

NAIC 2022 Climate Change Survey – Company Response

Group Code: 0088 – The Hanover Insurance Group

Co. Codes: 10212, 22292, 22306, 36064, 41840, 31534, 10815, 42552

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Governance – Responses

Oversight of Environmental, Social, Governance (ESG)-related risks and opportunities is the responsibility of both the entire Board and committees of the Board. In general, ESG-related governance is codified in the charter of the Board's Nominating and Corporate Governance Committee; however, certain aspects of ESG, such as oversight of the company's risk management policies and procedures, and data security and privacy, are the responsibility of the Audit Committee and are contained in the committee's charter. The full Board also receives periodic updates on ESG topics, including sustainability and environmental matters such as the effect of increasingly severe weather and weather-related events upon the company's business.

The Board and Audit Committee regularly receive reports and presentations from key members of the enterprise risk management group and management, including the company's Chief Executive Officer, Chief Financial Officer, Chief Risk Officer, Chief Information Security Officer, Chief Privacy Officer, Chief Actuary, and Chief Legal Officer on matters which, in its or management's view, merit attention from a risk management perspective, such as catastrophe risks (including the risks of climate change for increased severity and frequency of weather-related catastrophes and changing weather patterns), insured property exposure aggregation levels, ex-catastrophe underwriting risk (including as a result of increased non-catastrophe weather-related events), reinsurance levels and creditworthiness of our reinsurers, the investment portfolio, litigation and regulatory matters, capital considerations, growth plans, matters relating to human capital management, and other material ESG risks.

Climate-related opportunities, to the extent that they are material to the organization, are integrated into our business plans and strategy, and are overseen by the Board as part of its regular review of The Hanover's strategic objectives.

The Board has overall oversight responsibility of the company's Chief Executive Officer and management of ESG topics. The executive leadership team has established a cross-disciplinary management group known as the ESG Council, which is headed by our EVP and Chief Legal Officer, and is comprised of business and functional leaders across the organization involved in ESG matters. The ESG Council has a formal written charter that establishes its mission to support the company's ongoing commitments and initiatives related to ESG, including corporate social responsibility, sustainability, and other policy matters relevant to the company and its stakeholders. The council assists the company in: (a) developing general strategy relating to ESG matters, (b) creating, implementing, and monitoring initiatives and policies based on that strategy, (c) the drafting and coordination of communications with employees, investors and other stakeholders with respect to ESG matters, (d) monitoring and assessing developments relating to, and improving the company's understanding of ESG matters, and (e) efficient, timely and accurate disclosure of ESG matters to internal and external stakeholders.

The ESG Council's primary charge is one of oversight, such that the primary responsibility and ultimate decision-making with respect to the company's underlying programs and policies remains with senior management, as well as the business units and functions currently responsible for such matters.

Disclosure of matters related to climate change that are material to the company occurs at the group level, via periodic filings with the U.S. Securities and Exchange Commission, and at the insurance company level via the annual Own Risk and Solvency Assessment (ORSA) reporting. Other climate-related disclosures are from time to time requested by regulatory and quasi-regulatory authorities, and those requests are typically addressed at the insurance company level. In each case, such disclosures are coordinated through the finance and accounting, enterprise risk management, and legal departments, in collaboration with business units and other constituents of the ESG Council and various disclosure working groups.

Responsible Investment Policy

The Hanover is committed to protecting our environment, making a difference in our communities, and governing our actions with integrity. We sincerely believe these values are essential to our success as a leading property and casualty insurance company providing insurance solutions in a dynamic world. As a result of this commitment, we recognize that ESG factors are an important consideration in the fundamental investment analysis that we undertake. We believe integration of these factors in our analysis will lead to better investment decisions regarding the sustainability of an investment and its risk and return profile.

We incorporate ESG factors in our decision making as part of our fundamental investment research process. We have found that by having a greater awareness of how ESG factors can impact the long-term sustainability of an investment and better manage risks, our investment professionals demonstrate a higher level of integration of ESG factors into their investment decision making.



Source: 2023 Inaugural Sustainability Report, Pg. 16

Strategy – Responses

The Hanover is committed to protecting our environment, making a difference in our communities, and governing our actions with integrity. We believe these values are essential to our success as a leading property and casualty insurance company providing insurance solutions in a dynamic world. We recognize climate change poses new and emerging risks, as well as opportunities to make The Hanover and its stakeholders more resilient in the years to come.

