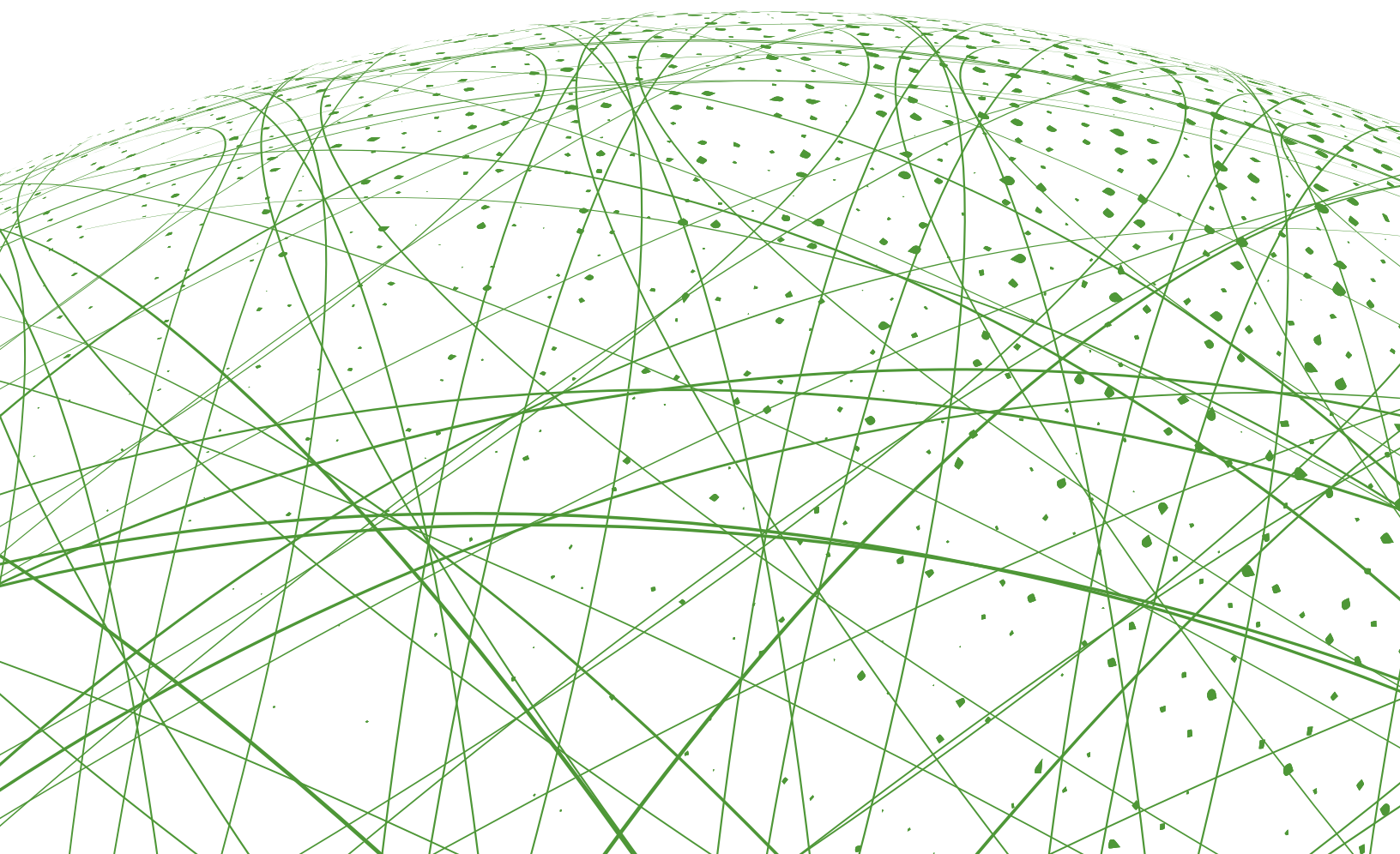




Proven to **perform.**

2021 TCFD REPORT



Who We Are: Solving the World's Challenges Through Materials Science

ATI is a \$3 billion global producer of high-performance materials and solutions. We are a leader in high value markets that require suppliers to have deep materials science expertise, significant process know-how, stringent product qualifications and strong customer and supplier relationships.

Our growth strategy is centered primarily on commercial aerospace and defense, as well as critical adjacent applications within the electronics, specialty energy, and medical markets that leverage our aerospace expertise and capabilities – markets that are growing, have extremely high barriers to entry and offer aero-like profitability profiles.

Through our extraordinary materials science and advanced, integrated process excellence, we create new specialty materials, then shape them to meet our customers' need for ultimate performance and long-term value. When the challenge is searing heat, crushing stress, blistering corrosion, or all of the above, our materials make amazing achievements possible. For example, our materials have had a critical role in delivering:

- **Every new generation of aircraft in the last 50 years**, including airframes and jet engines that continue to safely push the limits of power, fuel efficiency and reliability. Our materials and components help aircraft manufacturers save fuel, reduce emissions, reach new levels of efficiency, reliability and durability, and safely carry millions of travelers every single day;
- **Clean energy solutions** such as green hydrogen production, geothermal applications, nuclear power generation, energy storage and pollution control equipment;
- **Next-generation defense systems** and armor for protecting people and equipment from the ever-evolving threat of deadly explosive weapons; and
- **Medical advances** that range from superconducting wire for MRI machines to implantable stents and artificial joints that save and improve thousands of lives every day.

Our Values and Commitment to Climate Action

We recognize that a company should be defined not only by near-term financial results, but also by its values and the way in which those values inform its actions. Our core values set the foundation of everything we achieve. The strength of these values – Integrity; Safety & Sustainability; Accountability; Teamwork & Respect; and Innovation – is woven into our corporate mindset, driving us to do the right things in the right way. Consistent with these values, we believe that long-term excellence and profitability

Climate-Related Initiatives and Results

As an industry leader, we are advancing our stated environmental sustainability goals, including targets for reductions in GHG emissions, through a combination of efforts. Recent highlights include:

- Publication of our stand-alone **ESG report** annually since 2017;
- Medium-term and long-term goals for **reductions in the energy intensity of our manufacturing operations** and GHG emissions established in 2018;
- A 2020 LED lighting retrofit at our Cudahy, Wisconsin facility that **reduced annual energy usage at that facility by 8.4 million kilowatt-hours**, the equivalent to the GHG emissions of more than 1,200 passenger cars driven for one year;
- Annual purchases, beginning in 2019, of **carbon-free electricity** comprising a significant portion of the electricity used by our manufacturing operations;
- Annual declines in GHG emissions year over year since 2018, including an overall **45% decrease in GHG emissions** by our manufacturing facilities in 2021 compared to 2018;
- 2021 launch, as a result of a collaboration between ATI and WE Energies, of a **7,000 panel solar farm on ATI property in Cudahy, Wisconsin**, providing carbon-free power to homes across Wisconsin; and
- **2022 commitment** to reevaluate and realign our climate-related and other environmental sustainability goals.

require us to operate in ways that promote environmental and social sustainability, supported by appropriate governance structures and enterprise risk oversight practices. We are committed to protecting our people, our communities and our planet through our products and the way that we operate.

