



# 2023 CLIMATE RISK AND OPPORTUNITY INDEX

June 2024

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Pillar	Area of Focus	Response
<b>Governance</b>	<p>a) Describe the board’s oversight of climate related risks and opportunities.</p> <p>b) Describe management’s role in assessing and managing climate related risks and opportunities.</p>	<p>With Solenis’ acquisition by Platinum Equity Advisors, LLC in November 2021, the company implemented a governance structure in alignment with other Platinum portfolio companies. This structure consists of two bodies: the Operating Council and the Executive Committee. These bodies work in close cooperation, partnership, and communication with Solenis’ Sustainability Task Force Leadership Team. Throughout the governance structure, these leadership teams develop and implement Solenis’ position on sustainability and monitor global developments and sustainability trends to ensure that Solenis’ efforts remain relevant, competitive, and compliant with governmental requirements. In addition, through Solenis’ governance structure, the company monitors and facilitates progress to ensure consistency with strategy, goals, and reporting standards. The highest governing body at Solenis is the Operating Council. This group of seven people provides business strategy and operations oversight and measures the company’s progress toward its stated goals against our Key Performance Indicators (KPIs) and targets. The body consists of Platinum’s Chief Financial Officer (who is a permanent member of all of Platinum’s portfolio companies); four other Platinum representatives who are selected by Platinum’s senior managers; Solenis’ CEO; and one independent advisor, who is the only member who is compensated for his participation. A managing partner of operations chairs the Operating Council.</p> <p>There are three key working groups within the Operating Council: Audit; Compensation; and Sustainability. The Sustainability Committee works closely with the Operating Council’s independent advisor. Solenis’ Chief Sustainability Officer (CSO) provides four updates per year to the Operating Council and meets bi-monthly with Solenis’ independent sustainability advisor to review strategy and execution of sustainability initiatives.</p> <p>Solenis’ Sustainability Task Force is led by the CSO along with eight other executives from differing functions in the company. This leadership team meets weekly to manage long-term planning and set workstream agendas. The CSO has the primary responsibility for ensuring that the relevant processes and initiatives are aligned with the company’s sustainability strategy. The full task force is comprised of about 50 people who represent the various businesses, functions, and locations throughout Solenis and meets on a bi-weekly basis. The Sustainability Task Force has the primary responsibility for overseeing the work associated with the four sustainability pillars and acts as a resource to obtain the necessary support to drive improvement. The task force also coordinates work on key cross-functional initiatives aimed at improving Solenis’ sustainability profile across the corporation, including climate strategy.</p>

		<p>For more details on governance roles and responsibilities, Executive Committee oversight, and cross functional workstreams under the Sustainability Task Force, please see Section 4 of <a href="#">Solenis' 2023 Sustainability Report</a>.</p> <p>----</p> <p>The primary duty of the Sustainability Committee is to assist the Operating Council in its oversight of Solenis' Environmental, Social, Governance + Customer (ESG+C™) strategy, including progress on targets, reporting efforts, organizational structure, budgeting, compliance with ESG regulations, and sustainable value creation in line with the Company's overall business strategy.</p> <p>The Sustainability Committee is responsible for the following:</p> <ul style="list-style-type: none"> <li>• Approve the sustainability strategy, goals, and targets set for the Company</li> <li>• Inform the Board on sustainability and climate-related impacts, risks, and opportunities</li> <li>• Track progress on ESG+C™ targets to advance progress and ensure goals will be achieved             <ul style="list-style-type: none"> <li>○ Environmental Stewardship, including water, climate, waste</li> <li>○ Social Responsibility: including diversity, inclusion, training in ESG+C™ topics, safety, supplier engagement/due diligence and community engagement.</li> <li>○ Governance, including reporting, transparency, policies, and ESG ratings</li> <li>○ Customer Value, including Value Advantage and integration in sales efforts</li> </ul> </li> <li>• Identify where progress is lagging and provide guidance on improvements</li> <li>• Ensure that sufficient resources are being allocated to achieve Company goals</li> <li>• Review the annual sustainability report to ensure adequate transparency on material issues</li> <li>• Monitor ESG ratings to maintain leadership position</li> <li>• Ensure that trends in sustainability are being adequately addressed</li> <li>• Engage stakeholders to ensure material issues are being considered</li> <li>• Assess the value creation associated with sustainability efforts to ensure it contributes positively to the financial health of the Company; and</li> <li>• Review the effectiveness of the Sustainability Committee, Core Team, and Task Force and provide recommendations to the Board.</li> </ul> <p>The Solenis Board appoints the Chair and members of the Sustainability Committee on recommendation from the Committee. The composition of</p>
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<p><b>Strategy</b></p>	<p>a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.</p> <p>b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.</p> <p>c) Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.</p>	<p>Solenis has analyzed transition and physical climate risks and opportunities in current, 2030, and 2050 timeframes under business as usual and lower warming scenarios, including a 2°C or lower scenario.</p> <p>The physical climate analysis identified potential climate-related risks arising from both acute and chronic hazards: water stress, flooding, cyclones, extreme heat and cold, wildfires, extreme rainfall, and landslides. Climate change may affect Solenis' physical assets, present a potential health and safety risk to employees, and impact suppliers as well as transportation and distribution networks. Climate events may also increase the risk of possible operational delays and increase demand for more resilient infrastructure. For example, water availability directly impacts production, supply chain management, and overall business sustainability. Water shortages or restrictions could disrupt manufacturing operations. Interruptions in water supply may result in production slowdowns, downtime, and increased operational costs. Flooding, cyclones, extreme rainfall, wildfires, and landslides can pose a health and safety risk to employees, as well as a potential risk to business continuity, asset damage, products on-site, equipment, vehicles associated with Solenis assets, and contamination from hazardous waste incidents at the site level. By identifying these climate risks, Solenis has the opportunity to enhance its risk management measures and incorporate them into business strategy.</p> <p>To better understand and manage physical risks, Solenis engaged a third-party consultancy to conduct an analysis of 46 of Solenis' manufacturing facilities and 4 large offices, accounting for 99% of production. For most sites where potential high hazard risk is detected, Solenis has redundant operations that would reduce negative impacts to the business. For sites identified with high hazard risk, Solenis also plans to incorporate these considerations into risk management strategy and develop appropriate plans to manage risks at these sites.</p> <p>Across locations, the top hazard in the present timeframe is water stress while the main emerging climate hazards in 2050 are projected to be water stress and extreme heat. A deeper dive analysis was conducted on 8 of Solenis' most financially material sites. These sites have either minimal or low asset risk scores, but five out of the eight sites have individual hazards identified as high or very high risk, with the main hazard being riverine flooding. Other hazards include water stress, cyclones, wildfires, and extreme heat.</p> <p>The transition climate analysis identified potential climate-related risks arising from policy, technology, market, and reputation. Emerging energy transition risks may be lower in the near term but could increase over time through 2050 in a lower carbon future with greater pressures to reduce</p>