Identified Climate-related Risks and Opportunities

Risks

The Hanover recognizes the risks climate change poses to our environment, the implications of increased weather occurrences and severity on our customers, and the impact our employees may have on the environment as they perform their job functions and commute to and from the workplace. The financial risk that climate change brings to The Hanover primarily relates to the impact it may have on the frequency and/or severity of weather events, and the resulting impact those events may have on the property and casualty coverages we provide. Our greatest defense to the potential impacts of climate change on our business is to manage our exposure

concentrations in any one geographic area, leverage external and internal catastrophe and other models, and utilize reinsurance.

Opportunities

Climate change offers an opportunity for The Hanover to strengthen its financial resilience by managing its exposure footprint and containing the severity of a 1-in-250, or extreme loss event, within a specified risk tolerance. By establishing resiliency to climate change, we believe that we can maintain a strong financial foundation and can continue to deliver on our promise to our insureds. We continuously manage volatility and concentration risk by leveraging models and third-party scores to identify areas to address through pricing, as well as reinsurance terms and conditions. We purchase facultative, property per-risk and catastrophe treaty reinsurance to protect areas of concentrated risk, as well as to mitigate possible impact from extreme events. We will continue to evaluate our rate structure, underwriting guidelines, and coverage offerings in response to changes in weather patterns, as well as developments in building and community resilience.

We consider climate risk and opportunities through both our annual strategic planning process and ongoing business management, as well as through our long-term strategic planning efforts.

Time Horizon	Climate Risks	Climate Opportunities
Short Term 1-5 Years	<ul style="list-style-type: none"> Increased volatility (frequency/severity) of weather events 	<ul style="list-style-type: none"> Promote green endorsements and coverages Support building resiliency through evolving building code standards and compliance to ordinance or law coverage
Medium Term 5-10 Years	<ul style="list-style-type: none"> Potential changes to the Atlantic hurricane patterns impacting exposure concentration Potential for regulatory changes constraining insurer underwriting responses 	<ul style="list-style-type: none"> Leverage loss control services to educate insureds on preventative measures (e.g., contractual language, green endorsements, storm preparedness) Deepen underwriting and loss control staff training on evolving and unique climate exposures
Long Term 10-30 Years	<ul style="list-style-type: none"> Changes to availability of reinsurance coverage to protect economics 	<ul style="list-style-type: none"> Mitigation of risk over time by growing our casualty portfolio to balance property exposure

- The potential for sea level rise to alter the coastline and the associated risk to local economies
 - Climate-related litigation
 - Evolution of tools and models to aid in climate-change scenario modeling and exposure management practices
 - Advancement in pricing to reflect loss mitigation through enhanced building codes and resilient building features
-

Climate Resiliency

The Hanover works closely with policymakers and regulators, including legislators and the National Association of Insurance Commissioners, and is an active participant in the American Property Casualty Insurance Association and the Insurance Institute for Business and Home Safety (IBHS). Through our involvement in and collaboration with these organizations, we work to protect our natural environment and resources, while advocating for sustainable building codes and resilient communities.

In 2022, The Hanover signed the IBHS principles of climate change adaption, which outline the steps policymakers, in collaboration with the insurance industry and other private sector stakeholders, should take to improve the resiliency of American homes, businesses and communities to adapt to a changing climate. Several of The Hanover’s senior leaders are members of the IBHS Board of Directors. Moreover, The Hanover’s Chief Strategy Officer is a member of the ESG Council and responsible for ensuring that ESG-related factors, including climate change, are integrated in the company’s long-term strategy efforts.

Green Team

In 2022, we launched the Green Team, an employee-led advisory group. Their mission is to lead resiliency action and nurture a sustainable mindset among employees through education and community engagement, in support of our commitment to be a socially responsible organization. The team is organized around three main topics:

- Education - Strengthen knowledge of ESG practices, with a focus on the role individuals and our company play in building climate resiliency
- Community - Establish “green champions” across our company to compile resources and offer opportunities for employees to get involved both internally and externally

- Business Alignment - Develop a feedback loop between employees and senior leaders to exchange ideas and knowledge on environmental topics, seeking ways to communicate this information and elevate The Hanover brand

The Green Team will focus on important ways to continue to drive awareness and action to enhance our efforts toward long-term sustainability.