We support the principles of the Paris Accord and efforts to reduce green-house gas ("GHG") emissions and understand that businesses such as ours have an active role to play in identifying and implementing solutions to the challenges posed by climate change. We first publicly articulated climate-related targets for reducing GHG emissions and energy intensity, among other sustainability metrics, in 2017. Since then, we have reported annually on our steady progress in achieving, or exceeding, the reduction targets that we set. Last year, we committed to publishing this report in recognition of our stakeholders' growing interest in gaining a deeper understanding of the climate-related risks and opportunities that climate change presents to our business.

Our operations, and those of our customers and suppliers, produce GHG emissions. Although we produce some specialty steel products, **we do not burn any coal** in our own operations, in contrast to integrated carbon steel producers, generally. Additionally, as discussed in greater detail below and in [our annual ESG Report](#), we make extensive use of recycled scrap material in our production processes.

Nevertheless, producing the highly specialized alloys and other critical products that we provide to the commercial aerospace, defense and other markets requires that we melt raw materials at very high heat and engage in other processes that consume energy. While a significant portion of those processes are fueled by electricity, much of which currently is sourced from carbon-free generators, the majority use natural gas. As discussed in this Report and in our annual ESG Report, we believe we have made important strides in addressing our environmental impact, including as it pertains to GHG emissions. Work remains, however, as we continue to address the risks and opportunities facing our business as a result of climate change and the potential transition to a lower-carbon global economy.

Executive Summary

In our 2020 ESG Report, published in mid-2021, we committed to adopting the recommendations of the Task Force of Climate-related Financial Disclosures ("TCFD") as part of our annual reporting to our stakeholders.

To meet this challenge, we undertook an enterprise-wide evaluation effort with a view toward articulating our alignment with the core elements of TCFD's recommendations: governance; strategy; risk management; metrics and targets. The results of this effort are outlined in this Report.

TCFD's Core Disclosure Recommendations



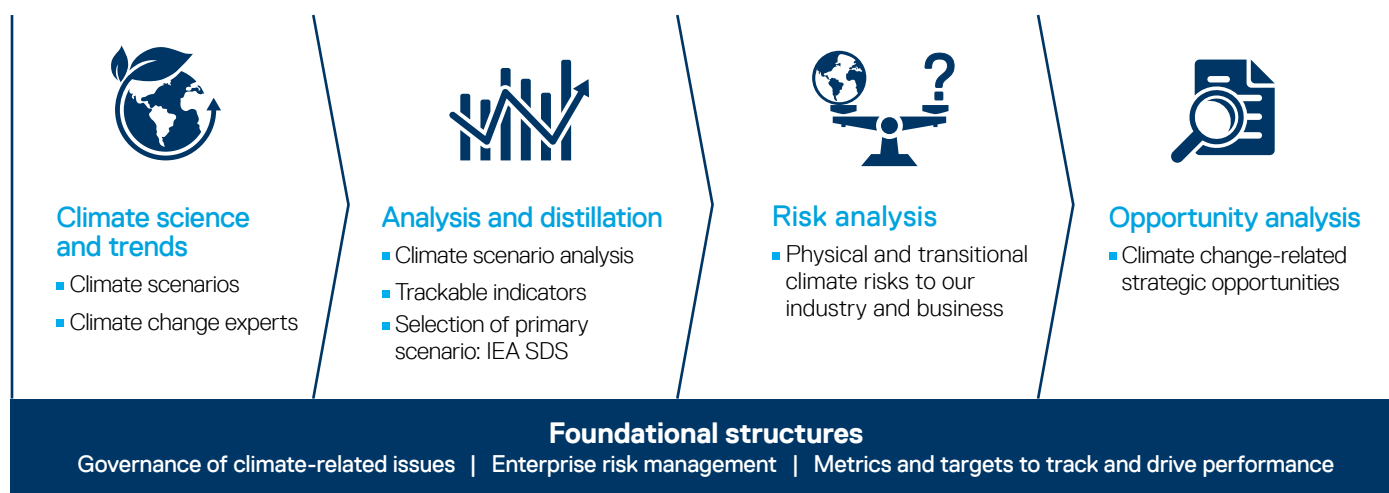
- **Governance**
The organization's governance around climate-related risks and opportunities
- **Strategy**
The actual and potential impacts of climate-related risks and opportunities on the organization's business, strategy, and financial planning
- **Risk Management**
The process used by the organization to identify, assess, and manage climate-related risks
- **Metrics and Targets**
The metrics and targets used to assess and manage relevant climate-related risks and opportunities

Our Analysis

To support the development of this report, we established a cross-functional TCFD working group drawn from leadership in relevant portions of the organization. The working group conducted workshops and engaged with internal stakeholders and external consultants to understand and identify climate-related risks and opportunities.

As discussed in greater detail in the body of this Report, the team broadly considered both the physical risks posed to our business, taking into account a worst-case scenario with minimal global mitigation policy effort, as well as the risks and opportunities presented by

the transition to a low-carbon economy. Additionally, to further evaluate and prioritize identified risks and opportunities and ensure that we captured an appropriate diversity of operational expertise and perspective, we conducted an expanded survey to a wider range of stakeholders across our operations.



Through this analysis, we identified the opportunities, transitional risks and physical risks that are summarized in the following table and discussed in greater detail in the body of this Report.

