

MATERIAL TOPIC

# Climate Change

Understanding how our business practices impact climate change allows us to develop a decarbonization strategy and execute actions to reduce our carbon footprint.



Reducing GHG emissions, reducing our energy consumption, decarbonizing, and working with global partners to strengthen our capacity to mitigate and adapt to climate change and climate-related impacts.

Value Chain



GOALS

- Reduce Scope 1 and 2 GHG emissions by 60% by 2030
- Ensure full compliance with climate-related frameworks and regulations
- Increase renewable energy use

PROGRESS

- Reduced absolute Scope 1 and 2 GHG emissions and intensity by 4%
- Committed to SBTi to set Science-Based Targets
- Continued procuring green energy where possible
- Continued mapping Scope 3 categories

## How We Are Managing It

To effectively address the evolving impact of climate change, it is imperative that we have a strategy to address our carbon emissions. As outlined below, we have undertaken a holistic and comprehensive approach, based on research, science, technology, and market realities, to develop our strategy for climate action.

## Emissions and Energy

The key to our climate change strategy starts with assessing our carbon footprint and reducing our emissions across our operations. Our manufacturing processes, transportation, office operations, and supply chain are all sources of air and GHG emissions. These are emitted when fossil-fuel-based combustion processes are used to generate electricity for manufacturing, heating and cooling, lighting and building management systems, and to operate cars, trucks and other small machinery. In addition, we use fluorinated gases as refrigerants. However, our fluorinated gases are immaterial due to our modernized HVAC equipment used.

Maximizing efficiency is our priority and an essential step to reducing our emissions. Energy-efficiency measures include timely maintenance of air-conditioning, heating, ventilation, and building management systems. Energy efficiency levels encompass aligning lighting levels based on occupancy and availability of natural light. The utilization of LED lights and implementation of energy management systems are also considered energy efficiency measures. The other important component of our energy management plans is our renewable energy production and procurement. The four primary levels in our energy strategy are as follows:

- Energy efficiency
- Renewable energy production
- Renewable energy procurement
- Fleet electrification

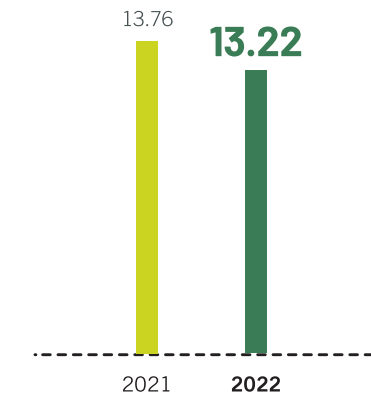
# 175,276 tonnes

Total GHG emissions (Scope 1 and 2) of carbon dioxide equivalent (tCO<sub>2</sub>e)

# -4%

reduction of intensity and absolute Scope 1 and 2 GHG emissions

Total Scope 1 and 2 GHG Emissions Intensity (tCO<sub>2</sub>e per sales revenue, US\$ million)



KEY INITIATIVES AND PROGRESS

- In 2022 there were no incidents of non-compliance with air emission regulations.
- Our GHG emissions (Scope 1 and 2) totaled 175,276 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e). There was a reduction of intensity and absolute Scope 1 and 2 GHG emissions by 4% compared to the prior year.
- 4.5% of our overall energy consumption is composed of hydro, solar or biomass energy.
- Our Floorcare site in Greer, SC completed the conversion of all propane fork trucks to battery or electric reducing the overall propane use by over 70,000 lbs. per year.
- After assessing the potential air pollutants we produce, results show that these air emissions are not significant, however, we continue to monitor and evaluate them.

RISK	OPPORTUNITIES	RESPONSE
<ul style="list-style-type: none"> <li>• Not achieving environmental targets and the resulting financial impacts</li> <li>• Failure in the transition to clean, renewable energy sources</li> </ul>	<ul style="list-style-type: none"> <li>• Implement energy efficiency programs, transition to renewable energy and electric vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Conducting energy assessments at all key sites across the Group and establishing an energy reduction action plan</li> <li>• Creating Scope 1 and 2 reduction initiatives</li> <li>• Mapping Scope 3</li> <li>• Developing plans to mitigate physical and transitional climate risks</li> </ul>
<ul style="list-style-type: none"> <li>• Non-compliance with climate-related frameworks and regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Align climate action and disclosure with climate-related frameworks and regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Climate action and disclosure training for relevant colleagues</li> <li>• Reporting metrics for climate action and compliance with related frameworks and regulations</li> </ul>
<ul style="list-style-type: none"> <li>• Physical damage to assets from climate events that could lead to business disruption</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a strategy for operational and supply chain resilience</li> </ul>	<ul style="list-style-type: none"> <li>• Climate resilience strategy development</li> <li>• Collaborating with industry and NGO partners to address climate action</li> </ul>



**KEY INITIATIVES AND PROGRESS**

Our total energy consumption in 2022 amounted to 488,380 mWh. This represented a 16% increase compared to 2021.