To provide key constituencies, including our employees, business partners and agents, shareholders and the general public, with transparency on ESG topics, including topics related to climate, the company published its inaugural Global Reporting Initiative (GRI)-referenced content index on its website in 2018 and can be found by visiting www.hanover.com. In 2021, the company cross-referenced the index to the Task Force on Climate-related Financial Disclosures (TCFD) framework. In 2023, Hanover published the Inaugural Sustainability Report.

Products and Services

The Hanover provides various products and offerings to encourage policyholders to reduce losses caused by climate change-influenced events. Current offerings include:

- “Green Coverage” offering from our Personal Lines business that enables homeowners to request restoration work with environmentally friendly materials after a loss;
- “Green Advantage” offering from our Commercial Lines business that covers additional costs to restore green-certified buildings to current standards, to perform air quality testing, and to recycle debris;
- Sprinkler credits and loss control services to reduce hostile fires and water use;
- Safety and disaster preparedness materials via participation in and sponsorship of International Business and Home Safety. The Hanover also provides materials via our Loss Control Portal for agents and policyholders to prepare for severe weather events;
- Aerial imagery, including a drone program, to assist with roof inspections and wildfire risk assessments.
- IoT sensors for businesses to detect leaks or freezing conditions to minimize loss

In addition, our risk solutions consultants connect with the policyholder to develop customized business resiliency plans. They do this by gaining an understanding of the business’s specific challenges; offer insight about emerging trends and other factors impacting the policyholder’s industry and suggest recommendations for improved resiliency.

Transition to a Low Carbon Economy

The Hanover has taken many steps to reduce energy consumption, emissions, and our impact on the environment. In 2022 we completed installation of new interior lighting within our main Worcester facility. Using LED technology and advanced controls has reduced our electricity consumption meaningfully and reduced run times through scheduling and motion sensing controls. We also completed upgrades to two important HVAC systems that have reduced electricity and natural gas consumption and improve controls allowing us to manage system schedules and run times more efficiently.

In the past several years we've made meaningful impacts to reduce our resource consumption that continued in 2022. These include installation of low-flow water fixtures as part of renovation projects. We also continue to purchase renewable energy credits, offsetting 100% of the electricity consumption for our Worcester, MA campus with wind energy.

In 2022 we renewed our Energy Star Certification for our owned and occupied locations, indicating that facilities perform better than at least 75% of buildings nationwide.

In addition to the management of our facilities, The Hanover recognizes the impact its employees may have on the environment as they commute to and from the workplace and has long supported the use of alternate forms of travel to reduce greenhouse gas emissions. With the recognition that electric cars materially contribute to the reduction of carbon emissions and a healthier planet, we have invested in electric car charging stations for employees and visitors at the company's headquarters. With Massachusetts anticipating that 300,000 electric vehicles will be on the road by 2025, we are proud to help pave the way for widespread use of alternative fuel vehicles. The Hanover also supports employee flexible work arrangements, allowing many employees to work from home, further improving air quality and reducing traffic on our congested roadways.

The Hanover offers the following programs to engage, attract, motivate, and encourage the health of a diverse work force, including:

- On-site fairs at our main campuses to educate employees on how to reduce their carbon footprint through solar energy, composting, the use of sustainable products and more.
- Numerous health and wellness program offerings.
- Financial counseling to assist employee well-being.
- Flexible work arrangements.
- Volunteer opportunities to clean up and improve the community; and

- Local sourcing with seasonal activities such as a weekly farmers market and local vendor fairs at the company's headquarters

Climate-related scenarios

The risk function is in the process of developing a climate-related scenario framework to facilitate responses to a variety of differing types of impact scenarios, alternative simulation catalogs, discrete scalar factors on frequency or severity, and addition of new sources or non-model risks. The goal is to assess potential impact with more focus on the near term, recognizing the greater uncertainty related to medium- and long-term impacts.

Risk Management Responses

The Hanover recognizes the risks climate change poses to our environment, and the implications of increased weather severity on our customers. A robust governance structure ensures the proper understanding and oversight of climate risks and opportunities. The enterprise risk management (ERM) function closely manages exposure concentrations and continues to partner with business units to develop tools to better understand and manage aggregation risk, including the development of a framework to analyze and conduct scenario analysis. Climate scenarios are complex, and we expect this process to evolve over time.