		<p>emissions and energy consumption. Policy and legal risks were found to be minimal or moderate, even under more ambitious net zero scenarios with the potential maximum cost of all Scope 1 and 2 emissions at around 2% of revenues. Technology risks may arise from the rapid decarbonization of the chemical sector, which could require the need to increase research and development (R&amp;D) spending. Rapid decarbonization could also reduce the demand for certain types of higher-carbon products. Reputationally, the sector could face greater stigmatization and pressure from consumers and stakeholders to transition to low-carbon, and more water-efficient, sustainable alternatives.</p> <p>Solenis also stands to potentially gain from the transition to a low-carbon economy. There are potential expansion opportunities for Solenis in a low-carbon future that are available beginning in the near term, and which could expand over time. Potential opportunities include those in resource efficiency, energy source, products and services, and markets. Solenis is targeting 90% of its R&amp;D programs to include a circularity focus by 2025. As these innovations are pursued, research may identify processes within Solenis' operations whose efficiency could be improved or which could utilize waste resources, which could reduce costs, enhance competitiveness of products, and help Solenis expand into new markets. Given that Solenis is involved in high emissions sectors, it also stands to gain from public incentives which encourage less carbon-intensive technologies (e.g., producer tax credits for more efficient boiler systems, EU solar installation incentives). Solenis products also have the potential to provide low-carbon water treatment solutions which reduce water, lower energy use, and minimize waste (e.g., through the development of compostable products, products that use recycled material or bio-based materials.)</p> <p>The climate-related risks and opportunities associated with the transition to a low-carbon economy have impacted Solenis' climate strategy in that it is focused on reducing operational energy consumption and greenhouse gas (GHG) emissions. These reductions are achieved through a three-pronged approach: operational and upstream decarbonization, site-level energy and GHG reduction, and sustainable R&amp;D and customer programs. Initiatives to decarbonize Solenis' operations and supply chain include partnering with East Coast Hydrogen to conduct feasibility studies related to the potential supply of hydrogen for use in power generation, as well as the partnership with Vital Energi, under which the contractor will upgrade the existing combined heat and power system and install two new efficient steam boilers and a new control system to ensure efficient and reliable energy generation. Examples of site-level decarbonization and energy reduction initiatives include conducting steam trap repairs, boiler burner adjustments and replacements, other process optimization initiatives, installing LED lighting throughout the Solenis' manufacturing network, forklift truck switch outs from diesel to electric, and installing a new heat pump at the Krefeld plant.</p>
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<p><b>Risk Management</b></p>	<p>a) Describe the organization's processes for identifying and assessing climate related risks.</p> <p>b) Describe the organization's processes for managing climate related risks.</p> <p>c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.</p>	<p>Solenis aligned with industry-leading approaches to identify and assess physical and transition climate risks and opportunities.</p> <p>The climate physical risk analysis assessed risk to climate hazards at 50 of Solenis' key manufacturing and office locations that make up the majority of Solenis' material sites from an inventory, investment, and business continuity perspective. Nine different climate hazards were assessed across low- and higher-emission climate scenarios (SSP1-2.6 and SSP3-7.0) in current, medium-term (2030), and longer-term (2050) time horizons. The assessment included the identification of assets that are at the highest risk across hazards as well as the assessment of the underlying hazards and hazard change over time. Hazards were assessed using climate data indicators for water stress, flooding, cyclones, extreme heat and cold, wildfires, extreme rainfall, and landslides. Risk scores were assigned based on location-specific climate exposure and asset type. For select manufacturing assets, identified as financially critical to business operations, additional analysis was conducted to assess the hazards that posed the most risk, how risk changed over time, and the estimated financial impact on the asset.</p> <p>The Solenis transition risk analysis assessed risk and opportunity based on the International Energy Agency (IEA), World Energy Outlook (2023) Stated Policy (STEPs), and Net Zero (NZE) scenarios for current, 2030, and 2050 timeframes. These scenarios were chosen to represent a wider range of possibilities to account for future uncertainty as well as the ambition to align with a 1.5 degree C by 2100 temperature threshold. Risk ratings were determined on a minimal to very high scale based on the potential impact and opportunity under the different scenarios. The</p>