Summary of Climate-Related Risks and Opportunities

Strategic Opportunities	Transitional Risks	Physical Risks ¹
<p>Products and Services: Growing demand for products and services that support the transition to a lower-carbon economy creates extensive opportunities for our high-performing and innovative products across our existing markets, particularly in aerospace and defense, and in emerging areas, such as alternative energy/fuel production and storage.</p> <p>Resource Efficiency: The manner in which we use energy in our own operations can reduce our costs and create a competitive advantage as our customers seek to advance their own sustainability initiatives.</p> <p>Energy Sources: Opportunities to procure and use clean, carbon-free and/or renewable energy sources to power our facilities are expanding, which has the potential to increase the resiliency of our operations and reduce cost exposures.</p>	<p>Policy and Legal: New or more stringent laws and regulations, including the recent proposal by the U.S. Securities and Exchange Commission to require more extensive climate-related disclosure, intended to address climate-related matters impact ATI and/or its suppliers and customers.</p> <p>Technology: Risks associated with the timely emergence, availability, scalability and potential costs of technologies necessary to support the transition to a lower-carbon economy.</p> <p>Market: Demand for our products and/or those of our customers declines or shifts in favor of products that we do not produce.</p> <p>Reputation: Potential negative impacts if we fail to appropriately adapt to the sometimes rapidly evolving expectations, as they pertain to climate change, of our customers, investors, lenders and other stakeholders.</p>	<p>Acute: Potential for increased frequency, severity and/or geographic propensity in:</p> <ul style="list-style-type: none"> storm activity, resulting in coastal or river flooding; wildfires; and periodic drought and high heat events. <p>Chronic: Less predictable weather, generally.</p> <p>¹ Primarily based on our review of a “worst-case” scenario. We anticipate that physical impacts to our business operations by the 2030 timeframe contemplated by the SDS scenario will not be material.</p>

Climate risk and opportunity analysis is a developing discipline, and its application to industrial companies is a relatively new field. We view the assessment of climate risk and opportunity as an ongoing, iterative process, the outcome of which will, by definition, evolve in step with changes in our business and the markets and economies in which we operate. Accordingly, as our risk management infrastructure and understanding of the anticipated pace and potential outcomes of climate change evolve, we expect to update and adapt our assessments and disclosures. Moreover, as we further integrate the TCFD process across our organization, we may modify or supplement one or more of our previously articulated environmental sustainability goals, or related metrics, to ensure that we remain aligned with the evolving risks and opportunities facing our business because of climate change.

Forward-looking Statements

This Report contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Certain statements in this Report relate to future events and expectations and, as such, constitute forward-looking statements. Forward-looking statements, which may contain such words as “anticipates,” “believes,” “estimates,” “expects,” “would,” “should,” “will,” “will likely result,” “forecast,” “outlook,” “projects,” and similar expressions, are based on management’s current expectations and include known and unknown risks, uncertainties and other factors, many of which we are unable to predict or control. Our performance or achievements may differ materially from those expressed or implied in any forward-looking statements due to the following factors, among others: (a) material adverse changes in economic or industry conditions generally, including global supply and demand conditions and prices for our specialty metals; (b) material adverse changes in the markets we serve; (c) our inability to achieve the level of cost savings, productivity improvements, synergies, growth or other benefits anticipated by management from strategic investments and the integration of acquired businesses; (d) volatility in the price and availability of the raw materials that are critical to the manufacture of our products; (e) declines in the value of our defined benefit pension plan assets or unfavorable changes in laws or regulations that govern pension plan funding; (f) labor disputes or work stoppages; (g) equipment outages and (h) business and economic disruptions associated with the currently ongoing COVID-19 pandemic or other similar widespread public health crises that may arise in the future and (i) other risk factors summarized in our Annual Report on Form 10-K for the year ended December 31, 2021, and in other reports filed with the Securities and Exchange Commission. We assume no duty to update our forward-looking statements. Moreover, the inclusion of any information in this Report, including but not limited to any forward-looking statements, should not be construed as a decision by ATI that such information is material information.

Climate-Related Governance

TCFD recommends that organizations adopting its framework provide disclosure regarding governance over climate-related risks and opportunities, including descriptions of the role that the organization’s Board of Directors (“Board”) plays in oversight of climate-related risks and opportunities and of management’s role in assessing and managing climate-related risks and opportunities. The following provides an overview of the ATI Board’s exercise of its oversight function with regard to climate change matters and of our management’s role in developing and executing climate-related strategy and supporting the Board’s oversight efforts.

Board Overview

ATI has a diverse, highly credentialed, and highly experienced Board. Our directors possess a variety of tenure, qualifications, backgrounds, skills, and experiences contributing to a Board that is well-rounded and well-positioned to effectively oversee our business and promote the interests of our stakeholders. It currently is comprised of nine members, eight of whom are independent under applicable New York Stock Exchange and U.S. Securities Exchange Commission standards, including two women and one minority director. Our Board routinely engages in succession planning and adds new members on an opportunistic basis when it identifies candidates whom it believes have experience, skill sets and other characteristics that will enhance the Board’s effectiveness. ATI has long been a leader in promoting Board diversity; our Board has been comprised at least 20% of women directors and has included minority director representation consistently for more than a decade.

Board Oversight

As articulated by our Corporate Governance Guidelines, our Board’s core responsibility is to exercise its business judgment in good faith in what our directors reasonably believe to be the best interests of the Company and its stockholders while also recognizing that the long-term interests of ATI are advanced by considering the concerns of other constituencies, including employees, customers, suppliers and the communities in which ATI operates. Accordingly, while not involved in our day-to-day operations, our Board actively oversees matters of key importance to the overall conduct of our business, including among other matters: our financial performance and expectations; development and implementation of near-, medium-, and long-term strategies; capital structure and allocation matters impacting our corporate governance and culture; and the identification and mitigation of known and emergent enterprise risks and opportunities, including those pertaining to environmental, workforce and community, and safety and sustainability.

ATI’s Board currently has delegated certain aspects of its oversight function to four standing Committees, including the: Audit and Risk Committee; Nominating and Governance Committee; Personnel and Compensation Committee and Technology Committee. Each Committee is comprised entirely of independent members of our Board and operates according to a committee charter that outlines the extent of its specific responsibilities and delegated authority. The Board reviews these charters and assesses committee performance relative to their articulated responsibilities at least annually.

Our Board and its Committees regularly review and consider a range of environmental, social and governance (“ESG”) matters impacting ATI, its operations, performance, and prospects, including climate change and the transition to a low-carbon economy. These reviews occur at meetings conducted regularly throughout the year and as part of the Board’s annual multi-day strategic planning meeting. Although the Board, as a whole, is regularly engaged in ESG matters, including climate change, and retains ultimate oversight responsibility with respect to such matters, each of its Committees assists the Board in its broad oversight function. This approach enables the Board to better leverage the deep expertise of its various members on particular matters, provides an opportunity for targeted analysis by each Committee of matters relevant to its mandate, and in general provides for more efficient exercise of the Board’s oversight responsibilities.