- Although energy consumption has increased, the amount of green energy procured is up 8% from 2021.
- This year, our Asia Industrial Park (AIP) in the PRC took the following steps to decrease emissions and improve energy efficiency:
  - » Reduced light usage, saving 20,000 kWh of electricity per year.
  - » Installed a time controller at dormitories to manage the HVAC system more efficiently, saving 303,682 kWh of electricity per year.
  - » Removed exhaust fans saving approximately 73,728 kWh of electricity per year.
  - » Replaced five heat pumps saving approximately 6% of electricity consumption per year or nearly 11,388 kWh of energy.
  - » Modified the workshop high altitude fan control circuit saving roughly 518,400 kWh of electricity per year.
  - » Replaced six 3KW dryers with four 3.38KW dryers and eliminated an exhaust air duct, saving 51,517 kWh of electricity consumption.
  - » Optimized the standby time and temperature setting of the heat treatment to save 2,671 kWh of electricity.
  - » Reduced centralized air supply pressure among our operations.
  - » Created a reporting mechanism for compressed air leakage in the production workshop to preserve energy.

We continuously evaluate our energy usage in our facilities through energy audits. In 2022, we ran comprehensive energy audits at our main sites in the PRC and the USA. The audits investigated the usage of alternative energy sources and energy-saving opportunities. The findings emphasized short payback measures and many major scale savings through assessments at individual manufacturing plants. This process included site inspections to assess operations, support machinery, and maintain activities. In the USA, several energy efficiency measures were identified and will be implemented in the next few years. In the PRC, over 20 energy-efficiency measures were identified and will be implemented as part of our decarbonization program. Some of these measures include upgrading lighting, replacing and upgrading equipment, establishing energy efficiency controls, and optimizing processes.

Throughout all our BUs we have a comprehensive process for the development of vast amounts of products, batteries, and chargers each year across multiple brands and product lines. Every stage of development is supported by relevant testing procedures, utilizing significant testing times, sample sizes, and applications. To minimize the impact of testing on energy consumption, our test labs have developed dedicated test systems based on regenerative electronic loads. As a result of this technology, up to 92% of the energy needed to validate and qualify these products can be recovered. In 2022 alone, this testing system generated an approximate net energy saving of 121,000 kWh over 27,000 samples related to 793,000 test cycles.

We continue to ensure that new manufacturing sites incorporate environmental considerations such as energy efficiency, use of renewable energy, biodiversity, water conservation in the design and construction of buildings, as well as systems and equipment.



In 2022, we continued to assess onsite renewable energy in our operations in Vietnam, Europe, and the USA. In addition, we have assessed other offsite renewable energy procurement opportunities such as Power Purchase Agreements, green tariffs, green procurement, and renewable energy certificates.

A large part of our decarbonization strategy is green energy procurement, both on and offsite. Regarding energy procurement on site, we installed solar panels in our Dandenong South facility in Victoria, Australia and our Eastern Creek facility in New South Wales, Australia.

In addition to procuring green energy onsite, we have successfully procured external green energy for use in Australia, Germany and China. For example, our Dandenong South site and our Carole Park site in Queensland both procured 100% green energy in 2022. All sites in Milwaukee, WI also procure green energy resulting in zero GHG emissions. For BUs that don't use green energy yet, we plan to implement the following:

- Review solar roof opportunities
- Switch standard grid to green energy
- Review Power Purchase Agreements (PPAs) / Virtual Power Purchase Agreements (VPPAs)

We are pursuing an offsite project in the USA to help meet our decarbonization target. Our MILWAUKEE North America BU engaged experts at their main energy provider, WE Energies, to perform energy audits at all locations in Southeastern Wisconsin. After reviewing their projected consumption, our MILWAUKEE BU entered a green energy commitment with WE Energies which provides 100% renewable energy at all Southeastern Wisconsin Milwaukee locations. The agreement commenced in February 2022 and makes our MILWAUKEE business one of the early adopters of the Energy for Tomorrow program. The Energy for Tomorrow program, offered to customers of WE Energies, aims to enhance the production of electricity from clean and renewable sources such as wind and solar power. More information can be found on the WE Energies website.