Identifying and assessing climate-related risks

The Hanover seeks to monitor and control risk exposure through an enterprise-wide risk management framework, which includes management, modeling and monitoring of catastrophe underwriting risk. The Hanover's risk governance is robust, with business unit risk structures supported by an ERM function. The ERM function, in partnership with the Enterprise Risk Management Group (ERMG), is responsible for identifying, monitoring, and analyzing material, corporate-level risks and emerging issues. Together, the team classifies, assesses, and manages risks, ensuring proper governance across the enterprise. ERMG membership includes leaders representing Agency Markets and Specialty businesses, as well as identified functional areas across the organization, such as underwriting technology, legal, human resources, finance, compliance, claims, among others. A risk register is maintained and updated quarterly, and each risk is assessed in terms of its likelihood of materialization, its mitigated financial magnitude, the time horizon over which it might exist or emerge, as well as qualitative considerations. Each risk in the risk register is owned by a member of ERMG, and the risk team meets with each risk owner to capture new risks and review and refresh risk assessments at a minimum annually, and up to quarterly, dependent upon the nature and priority of the risk.

Climate change and weather severity is a top risk on The Hanover's current and emerging risk register, and is tracked, researched, analyzed, and reported by the ERM function. Regular

updates are provided to the corporate Group Risk Committee (GRC), Aggregation Working Group, ERMG, and ESG Council. The Chief Risk Officer presents on the ERM program, including updates to The Hanover's top current and emerging risks, to the Audit Committee of the Board five times per year, and to the Board of Directors annually.

Management of underwriting risk

The management of underwriting risk, including climate change, starts with the Chief Underwriting Officer and corporate underwriting team to set guidelines and corporate appetite guardrails that apply to all lines of business (e.g., hurricane risk). The team works in collaboration with business units to fulfill their specific strategies. Business unit leaders create and review underwriting guidelines within established guardrails and for each line of business, industry and/or class of business that specify the nature and characteristics of the risks The Hanover is willing to underwrite. Underwriting authority letters are granted to each individual underwriter in the organization. Authority letters provide specified limits of authority and outline a clear escalation path as risks increase in size and complexity.

The Aggregation Working Group is responsible for exposure management, as well as monitoring and managing catastrophe risk and risk concentrations as they relate to each peril and region – hurricane, other wind, winter storm, earthquake, hurricane-induced precipitation, flood, wildfire, and terrorism. The Underwriting Committee is responsible for assisting executive management in exercising its oversight of the underwriting risks and controls that have a material impact on the company. The committee conducts research on underwriting topics, reviews performance against established risk tolerances, and directs actionable items toward the appropriate businesses. The GRC considers the current and emerging risks and mitigation actions underway for each of the six major sources of risk. All members of the executive leadership team are members of the GRC. The committee meets quarterly, and the results are reported to the Board of Directors.

In addition to the robust governance structure, regular engagement with business leaders, finance officers, underwriting professionals, actuarial staff and the claims unit provide collaboration opportunities and prompt development of new risk management strategies and reporting tools to better inform risk selection and management across the enterprise.

Risk monitoring and modeling

The risk function developed climate risk monitoring reports in 2022, aligned to the New York Department of Financial Services guidance, to define and show progress against mitigating the following categories of risk: reputational, pricing and underwriting, liquidity, credit, market, legal and regulatory, business continuity, and strategic risk. Risks in these categories are not of equal size or materiality, with enterprise risk management primary focus on physical risk, including pricing and underwriting. We have limited exposure to industries most susceptible to

transition risk. Commercial Lines premium in high carbon sectors, defined as coal, oil and gas, utilities, and transportation, represents roughly two percent of The Hanover's Commercial Lines gross premium, and approximately one percent of The Hanover's total gross written premium.

As described above, we are in the process of developing a climate-related scenario framework to facilitate responses to a variety of differing types of impact scenarios, alternative simulation catalogs, discrete scalar factors on frequency or severity, and addition of new sources or non-model risks. The goal is to assess potential impact with more focus on the near term, recognizing the greater uncertainty related to medium- and long-term impacts.

We have built internal tools to analyze historical data and trends to identify possible signs of climate change impacting both catastrophe and non-catastrophe weather-related losses. For example, the hurricane region analysis is an internal aggregation model aimed at measuring potential hurricane losses relative to our market share. The tool provides insight into where we have micro-concentrations that could lead to outsized losses for smaller events that are within our reinsurance retention and take targeted actions around reducing those concentrations.