Specifically, the Board’s Committees assist in its climate-related oversight responsibility as follows:

- **Audit and Risk Committee:** The Audit and Risk Committee assists the Board in overseeing the integrity of the Company’s financial statements, the qualifications and performance of its internal and external auditors, and the effective exercise of its compliance and risk management functions. Among other specific matters, the Audit and Risk Committee assists the Board in its oversight of risks to the Company and its business, operations and results, associated with climate change and other environmental compliance and sustainability matters. The Committee regularly discusses with management the Company’s significant risk exposures and the steps management has taken to monitor and control such exposures, including the Company’s risk assessment and risk management guidelines and policies.
- **Nominating and Governance Committee:** The Nominating and Governance Committee assists the Board in overseeing the Company’s corporate governance practices and profile, including as appropriate, the legal standards, prevailing recommended practices, investor views, and potential benefits and risks associated with or impacting such governance practices and profile. Among other corporate governance matters, it makes recommendations to the Board of Directors concerning appropriate delegations of authority to the Board’s various committees, and exercise of its oversight function with regard to climate change and other ESG matters through the operation of the Board’s committees.
- **Personnel and Compensation Committee:** The Personnel and Compensation Committee assists the Board in its oversight of the Company’s executive compensation and management organization matters generally. Among other specific matters, it monitors and encourages the development of intellectual capital and oversees the Company’s human capital management policies and procedures. As such, the Personnel and Compensation Committee assists in overseeing management’s efforts to mitigate any impact of climate change and resulting risks on the Company’s workforce. Additionally, as part of its oversight of our executive compensation policies and practices, the Personnel and Compensation Committee considers, from time to time, the extent to which goals and targets related to climate change or other sustainability matters may be incorporated into the performance-driven elements of our executive compensation programs, including as part of the personal performance components of our annual short-term cash incentive program. For additional information, see the Proxy Statement for our [2022 Annual Meeting of Stockholders](#)
- **Technology Committee:** The Technology Committee is responsible for assessing the technical capabilities of the Company in all phases of its activities and the risks and opportunities such capabilities present in relation to corporate strategies and plans. Among other matters, it is charged with assisting the Board in identifying and analyzing significant emerging scientific, technological, and product or process-related innovations and current or emerging industry or geopolitical developments regarding the same, that could disrupt or present opportunities to the Company’s overall business strategy. From a climate perspective, it is expected that the Technology Committee’s work will enhance that of the Audit and Risk Committee in overseeing the impact of, and the Company’s response to, the many challenges and opportunities presented by climate change and other environmental sustainability matters.

The Chair of each committee delivers a report regarding the activities and recommendations of his or her committee to the full Board at each regularly scheduled meeting of the Board.

Management's Role

ATI's Executive Council leads executive management of the day-to-day operations of our business and works to ensure that our Board receives the information necessary, on a timely basis, to support the effective exercise of its oversight function.

The Executive Council, which meets regularly on a formal basis (as a complement to the frequent, more informal collaboration of its members) is chaired by our Board Chair, President and Chief Executive Officer. The Executive Council also includes our Chief Operating Officer, Chief Financial Officer, Chief Commercial and Marketing Officer, Chief Human Resources Officer, Chief Digital and Information Officer, and Chief Legal and Compliance Officer. It is responsible, with the support of other members of our management team, for overseeing the identification, evaluation, and management of enterprise risk and for developing and implementing near, medium and long-term corporate strategy, including with regard to climate change. In this regard, the Council routinely considers a wide range of risks facing ATI's business, including among others the various physical and transitional risks associated with climate change, and works with other management team members (generally with an Executive Council member serving as a team sponsor) to further evaluate the anticipated impact of, and develop and execute mitigation strategies with respect to, those that are deemed to have the greatest potential impact on the Company's business, stakeholders and the communities in which it operates.



Climate-Related Strategy

TCFD recommends that organizations adopting its framework provide disclosure regarding the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning, to the extent material, including descriptions of: the climate-related risks and opportunities the organization has identified over the short, medium, and long term; the impact of climate risks and opportunities on the organization's business, strategy and financial planning; and the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2° or lower scenario. The following addresses the opportunities that the transition to a low-carbon global economy creates for our business, as well as the risks facing our business in connection with any such transition and the potential physical risks to our operations that could arise from ongoing, unmitigated impacts of climate change.

As described above, we established a cross-functional TCFD working group to assist in the development of this report. Through a series of workshops, surveys and other engagement with both internal stakeholders and external consultants, the team broadly considered both the physical risks posed to our business, taking into account a worst-case scenario with minimal global mitigation policy effort, and the risks and opportunities presented by the transition to a low-carbon economy.

With the assistance of external advisors, we reviewed qualitative and quantitative information related to medium and long-term climate change impacts as detailed within standardized, third-party scenarios. Leveraging accepted, publicly available scenarios aligns our analysis to stakeholder expectations and enables comparisons to other reporters. Specifically, our analysis centered on the International Energy Agency's (IEA) 2021 World Energy Outlook's Sustainable Development Scenario (SDS). The SDS is consistent with limiting the global temperature rise to 1.65 °C (with a 50% probability). It assumes a surge in clean energy policies and investment that puts the energy system on track for key U.N. Sustainable Development Goals. Under the SDS, global net zero pledges are achieved with significant progress made through near-term emissions reductions. Advanced economies achieve zero emissions by 2050 with all other countries doing so no later than 2070.

We identified climate-related risks and opportunities through the dual lens of time horizons – including short (0 to 3 years), medium (3 to 5 years) and long (greater than 5 years) – and impact to our business. Climate-related opportunities could influence how we operate our facilities and the resources we consume, the products we develop, the markets in which we participate, and the resiliency of our operations. Climate-related risks are identified in two categories: (1) transition risks, as we move toward a low-carbon economy, and (2) physical risks driven by a changing climate.

Climate-Related Opportunities

TCFD says of climate-related opportunities: "Efforts to mitigate and adapt to climate change also produce opportunities for organizations, for example, through resource efficiency and cost savings, the adoption of low-emission energy sources, the development of new products and services, access to new markets, and building resilience along the supply chain. Climate-related opportunities will vary depending on the region, market, and industry in which an organization operates."