		<p>analysis focused on Solenis' sensitivity to policy and legal risk (e.g., from carbon pricing and regulatory obligations), technology and resource efficiency changes (e.g., from substitution of products with low emissions options, cost of transition to lower emissions technologies, and investment in new technologies), market risks, and product line opportunities (e.g., due to customer behavior and potential expansion of low-emission goods and services).</p> <p>Additionally, the potential financial impact of carbon prices was quantified both locally at the Bradford site and a global level. Bradford was selected due to its high Scope 1 emission profile within Solenis' portfolio (~33% of global Scope 1 emissions in 2023) and as it is one of the few sites currently subject to carbon pricing. Calculation of the financial impacts of carbon prices was conducted for STEPs and NZE scenarios in current, 2030, and 2050 timeframes, considering two sub-scenarios – an 'Abatement' scenario where Solenis' proposed emissions reduction targets are achieved and a scenario of "No Abatement" where emissions are not reduced.</p> <p>Risks are also identified through an annual internal Environmental, Health, and Safety survey to assess and improve the sustainability of Solenis' manufacturing plants, including topics such as energy management. After risks are identified, Solenis prioritizes them by quantifying their impact. This process takes into consideration the financial or economic impact, probability of occurrence, duration, and velocity of the risk.</p> <p>Solenis intends to integrate climate change risks within the Enterprise Risk Management (ERM) framework. The ERM Committee aligns the organizational strategy, facilitates the risk assessment, monitors risk strategies, recommends institutional policies related to risk-adjusted measures for value creation, validates/reviews mitigation efforts, and promotes a culture that identifies risk management as a consideration when executing and planning institutional activities. The ERM Committee will assist the Environmental, Health, and Safety team in its risk mitigating efforts related to climate change.</p> <p>Solenis strives to manage transition risks associated with a lower-carbon future by reducing their operational energy consumption and GHG emissions. To decarbonize operations, Solenis is working with energy procurement consultants to develop a renewable energy plan, investigating fuel switching options (which targets the primary source of Scope 1 emissions, emissions associated with natural gas for heat and steam generation), purchasing renewable electricity, and transitioning to electrical vehicles. In addition to decarbonizing, Solenis will establish a strategy to upgrade their fleet and boilers to reduce the risk associated with increasingly stringent environmental regulations.</p> <p>At the site level, there are local improvement initiatives to encourage employees to generate ideas to save energy. For example, in the UK a site developed a Net-Zero roadmap with the UK government as part of the UK's Industry of the Future Program. The Bradford site, which is a</p>
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		<p>significant source of Scope 1 emissions, has a comprehensive emission reduction program in place, including boiler upgrades and upgrades to its heat and power system. In addition, the Helsingborg site established a biogas contract for the site to promote low-carbon energy consumption. At many sites, improvements are also linked to performance targets.</p> <p>To supplement other corporate- and site-level decarbonization efforts, Solenis has engaged in research on different bio-based, circular, and generally non-fossil based raw materials and seeks to implement the Mass balance principle for factories to gradually introduce raw materials with lower-carbon footprint into current products. Solenis has also embarked on a series of product carbon footprint studies. These studies employ a cradle-to-gate approach, accounting for the environmental impact of raw material extraction, transport, and energy consumption within the operational facility; however, they exclude considerations for packaging, waste disposal, and transport. Solenis is also developing an advanced tool to automate the calculation of their products' carbon footprint and will encompass their extensive product portfolio. Armed with this data, Solenis can implement a multifaceted strategy that involves exploring alternatives to fossil-based raw materials and optimizing supply chain logistics and manufacturing processes.</p>
<p><b>Metrics and Targets</b></p>	<p>a) Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process.</p> <p>b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.</p> <p>c) Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.</p>	<p>Solenis uses a variety of energy, emissions, and other climate-related metrics to assess climate risks and opportunities. For example, the avoided emissions and percent revenue generated from low-carbon products (such as defoamer products, retention and drainage aids, antiscalants, and dry strength additives) or the estimated emissions saved from climate initiatives (such as energy efficiency in building lighting and various stages of the production process as well as consumption of low-carbon energy) are tracked annually.</p> <p>Solenis reports its GHG emissions according to the Greenhouse Gas Protocol as promulgated by the Greenhouse Gas Protocol Initiative for Scope 1, 2, and 3, including the following methods for Scope 3: supplier-based, activity-based, hybrid, average-data, spend-based, distance-based, and waste-type-specific (see the bottom of this section for 2023 Scope 1, 2 and 3 metrics). Data for the sites acquired with the Diversey business are not included.</p> <p>GHG emissions in Solenis' plants are primarily related to fuel and electricity consumption. In 2023, Scope 1 GHG emissions increased by 10% while Scope 2 emissions increased by 16%. This was largely due to the inclusion of the South Charleston, W. Va., U.S.A., facility which was acquired with Clearon Corp. in September 2022. Excluding the impact of the Clearon site, Scope 1 GHG emissions decreased by 3% and Scope 2 GHG emissions decreased by 8%. Solenis' GHG emissions intensity (metric tons of emissions for every metric ton of product output) increased slightly from 0.21 to 0.25 in 2023 versus 2022. In addition to the inclusion of the Clearon site, the loss of a landfill gas supply contract in Suffolk, Va., U.S.A., contributed to the increase since alternate energy sources were</p>