In addition, in 2020 we developed an internal tool to measure the relative profitability of all lines against the relative contribution to probable maximum loss (PML) for a business unit and geography. This tool informs the strategic planning process to ensure catastrophe capacity is used efficiently. In addition to contrasting all lines profitability with relative PML contributions, the tool measures catastrophe profitability by accounting for the average annual loss (AAL), reinsurance cost and capital cost relative to the property rates and an established target rate for ex-catastrophe losses and expenses. State managers, chief underwriting officers and business unit leaders across the organization use the tool to inform planning and decision making.

Liability and Transition Risk

Climate change creates the potential for litigation to emerge related to green-house gas emissions in general liability lines, responsible climate risk disclosure and oversight in management liability lines, and in professional liability lines for insureds such as architects and engineers. Exposure to climate liability is mitigated in several ways, including the restriction of underwriting risk appetite to private company management liability, through appropriate use of pollution exclusions on general liability and umbrella policies, and through education and training for professional liability insureds and underwriters.

Transition risk is also mitigated through underwriting risk appetites. Generally speaking, Hanover does not have an appetite to write carbon-intensive sectors. Commercial Lines premium in 'high carbon sectors' represents roughly two percent of The Hanover's Commercial

Lines gross premium, and approximately one percent of The Hanover’s total gross written premiums; see section IV. Metrics and Targets for more detail.

Climate Resiliency

The Hanover works closely with policymakers and regulators, including legislators and the National Association of Insurance Commissioners, and is an active participant in the American Property Casualty Insurance Association and the Insurance Institute for Business and Home Safety (IBHS). Through our involvement in and collaboration with these organizations, we work to protect our natural environment and resources, while advocating for sustainable building codes and resilient communities.

As noted above, The Hanover signed in 2022 the IBHS principles of climate change adaption, which outline the steps policymakers, in collaboration with the insurance industry and other private sector stakeholders, should take to improve the resiliency of American homes, businesses and communities to adapt to a changing climate. Several of Hanover’s senior leaders sit are members of the IBHS Board of Directors. Moreover, The Hanover’s Chief Strategy Officer is a member of the ESG Council and responsible for ensuring that ESG-related factors, including climate change, are integrated in the company’s long-term strategy efforts.

Products and Services

The Hanover provides various products and offerings to encourage policyholders to reduce losses caused by climate change-influenced events. Current offerings include:

- “Green Coverage” offering from our personal lines business that enables homeowners to request restoration work with environmentally friendly materials after a loss.
- “Green Advantage” offering from our commercial lines business that covers additional costs to restore green-certified buildings to current standards, to perform air quality testing, and to recycle debris.
- Sprinkler credits and loss control services to reduce hostile fires and water use;
- Safety and disaster preparedness materials via participation in and sponsorship of International Business and Home Safety. The Hanover also provides materials via our [Loss Control Portal for agents and policyholders to prepare for severe weather events](#).
- Aerial imagery, including a drone program, to assist with roof inspections and wildfire risk assessments.
- IoT sensors for businesses to detect leaks or freezing conditions to minimize loss.

In addition, our risk solutions consultants connect with the policyholder to understand the business's specific challenges and offer insight about emerging trends, experience and other factors impacting the policyholder's industry.

Investment risk

We believe that as the world increasingly moves toward a lower carbon-based economy to lessen the impact of climate change, climate factors could influence the sustainability of an investment and its risk and return profile. For these reasons, we consider the impact of climate change and environmental issues as important factors to include in the fundamental research process we employ to manage investment assets.

We incorporate climate factors in our decision making as part of our fundamental investment research process. We have found that by having a greater awareness of how environmental factors can impact long-term sustainability and better manage risks, our investment professionals demonstrate a higher level of integration of climate factors into their investment decision making. Findings from this process are incorporated with other relevant information as part of our broader investment decision-making process.

This awareness leads us to favor investments in companies with a demonstrated commitment toward a reduced carbon footprint and increased reliance on cleaner and or renewable energy sources. In addition, since climate change can affect weather patterns, our investment decision making recognizes that certain regions and parts of the country are more vulnerable to rising ocean levels, coastal flooding and storms, drought, wildfire and other natural disasters.

The ERM function works in close collaboration with Opus to monitor matters in relation to asset allocation, financial market risk and liquidity risk. Risk management is embedded into rating agency debt ratings, such as Standard & Poor's and Moody's, which are regularly utilized to inform decision making. We will continue to enhance our practices, including investment climate-related scenarios, as guidance and standardization becomes available.