We believe the transition to a low-carbon global economy presents tremendous opportunities for ATI's business and we are well positioned to take advantage of those opportunities. Our mission is to **solve the world's challenges through materials science**. It's what we do best, and every day our team extends what our advanced process technologies can deliver, motivated by challenges and by what others see as boundaries.

Our evaluation of opportunities presented by climate change and the transition to a low-carbon economy focused on market-related opportunities associated with the products that we produce or may in the future produce as well as opportunities to improve the sustainability of our own operations as follows:

Products and Services

Our products are indispensable to our customers' efforts to meet the challenges of the world's rapidly evolving and demanding environmental sustainability needs and expectations. From lighter, more fuel efficient, longer-lived jet engines to solar, geothermal and nuclear energy applications and green hydrogen production to pollution control and wastewater treatment, ATI's innovative and exacting products and processes are helping to solve the world's climate and other environmental challenges through materials science.

Demand for low-carbon products continues to rise as markets transform and customer needs evolve to address climate change. In particular among the markets we currently serve, for commercial aerospace manufacturers, climate change and the drive for sustainability are accelerating important fuel efficiency and weight reduction trends. Next generation commercial aircraft engines demand innovative solutions — airlines need lighter planes that use less fuel to fly further and at lower costs. In this regard, our materials provide real, tangible improvements for our jet engine OEM customers and the aircraft manufacturers and commercial airlines they ultimately serve. For example:

- To achieve extended flight ranges and lower fuel costs, next generation jet engines require the temperature resistant capabilities of the nickel and cobalt-based superalloys and titanium alloys that we develop and produce. The newest generation of commercial jet engines burn significantly hotter than those they are replacing, and the next generation of engines will likely drive those operating parameters even further. We believe that we are uniquely positioned to support engine manufacturers in this drive to increasing efficiency.
- Lightweight materials complement new engine technologies to help achieve the aerospace industry's cost and flight range goals. Titanium is increasingly applied in primary aerostructures to address the risk of galvanic corrosion around carbon fiber wing structures. Consequently, titanium usage has grown substantially in recent decades, with next generation narrowbody aircraft using roughly 30% more titanium than the legacy designs. We believe this percentage is almost certain to grow over the next 20-year period, in response to carbon reduction targets and other trends.
- In addition to light weighting and corrosion resistance, titanium adds strength and provides temperature resistance for key components in the jet engine's cold section, as well as in engine pylons and exhausts. Additionally, it is increasingly used in components like landing gears to reduce weight and improve fatigue resistance. Demand for aerospace quality titanium is expected to grow significantly between 2023 and 2025 and beyond. This is a result of increased applications and the return of wide body production.

Ultimately, advanced materials, like the nickel and titanium and related alloys that we produce, are already enabling very meaningful improvements in carbon reduction and sustainability, while also delivering cost reductions, and are expected to continue to do so. One major commercial jet manufacturer estimates its next generation of aircraft would help save more than \$9 billion a year in fuel costs and reduce its carbon footprint by up to 25% over legacy designs, and others are making similar strides. Today these advances are in part made possible by ATI's advanced, sustainable materials, and we believe that opportunities to continue our contributions in this regard are likely to expand as the drive to a low-carbon economy accelerates.

Moreover, we have identified additional opportunities and markets into which we would be well-positioned to expand in response to future climate change initiatives. For example, a resurgence in nuclear power generation could present significant opportunities to supply zirconium for fuel cladding, as well as alloys and forgings used throughout nuclear power plants. Additionally, our products improve the performance of land-based gas turbines and fuel cell technology and are used in solar and geothermal power applications and "green" hydrogen production, supporting the transition to cleaner fuels.

An important attribute of what we deliver across the various markets that we serve is material durability. The longer and better our products perform, the lower the operating costs for our customers, and the better for the environment, as materials and components need to be replaced less often. Ultimately, these efforts benefit the planet by reducing greenhouse gas emissions – aiding the aerospace industry, and others, in meeting their emissions reduction goals.

As climate change impacts all facets of our economy, we expect markets to evolve driven by customer demand for low-carbon products and solutions, governmental and policy shifts, and redirection of investment and capital to further spur climate-related innovation and action. We believe that these trends combined with our proven track record for innovation and performance in the most demanding markets and environments should in the future enable us to further expand our reach in new and innovative markets that are responding to the transition to a low-carbon economy and align with our overall strategy.

Resource Efficiency

Operational efficiency and focus on supply chain effectiveness are core strengths that enable us to meet the critical needs of our customers. The manner in which we use energy and other resources can be a competitive advantage as our customers seek to advance their own environmental sustainability efforts. Moreover, using resources more efficiently can directly produce cost savings and help mitigate potential energy price increases and carbon fees or taxes. We have identified climate-related opportunities for resource efficiency to include the following:

- Driving operational efficiency and cost reduction by focusing on ongoing process improvements, and plant and logistics optimization;
- Investing in energy efficiency and new technology deployments across our facilities, including [exploring] the ability to capture and re-use energy from our processes, and taking advantage of incentives and funding driven by the energy transition;
- Reducing waste and maximizing the use of recycled scrap material in our manufacturing process, contributing to the circular economy through a cradle-to-cradle approach; and
- Making improvements in water efficiency and expanding our existing water recycling efforts.

We believe that focusing on how we use resources at our facilities and the technology that we use in our processes can build operational resiliency, help to optimize material use and recycling, and accelerate the transition to lasting carbon reduction.

Energy Sources

We are proactively pursuing sourcing strategies to reduce our carbon footprint. Opportunities for the use of clean, renewable/carbon-free energy sources to power our facilities and reduce our carbon footprint are greater than ever, driven by new technologies, lower costs, and the availability of subsidies and incentives to spur investment. We also recognize the importance of addressing our energy mix: in 2021, approximately 65% of our energy consumption was based on natural gas use, which represents 48% of our carbon emissions prior to our clean energy sourcing efforts – and nearly 61% of our carbon emissions taking clean energy sourcing into account. Transitioning to a low-carbon economy likely will require that we evaluate potential options relating to our use of natural gas. We have identified climate-related opportunities for energy sources to include the following:

- Transitioning the energy we use at our facilities to renewable and low-carbon sources. This includes contracting for renewable and carbon-free power (including, potentially, for credits), deploying on-site renewables and storage where feasible, and using the right sourcing strategies to ensure that we support the continued development and deployment of clean and renewable energy;

- Considering the development of un-used land within our portfolio as an opportunity for renewable energy development to support the overall advancement of clean energy projects in our communities; and
- Developing transition plans to address fossil-fuel alternatives across our plants, including electrification strategies and investments in innovative energy systems and alternative fuel options.

