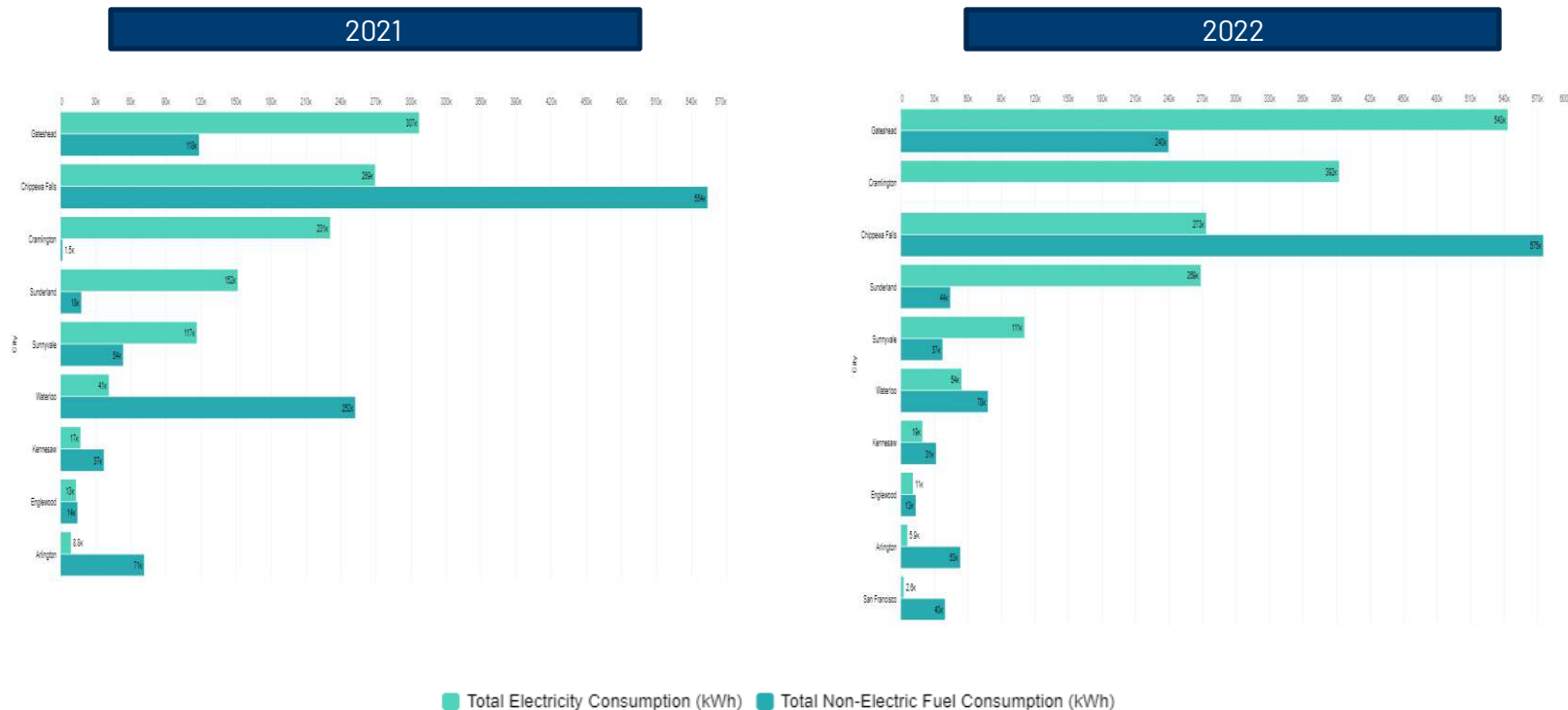
2022



Scope 1 & 2

Total kWh Consumption by Location

Electricity and natural gas consumption by location, as measured by local utilities. 2021 numbers include six months of UK location data.



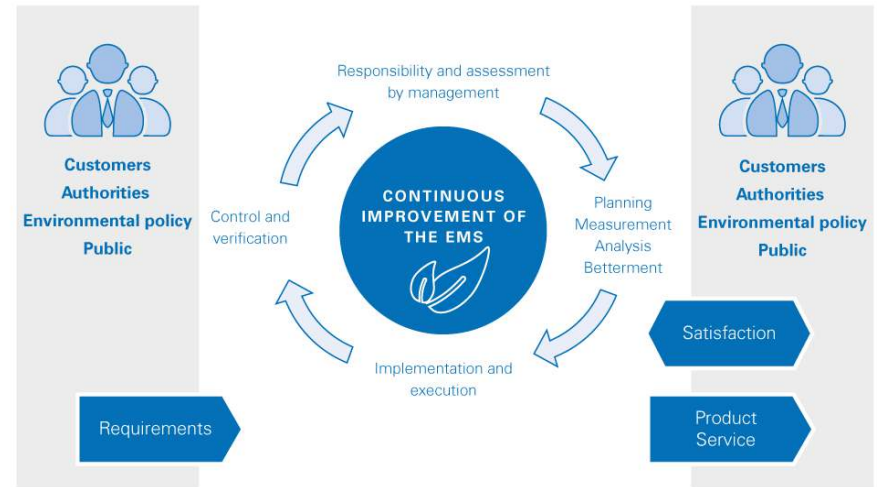
Success Certifications

EMS – ISO 14001

International Organization for Standardization (ISO) 14001 is the international standard that provides the requirements for an effective Environmental Management System (EMS). The standard offers guidance for the design and implementation of an EMS and provides a framework to help organizations measure and improve the way natural resources are used and disposed of.

All three of Turntide's UK locations – Gateshead, Cramlington, and Sunderland are ISO 14001 certified and have been several years.

Our EMS ensures environmental compliance is maintained, our programs and test protocols adhere to local and national regulatory requirements, and continuous environmental improvement is part of our everyday activities.



Goals

A Look *Forward*

Turntide has only just begun our journey to net zero, and we have a long road ahead. We are committed to making our products more energy efficient and providing our customers with solutions that help further their net zero goals as we explore ways to decarbonize our operations. We still have many areas to develop, including:

- Continue data collection
- Build a phased strategic plan/approach
- Institute internal processes across sites
- Identify top carbon emitters
- Research approach to Scope 3 reporting
- Explore synergies with other Climate Pledge signatories to help offset our carbon emissions



1295 Forgewood Avenue
Sunnyvale, CA 94089 USA
www.turntide.com

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