Metrics and Targets

The risk of climate change to property exposures is analyzed through running sensitivity tests on licensed third-party catastrophe models including RMS and AIR. These models contemplate the frequency and severity of natural perils, which may be impacted by climate change. We perform back-testing of catastrophe model loss distributions against historical losses to ensure these models capture historical volatility, as well as the potential for more extreme weather events.

Catastrophe risk is analyzed on a quarterly basis using these models along with exposure concentration assessment models built in-house to proactively manage our aggregations. The company maintains catastrophe risk appetite statements and risk tolerances against which we target and assess exposure to annual aggregate catastrophe losses. Risk appetites are established at three points in the risk distribution to govern acceptable risk levels. They are a primary control in the ERM framework, and they provide guardrails to protect the financial stability and security of the organization. Catastrophe risk appetites are monitored and reported to the GRC quarterly.

An internal risk assessment concluded that the largest climate change risk to the organization would stem from potential changes to the Atlantic hurricane patterns, and our largest areas of exposure are the Northeast and Texas. Conversely, we do not write personal lines business in Florida, Texas, or California. We purchase facultative, property per-risk, and catastrophe treaty reinsurance to mitigate losses from catastrophes and leverage the AIR and RMS models, along with historical losses, to assess the effectiveness of the reinsurance program.

As described above, the risk function is also in the process of developing a climate-related scenario framework to facilitate responses to a variety of differing types of impact scenarios, alternative simulation catalogs, discrete scalar factors on frequency or severity, and addition of new sources or non-model risks. The goal is to assess potential impact with more focus on the near term, recognizing the greater uncertainty related to medium- and long-term impacts.

We have built internal tools to analyze historical data and trends to identify possible signs of climate change impacting both catastrophe and non-catastrophe weather-related losses. For example, the hurricane region analysis is an internal aggregation model aimed at measuring potential hurricane losses relative to our market share. The tool provides insight into where we have micro-concentrations that could lead to outsized losses for smaller events that are within our reinsurance retention and take targeted actions around reducing those concentrations.

In addition, in 2020 we developed an internal tool to measure the relative profitability of all lines against the relative contribution to probable maximum loss (PML) for a business unit and geography. This tool informs the strategic planning process to ensure catastrophe capacity is used efficiently. In addition to contrasting all lines profitability with relative PML contributions, the tool measures catastrophe profitability by accounting for the average annual loss (AAL), reinsurance cost and capital cost relative to the property rates and an established target rate for ex-catastrophe losses and expenses. State managers, chief underwriting officers and business unit leaders across the organization use the tool to inform planning and decision making.

Financed or underwritten carbon emissions

The Hanover generally does not have an appetite to write carbon-intensive sectors (defined as coal, oil and gas, utilities, and transportation). Commercial lines premium in ‘high carbon sectors’ represents roughly two percent of The Hanover’s Commercial Lines gross premium, and approximately one percent of The Hanover’s total gross written premium:

	Investments / Premium as of December 31, 2022 (USD, \$ in millions)	
	Investments	Underwriting (Commercial Ins.)
Coal	0	1
Oil & Gas	155	0
Utilities	391	11
Transportation	131	51

No.	Commercial Insurance and Reinsurance Gross Premiums by Sector as of December 31, 2022	(USD, \$ in millions)
1	Energy	9
2	Materials	744
3	Industrials	936
4	Consumer discretionary	537
5	Consumer staples	169
6	Health care	216
7	Financials (insurance, banks, non-banks)	34
8	Transportation	117
9	Information technology	42
10	Telecommunication services	56
11	Utilities	16
12	Other	431
Total		3,306.70

Other sector includes commercial and reinsurance premiums from Real Estate = \$362 million and miscellaneous such as repair and maintenance, personal and laundry services, private households, and others = \$105 million.

Responsible Investment Policy

The Hanover is committed to protecting our environment, making a difference in our communities, and governing our actions with integrity. We sincerely believe these values are essential to our success as a leading property and casualty insurance company providing

insurance solutions in a dynamic world. As a result of this commitment, we recognize that ESG factors are an important consideration in the fundamental investment analysis that we undertake. We believe integration of these factors in our analysis will lead to better investment decisions regarding the sustainability of an investment and its risk and return profile.

We incorporate ESG factors in our decision making as part of our fundamental investment research process. We have found that by having a greater awareness of how ESG factors can enhance returns and better manage risks, our investment professionals demonstrate a higher level of integration of ESG factors into their investment decision making.