Although many of these opportunities may have long time horizons, may require extensive evaluation, research and development, or ultimately may not be feasible, to the extent that we are able on a commercially reasonable basis to further support energy transition, we believe it could enhance the resiliency of our operations, and reduce our exposure to carbon regulation, fees or taxes and potential energy price increases. Based on an initial screening of our portfolio and physical infrastructure and on current market factors, we currently believe that favorable opportunities for on-site renewable deployments are limited, but we intend to continue to evaluate opportunities as they arise. Supporting the overall market development of new clean and renewable energy sources also enhances our reputation by enabling us to establish carbon reduction targets that are more closely aligned with industry and stakeholder expectations.

Opportunities			
Risk Category	Identified Risk	Time Horizon	Potential Business Impact
Products & Services	Rising demand within the end markets ATI serves, particularly the commercial aerospace market, for products that support sustainability and the transition to a low-carbon economy	Medium	Medium
Products & Services	Ability to innovate and leverage expertise to expand into new markets as they grow or emerge in connection with the transition to a low-carbon economy	Medium	Medium
Resource Efficiency	Driving operational efficiency and cost reduction by focusing on process improvement and plant and logistics optimization	Short	Medium
Resource Efficiency	Further reducing waste and maximizing the use of scrap in our manufacturing process	Short	Low
Energy Sources	Ongoing transition to low-carbon and renewable energy sources; use of innovative energy sources, such as hydrogen, as they become available	Long	Medium
Energy Sources	Consider transition plans to address fossil-fuel alternatives in our operations	Long	Medium
Market	Ability to innovate and leverage expertise to expand into new markets as they grow or emerge in connection with the transition to a low-carbon economy	Medium	Medium

Transition-Related Climate Risks

While the prospect of a low-carbon economy presents important opportunities for our business, regulatory efforts to transition to a low-carbon economy in the regions in which we, our customers and our suppliers operate and the increased focus and evolving views of our various stakeholders on climate change issues could create risks to our business.

As part of our evaluation of transition risk and in cooperation with external advisors, we reviewed qualitative and quantitative information related to medium and long-term climate change impacts as detailed within the standardized, third-party SDS scenario. We anticipate that under this scenario, climate-related physical impacts to our business operations by the 2030 timeframe will not be material.

Our analysis identified the following most salient transitional risks:

Policy and Legal Risks

Increased worldwide focus on climate change has led to legislative and regulatory efforts to combat both potential causes and adverse impacts of climate change. New or more stringent laws and regulations related to greenhouse gas emissions, water usage and other climate change related concerns may adversely affect us, our suppliers and our customers. Such regulatory efforts could be broad in scope, could target specific products, sectors or markets, including those we serve, or more likely, could consist of a combined approach and result in market disruption. Targeted regulation that could directly impact our operations might include, for example, taxes or fees on carbon-based energy or limitations on water withdrawal or usage, while new regulations or policies that target end markets we serve, such as commercial aerospace or the oil and gas industry, could have a more indirect impact on our business.

We have publicly disclosed efforts to reduce the energy intensity, water intake intensity and GHG emissions of our operations, working consistently to enhance the environmental sustainability of our business by reducing our reliance on fossil fuel-based energy sources, promoting water reuse and other responsible water management practices, reducing waste and promoting recycling (including extensive use of recycled feedstock in our manufacturing processes) and ensuring our compliance with applicable environmental regulations. Notably, our recent exit from the production of standard stainless sheet products is expected to meaningfully reduce our use of some of our most energy-intensive melt operations, potentially driving future reductions in energy intensity and GHG emissions.

Nevertheless, new and evolving laws and regulations could mandate different or more restrictive standards, increase operating costs, require (or cause customers to require that we make) capital investments to transition to low-carbon technologies or purchase carbon credits, or otherwise adversely impact our ongoing operations. Our suppliers may face similar challenges, which could impact the availability of their products and/or cause them to incur additional compliance costs that are passed on to us. Moreover, increased reporting and disclosure obligations, including the recent proposal by the U.S. Securities and Exchange Commission to require more extensive climate-related disclosures, may strain human resources and/or result in increased costs. These direct and indirect costs may adversely impact our business and financial results, and the uneven development and application of underlying regulation across the key regions in which we operate could make compliance more complex and/or costly and the business impact more difficult to predict.

Included in the assumptions on which the theoretical SDS scenario is based is the expectation that accelerated decarbonization efforts will drive climate-focused policies expected to yield a carbon price of US\$100 per metric ton by 2030. If adopted, such policies would drive market and policy changes that could impact ATI's regulatory exposure, operational costs, and carbon mitigation strategies over mid-term (2030) and long-term (2050) timeframes. It's possible that, if such a scenario were to materialize, the resulting regulatory impacts could impact our operational costs in a manner consistent with the following:

Scenario Drivers	Description	Mid-term Impact	Long-term Impact
Carbon Pricing	ATI is not currently exposed to carbon pricing for our direct operations, but carbon prices under the SDS are assumed to reach \$100/MT in developed countries by 2030. Under this scenario, all regional markets have access to offsets, which is expected to lead to a convergence of prices. Transitions to increased renewable and low-carbon electricity supplies onto electric grids where we operate could mitigate our exposure.	Low	High
Fuel Costs	Recent economic recovery has put upward pressure on fuel prices and some analysts believe we may be entering a prolonged period of strong energy demand and supply constraints leading to high prices. Climate policies are likely to put further price pressure on these commodities, but under the SDS, lower energy demand mitigates the rate of cost increase.	Low	Medium
Electricity Costs	IEA indicates that, as regional electric grids transition from fossil-fired generating assets to predominantly renewable and low-carbon electricity generation, end users will realize increased electricity pricing aimed at covering transition costs tied to infrastructure upgrades (i.e., accommodations for growing demand, replacement/refurbishment of assets, integration of renewables).	Medium	Low
Electric Grid Carbon Intensity	IEA predicts rapid growth of grid-based renewables which are set to account for ~95% of the increase in global power capacity through 2026. In that case, over time, our electricity supply from the grid may decrease in carbon intensity and work to mitigate our scope 2 emissions.	Medium	High

Technology Risks

The transition to a low-carbon economy is driving technological innovation and improvements that could impact our organization and how we operate. Innovations in, for example, electrification, renewable energy sources, battery storage, carbon capture and hydrogen technologies are all at varying stages of development and deployment. If we do not keep pace with sometimes rapidly evolving technological

developments, we could risk overall market competitiveness and miss opportunities to meet ever-increasing market demand for low-carbon products. However, these and other emerging technologies may not be sufficiently scalable to support our operations. In addition, many of these technologies, specifically on-site renewable systems, are highly dependent on market and policy factors, such as incentives, that are beyond our control today. Ultimately, technology to support the transition to lower-carbon operations within the timeframe that could be required or necessitated by future regulation or expected in the future by our customers may not be available at the scale necessary to support our operations, in a timely or cost-effective manner, or at all.