**KEY INITIATIVES AND PROGRESS**

Initiatives focused on renewable energy included:

- Procuring green energy across operations in the United States, Vietnam and Europe.
- Approximately 14% of our overall energy is generated from green energy sources.



**TTI Innovation Center**  
Greenville, USA



- The TTI Innovation Center in Greenville, South Carolina has earned the ENERGY STAR certification from the U.S. Environmental Protection Agency (EPA).
- The Innovation Center scored in the top 10% among similar buildings in the US. The ENERGY STAR Certification represents proven, verified superior energy performance over a 12-month period. Preventive maintenance and monitoring systems contribute to efficiency at the Innovation Center. LED lighting with timers and motion sensors, water use management, efficient chilled water systems, and Energy Star low NOx condensing boilers all contribute to our building efficiency. Business operation professionals complete over 2000 preventive maintenance items at the Innovation Center each year to keep systems running at peak efficiency. Technical experts monitor advanced automation systems daily to recognize issues early and keep settings at optimum levels.

**CANADA**

**AMERICAS**

- 1
- 2
- 3
- 4

**TTI Canada**  
Toronto, Canada

- BOMA Gold Certificate of Excellence
- TOBY Building of the Year
- BOMA Best
- Energy Star
- WiredScore
- FitWel certified

**TTI NA HQ**  
Fort Lauderdale, USA

LEED EBOM-Gold Level certified building

To improve the impact our business has on the environment, we have a number of our global locations certified in Leadership Energy and Environmental Design (LEED). LEED is a respectable, widely used, green building rating system that implements WELL building standards and numerous other sustainable building standards. WELL is a performance-based system for measuring, certifying, and monitoring features of the built environment and how they impact human health.

- Our Fort Lauderdale TTI NA HQ building, as well as our TTI Asia HQ building, located at Kowloon Commerce Center, Hong Kong, have LEED -Gold Level certificates.
- Our Toronto Canada site has earned a BOMA Gold Certificate of Excellence, TOBY Building of the Year, BOMA Best, Energy Star, WiredScore, and FitWel certified award.
- Our TTI Vietnam Deutsches Haus Ho Chi Minh location earned a DGNB- Gold Level certificate as well as a LEED -Platinum Level certificate.

**EUROPE**

**ASIA**

**TTI Asia HQ**

Hong Kong, China

LEED – Gold Level certified building

**TTI ANZ**

4 Star, Green Star Performance by the Building Council of Australia

**AUSTRALIA**

- 1 Milwaukee  
Sun Prairie, Wisconsin, USA  
Mukwonago, Wisconsin, USA
- 2 Milwaukee and TTI FC  
Cookeville, Tennessee, USA
- 3 Milwaukee  
Jackson, Mississippi, USA  
Greenwood, Mississippi, USA
- 4 Milwaukee  
Torreón, Coahuila, Mexico
- 5 Drebo Germany  
Altshausen, Germany
- 6 TTI CZ  
Nýřany, Czech Republic
- 7 TTI AIP  
Dongguan, China
- 8 TTI Zhuhai  
Zhuhai, China
- 9 TTI Vietnam Manufacturing  
Dong Nai Province, Vietnam  
  
TTI Vietnam Manufacturing  
Binh Duong Province, Vietnam  
  
Upcoming Factory (Saigon High-Tech Park)  
Ho Chi Minh City, Vietnam

**Diversification**

By diversifying and localizing our manufacturing and supply chains, we can reduce GHG emissions and manage climate risk. Through diversification and localization, we are able to source and produce goods closer to market, reducing the transportation required and thereby the emissions generated. This also allows us to build closer ties with new markets as we engage local suppliers. Our goal is to work with business partners around the globe to upgrade environmental and safety standards across our value chain. We contribute to local community developments, creating a positive impact on their economies, living conditions, and educational prospects.