		<p>then employed. These increases offset the impact of reduced production and various energy reduction initiatives throughout the company.</p> <p>Overall, Scope 3 GHG emissions have remained the same as 2022. There was a significant growth in business travel as concerns regarding COVID began to abate. In addition, emissions related to transportation and distribution (Category 4 &amp; 9), decreased as more accurate distance-based data has become available.</p> <p>In 2023, Solenis' total energy consumption increased by 1% compared to the prior year. Their direct energy consumption, which includes, for example, natural gas to fuel their operations, plants, and projects, remained constant. Solenis' indirect energy consumption, which includes purchased electricity and steam, increased 18%. Again, the inclusion of the Clearon chlorine-based sites and the loss of the Suffolk, Va., U.S.A., landfill gas supply was only partially offset by the 3% reduction in production and initiatives to conserve energy.</p> <p>To manage climate-related risks and opportunities, Solenis has set a series of targets with corresponding KPIs. These include the following:</p> <ul style="list-style-type: none"> <li>• Operate with zero environmental harm and reduce their footprint. This is measured in part by reducing Scope 1 and 2 CO<sub>2</sub> emissions by 20% by 2030 with a 2018 baseline. Scope 1 emissions increased 10% while Scope 2 increased by 16% from 2022 to 2023.</li> <li>• By 2030, 90% revenue generation will result through the support of customers' sustainability goals. In 2023, 85% of revenues supported customers' sustainability goals.</li> <li>• Support circular economy principles and focus on innovation that brings a positive environmental handprint. This target is measured by 90% of innovation programs having a circularity or sustainability focus by 2025. In 2023, Solenis reported that 85% of innovation programs in pipeline have a sustainability or circularity focus.</li> <li>• By 2025, 30% of innovation programs will focus on reducing product carbon footprint. In 2023, Solenis reported that 18% of innovation programs drive reduced carbon footprint of their products.</li> <li>• Within a three-year time period, all new facilities are 100% certified to ISO 9001, RC14001, ISO 14001, ISO 45001, or SEDEX.</li> <li>• Increase supplier adherence to Solenis' sustainability requirements to greater than 90% by 2030. In 2023, 82% of suppliers by spend accepted Solenis' Sustainable Procurement Policy and Survey or met alternate criteria.</li> <li>• Solenis has committed to developing Science-Based Targets (SBT).</li> </ul> <p>Climate-related metrics for 2023 are summarized below. (Please refer to the 2023 Sustainability Report for more detail and historical trends.)</p> <p>GHG Emissions (metric tons CO<sub>2</sub>e)</p>
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