Market Risk

It is possible that, over time, due to both regulatory action and/or changing customer and societal norms and expectations regarding the causes and importance of climate change issues, demand for products in one or more of our significant end markets could decline or, if we fail to keep pace with changing demand and technological advancement, shift in favor of products that we do not produce. For example, if we do not adapt as appropriate, we could be negatively impacted by declines in oil and gas production and transportation needs (currently, one of the end markets that we serve) or by the development and broad adoption of a new generation of aircraft and aero engines that utilizes alternative fuel, such as hydrogen, or alternative materials/components that we have not developed the capability to competitively produce and supply. Regulation, competition and other market pressures could also negatively impact the availability of raw materials necessary to produce low-carbon products or otherwise for our product portfolio.

Reputation Risk

If we fail to appropriately adapt to the expectations of our customers or other stakeholders, fail to achieve or properly report progress toward our environmental sustainability goals and targets or otherwise are perceived as failing to adequately address climate change concerns, the resulting negative perceptions could adversely affect our business, reputation and access to capital. As our customers also are charting their own decarbonization pathways, if we do not proactively meet their requirements for the right product portfolio and level of performance transparency and disclosures, we risk losing our position as a supplier of choice for leading customers. Climate action can also impact our ability to attract and retain talent, limiting our ability to sustain a skilled and experienced workforce. It is also possible that equity investors and lenders who negatively perceive our reputation for climate stewardship could choose not to invest in our business at acceptable rates or at all, increasing our cost of and access to capital.

Transition Risks			
Risk Category	Identified Risk	Time Horizon	Potential Business Impact
Policy & Legal	Broadly-applicable policies and regulation intended to drive the transition to a lower-carbon economy, such as taxes or fees on carbon-based energy or regulations that limit water usage	Medium	Medium
Policy & Legal	Targeted taxation or other regulation aimed at specific sectors that include key ATI end markets, such as commercial air travel or oil and gas	Medium	Medium
Policy & Legal	Uneven development and application of climate-related regulation across key regions in which we operate	Medium	Medium
Policy & Legal	Increased and/or disparate reporting and disclosure obligations	Short	Low
Technology	Rapidly evolving technological innovations and the ultimate availability, scalability and cost-effectiveness of technologies needed to support the transition to a low-carbon economy	Medium	Medium
Market	Due to regulatory action and/or changing expectations regarding the importance of climate change, demand declines generally for one or more of our currently significant end markets	Long	High
Market	Due to regulatory action and/or changing expectations regarding the importance of climate change, demand shifts in favor of products we do not produce	Long	High
Market	Regulation, competition and other market pressures affect the cost and availability of raw materials	Medium	Medium
Reputation	Necessity of meeting the decarbonization expectations of customers, investor and other stakeholders	Short	Medium

Physical Climate Risks

As the physical effects of climate change accelerate, our assessment of the associated risk includes those driven by specific climate-related events and long-term permanent shifts in climate pattern, both of which can impact our operations, our supply chains, and our employees. TCFD defines physical risks as follows: “Physical risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns. Physical risks may have financial implications for organizations, such as direct damage to assets and indirect impacts from supply chain disruption. Organizations’ financial performance may also be affected by changes in water availability, sourcing, and quality; food security; and extreme temperature changes affecting organizations’ premises, operations, supply chain, transport needs, and employee safety.”

To assess the overall physical risk from climate change on our operations and in connection with the development of this report, we used a range of tools to evaluate potential near and long-term impact of coastal and river flooding, temperature rise, water scarcity, drought, and wildfires. The tools included the World Resources Institute (WRI) Aqueduct Water Risk Atlas tool (to assess overall water stress, drought risk, riverine flooding risk, and coastal flooding risk) and the Federal Emergency Management Agency (FEMA) National Risk Index (to evaluate exposure to physical risks from winter weather events, high heat, wildfire, hurricanes, and tornadoes). While we do not believe that we currently face material physical risk, we recognize the need to evaluate physical risk on site selection, business mix and manufacturing capacity considerations, and the impact on energy, water and raw material pricing.

Our analysis identified the following most salient physical risks associated with climate change:

Acute Risks

The acute physical risks that could adversely impact our operations include increased frequency of storm activity resulting in coastal and river flooding, and the severity of localized fires and periods of drought. Based on an evaluation of our facilities through the lens of susceptibility to these events that could impact our operations, we consider the impact on our business and supply chains to be limited. Although we do not believe that our facilities are currently exposed to significant physical risk as a general matter, our operations have at times been, and could in the future be, impacted by adverse climate-related events, such as, for example, the extreme heat and wide-spread wildfires that negatively impacted the Pacific Northwest region in 2021. Events such as these could cause damage to critical facilities and equipment, result in significant operational disruption and have meaningfully adverse effects on our employees and the communities in which we operate. Specific impacts could include:

- Increased costs of infrastructure repairs resulting from unexpected or unplanned events;
- Disruption in water intake or waterway transportation due to flooding events;
- Unanticipated increases in energy prices caused by climate events that impact energy markets;
- Localized work stoppages caused by events that impact our employee productivity; and
- Supply chain disruption caused by specific events, impacting availability of supplier materials and services.

Chronic Risks

Chronic risks, such as rising temperatures and increased aridity, are likely to occur gradually over time. Lasting changes in storm and rainfall patterns are expected over the next century and will vary considerably by region. Permanent changes in climate that result in lasting energy cost increases, impact our employees, or require investment in our facilities and infrastructure, could have potential business and financial impacts.