**Climate Risk Analysis**

We performed a Climate Risk Analysis so that we could better understand the risk that climate change poses to our business. To inform our risk management and strategic planning processes, we examined both physical risks that could affect crucial locations and transition risks. This analysis was conducted by working with experts in the field while also aligning with the HKEX's "Guidance on Climate Disclosures" (November 2021) and the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

A physical climate risk analysis was conducted on 13 of our key sites across markets in China, Vietnam, and Mexico. This analysis entailed modeling the impacts of eight acute and chronic physical risks under three future climate scenarios. A map of our key manufacturing sites can be found above.



Upcoming Factory (Saigon High-Tech Park)  
Ho Chi Minh City, Vietnam





A portfolio-level and asset-level financial analysis was conducted to evaluate potential financial losses from physical asset damage and potential business interruptions (i.e., operational losses). Markets and specific assets were ranked and prioritized in terms of their financial climate-value-at-risk (CVaR) to us. The preliminary analysis determined that regarding the identified portfolio, we are the most exposed to acute climate events such as typhoons, storm surges, and flooding from rainfall and river expansion. Due to this we could be impacted by chronic events such as extreme heat.

A transition risk analysis identifies risks and opportunities involved with transitioning to a low-carbon economy. This analysis was conducted under the following climate scenarios published by the [International Energy Agency \(IEA\)](#):

- Net Zero Emissions by 2050 Scenario (NZE), which is a stringent pathway; and
- Stated Policies Scenario (STEP), which is a business-as-usual pathway.

Government policies, the economy, and technology trends were reviewed to identify a list of transition risks and opportunities. They were further prioritized according to their impacts on our business, and operations and are as follows:

- Market and Reputation – Increased demand for energy-efficient products, electrification, and switching to low-carbon sources.

» Higher energy prices will drive demand for efficient products. Households will also be less reliant on oil and gas to meet their energy needs. We see this risk as an opportunity to gain a greater reputation and market share while meeting customers' expectations.

- Increased carbon price – Carbon pricing mechanisms through carbon taxes or emission trading systems and emerging carbon regulations will be introduced to all operating markets.

» This could increase the expenditure for compliance or enhancement of energy efficiency in operations.

We have plans to re-engage experts to conduct a physical and transition risk analysis on all our key sites in 2023.

### Decarbonization

To align with the Paris Agreement to limit global warming to 1.5 degrees Celsius compared to pre-industrial levels, TTI set out to work towards reducing our GHG emissions. We have followed best practice guidelines and methodologies, including the Science-Based Targets initiative to support our goals and implement a robust action plan. As part of the process, we completed a comprehensive energy audit of all manufacturing sites in the PRC in 2022. During this reporting period we were able to expand that decarbonization guidance to other BUs across all regions, requesting guidance to other sites across all regions, and initiate additional internal energy audits to ensure assessments are accurate and complete.

### SBTi Commitment Letter

In 2018, to effectively address climate change, the Intergovernmental Panel on Climate Change (IPCC) announced that limiting global warming to 1.5 degrees C above pre-industrial levels is crucial to avoid severe consequences. The IPCC is an intergovernmental body of the United Nations responsible for advancing our understanding of climate change that is caused by human actions. Many companies have been increasing efforts to help reduce climate change since the announcement. The Science Based Targets initiative (SBTi) was established in 2015 to help companies set emission reduction targets in line with climate science and Paris Agreement goals. These targets provide a roadmap for companies to lower their GHG emissions and take action against climate change, leading to decarbonization and increased competitiveness in the shift to a net-zero economy. By signing the SBTi commitment letter, we have now joined the ranks of over 1,200 other companies worldwide leading the transition.

To show our dedication to reaching our emission reduction target, we are officially committed to the Science Based Target initiatives (SBTi) as of March 24, 2023. Our overall long-term plan is to set incremental goals to demonstrate our commitment and alignment with the global shift toward reducing carbon emissions.

As part of our decarbonization plan, we have reviewed our Scope 1 and 2 emissions: Scope 1 emissions arise from onsite operations and company-operated vehicles; and Scope 2 results indirectly from purchased electricity. Earlier in 2022, we mapped out a decarbonization roadmap with concrete plans to reduce Scope 1 and 2 GHG emissions by 60% by 2030 as compared to 2021.

We are currently mapping our Scope 3 emissions and look forward to sharing our mapping results by 2025.

Once completed, we will validate our current Scope 1 and Scope 2 60% reduction target along with a reduction target for our most material categories.



### Steps in the SBTi process