Source: 2023 Inaugural Sustainability Report, Pg. 16

Scope 1, 2, 3 Emission

- Scope 1, direct greenhouse gas (GHG) emissions, in 2021 from natural gas used for heating The Hanover’s corporate headquarters campus in Worcester, Massachusetts and our Howell, Michigan location were estimated to be:
 - Carbon dioxide: 1,695 mT
 - Sulphur dioxide: 19 lbs.

- Nitrogen oxide: 2937lbs.

Changes to emission levels are considered significantly less than the 2018 baseline. This is primarily due to the reduced in-building population at both the Worcester and Howell locations due to adjusted work arrangements as a result of COVID-19.

Scope 2, Indirect greenhouse gas (GhG) emissions from utility-provided electricity in 2021 at The Hanover's corporate headquarters campus in Worcester, Mass., were completely offset by the purchase of renewable energy credits. Greenhouse gas (GhG) emissions from our Howell, Mich. location were estimated to be:

- Carbon dioxide: 851mT
- Sulphur dioxide: 1369 lbs.
- Nitrogen oxide: 2053lbs.

Overall emission levels in 2021 were slightly below the 2018 baseline despite systems that were shut down or reduced in run time during the COVID-19 pandemic returning to normal operation in 2021.

Scope 3, other greenhouse gas (GHG) emissions, are estimated based on calculations for business travel and use of company fleet vehicles. GHG emissions were estimated using information provided by our travel partner, miles traveled, and average vehicle fuel efficiency of fleet models provided by vehicle manufacturers. Travel and fleet GHG estimated emissions for 2021 were estimated to be:

- Carbon dioxide: 5,204mT
- Sulphur dioxide: 319 lbs.
- Nitrogen oxide: 8,307lbs.

Scope 1, 2, 3 emission estimates are updated on an annual basis on previous calendar year results and are published within our GRI referenced index. 2021 emission data is available as of December 31, 2022. 2022 emission data will be available as of December 31, 2023. To see available emission benchmarking, visit <https://www.hanover.com/why-hanover/our-corporate-commitment/gri-referenced-content-index>

Closed-ended questions directly correspond to the narrative above, allowing for explanation and qualification of the yes/no answers. Closed-ended questions are voluntary for reporting year 2022 and individual states may elect not to request them.

Governance

- Does the insurer have publicly stated goals on climate-related risks and opportunities? (Y/N)
- Does your board have a member, members, a committee, or committees responsible for the oversight of managing the climate-related financial risk? (Y/N)
- Does management have a role in assessing climate-related risks and opportunities? (Y/N)
- Does management have a role in managing climate-related risks and opportunities? (Y/N)

Strategy

- Has the insurer taken steps to engage key constituencies on the topic of climate risk and resiliency? (Y/N) *
- Does the insurer provide products or services to support the transition to a low carbon economy or help customers adapt to climate risk? (Y/N)
- Does the insurer make investments to support the transition to a low carbon economy? (Y/N)
- Does the insurer have a plan to assess, reduce or mitigate its greenhouse gas emissions in its operations or organizations? (Y/N)*

Risk Management

- Does the insurer have a process for identifying climate-related risks? (Y/N)
 - If yes, are climate-related risks addressed through the insurer's general enterprise-risk management process? (Y/N)
- Does the insurer have a process for assessing climate-related risks? (Y/N)
 - If yes, does the process include an assessment of financial implications? (Y/N)
- Does the insurer have a process for managing climate-related risks? (Y/N)
- Has the insurer considered the impact of climate-related risks on its underwriting portfolio? (Y/N/Not Applicable)*
- Has the insurer taken steps to encourage policyholders to manage their potential climate-related risks? (Y/N)*
- Has the insurer considered the impact of climate-related risks on its investment portfolio? (Y/N)*
- Has the insurer utilized climate scenarios to analyze their underwriting risk? (Y/N)
- Has the insurer utilized climate scenarios to analyze their investment risk? (Y/N)

Metrics and Targets

- Does the insurer use catastrophe modeling to manage your climate-related risks? (Y/N)
- Does the insurer use metrics to assess and monitor climate-related risks? (Y/N)
- Does the insurer have targets to manage climate-related risks and opportunities? (Y/N)
- Does the insurer have targets to manage climate-related performance? (Y/N)

* Asterisks represent questions derived from the original Climate Risk Disclosure Survey.