Even to the extent that significant weather events or changes in climate conditions do not directly affect our own facilities and/or operations, our business could be negatively impacted by events or more chronic climate conditions that disrupt or force longer-term changes in operations for our significant customers or suppliers, which could negatively impact the timing or overall volume of demand for our products or the cost and availability of critical raw materials, among other factors. Over time, widespread physical climate changes and risks could drive increases in other operational costs for our business, such as insurance costs.

Physical Risks			
Risk Category	Identified Risk	Time Horizon	Potential Business Impact
Acute	Near-term increases in more extreme weather-related events, such as storm activity, severe fires and periods of drought	Medium	Low
Chronic	Permanent climate change resulting in widespread temperature rises, increased aridity and lasting changes in storm and rainfall patterns	Long	Medium

Risk Management

TCFD recommends that an organization adopting its framework provide disclosure regarding how the organization identifies, assesses, and manages climate-related risks, including descriptions of: the organization's process for identifying and assessing climate-related risks; the organization's process for managing climate-related risk and the manner in which processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.

Risk Oversight

While we consistently work to enhance and refine our enterprise risk management practices, we believe that our current governance and management structures are sufficient to ensure that any climate-related risks are effectively monitored, evaluated, and managed. Identification and evaluation of the potential impact of various risks is an integral part of our financial disclosure process, and management regularly reports to our Board and its various committees on its assessments and mitigation plans with regard to existing and emerging risks. See "Climate-Related Governance" for a more in-depth discussion of the role that our Board and its standing committees play in the oversight of climate-related risks and opportunities.

We assess risks within the context of materiality and based on their anticipated impacts on our business, considering impacts on our industry and market strategy, our customers, our employees, and our impact on the community. Key functions across our organization have roles to play in identifying, assessing, and managing climate-related risks (as well as opportunities). Our legal, compliance and finance teams proactively monitor the broad regulatory and legislative landscape in which we operate to identify and assess regulatory and compliance risks and their potential impact to our business. In cooperation with our TCFD working group and our human resource organization, these teams monitor key sustainability and ESG trends and expectations, developing related disclosure and engaging with stakeholders. We receive feedback from our key customers, investors and independent raters regarding our strategies, targets, and performance, and we incorporate this feedback into our strategic planning process.

ATI's commercial organization remains closely connected with our customers and maintains a high level of engagement to understand the business challenges those customers face and degree to which their challenges could impact our own strategies. We monitor key industry trends within our sector and regularly measure key business indicators across our significant end markets. Our supply chain organization is responsible for managing energy and commodity markets and prices, with the objectives to ensure that we have the right sourcing strategies, plans and contracts in place to appropriately mitigate risk. We recognize that climate change can impact the overall movement of goods and services, and our management approach includes not only raw material sourcing, but considerations regarding the transportation and distribution of our products.

Our Environmental, Health and Safety organization is responsible for maintaining our environmental management system, assessing the environmental impact across our manufacturing platform, monitoring our regulatory and environmental compliance, and protecting the health of our team.

Physical Risk Identification and Assessment

ATI examines potential physical risk through the context of business continuity, impact on energy and raw material sourcing, and impact on our workforce. Our Environmental, Health and Safety organization focuses on safety and risk mitigation for our employees, including the impact that climate change could have on our operations. This data helps to inform our evaluation of potential capital investments, which could include, for example, physical repairs due to damage or investments to address flooding or other weather-related risk.

Metrics

TCFD recommends that an organization adopting its framework provide disclosure regarding metrics and targets used to assess and manage relevant climate-related risks and opportunities, to the extent material. This includes disclosure regarding the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process; disclosure of Scope 1 and Scope 2, and if appropriate, Scope 3 GHG emissions, and the related risks; and a description of the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

ATI is committed to reducing the environmental impact of our business, and we have established clear metrics and targets to guide our activities, manage risks and opportunities, and provide meaningful, transparent disclosure regarding our performance to our stakeholders.

We believe that our approach and targets demonstrate our commitment to environmental responsibility and productivity across our operations and reflect our overall business strategy and risk management process. As a large consumer of energy, we recognize that we have a responsibility to minimize our impact on the environment, to operate efficiently and to effectively manage how we consume resources across our operations.

ATI uses a range of metrics to assess and manage climate-related risks and opportunities, including among others:

Our Climate Metrics

- Total energy consumption by type;
- Percentage of electricity sourced through the grid;
- Total clean energy sourced through our voluntary efforts;
- Total carbon emissions by scope;
- Total water intake;
- Total tons of material recycled at production facilities;
- Total recycled material used in our production processes; and
- Air emissions.

Our Carbon Emissions Footprint

We annually report our carbon emissions and progress toward our environmental sustainability goals using 2018 as our baseline year. Our initial reports included data regarding emissions from our seven largest operating sites. Beginning with our 2021 ESG Report, our reported emissions include all of our manufacturing facilities. Our total 2021 market-based carbon emissions totaled 6529,843 Mt CO₂e, including:

- Scope 1 Emissions: 430,192 Mt CO₂e
- Scope 2 Emissions: 229,751 Mt CO₂e

Our market-based Scope 2 emissions (and total market-based carbon emissions) reflect our voluntary sourcing of zero carbon nuclear electricity across many of our largest energy consuming locations, representing a substantial portion of the electricity that we use.

[Please reference our 2021 ESG Report](#) for further information regarding our energy consumption, water intake, waste management data and air emissions.

Our Targets

ATI has established the following near- and longer-term goals relating to reductions in energy intensity, GHG emissions and water intake, as well as targets for increases in our already extensive production use of recycled materials.

Year	Targets (from 2018 baseline where applicable)
2022	<ul style="list-style-type: none"> ■ Include all manufacturing facilities in our metrics
2025	<ul style="list-style-type: none"> ■ Reduce energy intensity by 5% ■ Reduce CO₂/GHG emissions intensity by 5% ■ Reduce water intake intensity by 5% ■ Increase recycled materials used in production to 80%
2030	<ul style="list-style-type: none"> ■ Reduce energy intensity by 7% ■ Reduce CO₂/GHG emissions intensity by 7% ■ Reduce water intake intensity by 8% ■ Increase recycled materials used in production to 83%

As we continue to identify, assess and manage climate-related risks over the course of 2022, we intend to re-evaluate our previously-articulated environmental sustainability goals, including our specific goals pertaining to GHG reductions, to ensure that our goals are aligned with, and meaningful in the context of, change in our business and the evolving expectations of our stakeholders.

Tracking our Performance

Our complete performance tracking relative to our stated targets can be found in [our most recent ESG Report](#).

