

Climate Change Risk



Tredegar's management assesses climate change-related risks annually in its Enterprise Risk Assessment process. In that process, each business unit identifies various risks, including climate change-related risks, that are particular to its business. Senior management and risk managers at the corporate level then consolidate each business unit's identified risks into a Tredegar Enterprise Risk Assessment. Climate change-related risks are assessed in this process by the business units and corporate staff according to the oversight framework described below. Board oversight of climate change-related risks is assigned to the Audit Committee of Tredegar's Board of Directors, as specified in the Committee's charter. In addition, climate change-related risks are presented to the full Board when it receives from management and discusses with management its annual Enterprise Risk Assessment. In the Enterprise Risk Assessment, various risks, including climate change-related risks, are assigned numerical values reflecting a combination of likelihood and severity, taking into account implemented mitigation strategies. The Board is thus able to see progress, or lack thereof, against these numerical values.

Tredegar's climate change risk approach aligns with the framework and standards published by the Sustainability Accounting Standards Board and Task Force on Climate-related Financial Disclosures. The primary climate change risk categories evaluated are:

Physical Risk – the acute or chronic risk of climate change as manifested through rising sea levels, increased flooding, extreme temperatures, droughts and the increased frequency of extreme weather events. These climate phenomena could damage infrastructure, cause disruption of supply chains, result in raw material scarcity or harm human health.

Regulatory Risk – the changes in the domestic and international regulatory landscape (i.e., existing and pending climate change laws and regulations) that can impact existing business operations or could increase the cost of operations.

Transition Risk – includes a myriad of risks, such as reputation, technology, and market risk, that could manifest themselves during the transition to a low-carbon economy. Examples include changing consumer habits, costs to transition to lower-emissions technologies, and reputational risk stemming from a company's sustainability practices relative to stakeholder expectations.

Our risk assessment for each of these categories is set forth below:

PHYSICAL RISK:

Tredegar believes that the principal physical risk it faces from climate change is flooding related to the increased frequency of extreme weather. Although Tredegar does not have production facilities or offices near the seacoasts and therefore does not face the direct risk of rising sea levels, flooding from extreme weather events can potentially impact Tredegar's facilities and its supply chain.

Tredegar's Carthage, Tennessee aluminum plant is located in a 50-year floodplain. To protect expensive and sensitive equipment from 50-year floods, Tredegar has raised the floor level of production areas at the plant.

Extreme weather conditions interrupted Tredegar's supply chain in 2017 when floods caused by Hurricane Harvey forced a multi-month shutdown of several Texas petrochemical plants that supply resin to Tredegar. These events temporarily disrupted Tredegar's ability to supply customers in timely fashion. In response, Tredegar has further diversified its resin suppliers so that it is now able to mitigate the impact of future hurricane-related disruptions.

To address general flood-related risks across its facilities, Tredegar has increased its overall flood insurance, which significantly limits Tredegar's exposure in the unlikely event of a 100-year or 500-year flood.

In the future, heightened water scarcity due to climate change and droughts may prompt regulatory authorities to limit the ability of production plants to withdraw water from customary water sources. However, given the locations of Tredegar's plants, Tredegar believes the imposition of such limitations on its facilities in a manner that would affect its operations in a material fashion is unlikely in the foreseeable future.

Tredegar maintains ongoing efforts to reduce both water consumption and water discharge. At Tredegar's flexible packaging plant in Cabo de Santo Agostinho, Brazil, seasonal water shortage issues prompted Tredegar to invest in a closed-loop system, reducing consumption by approximately 60% and mitigating the threat of future shortages.

Tredegar's Pottsville, Pennsylvania films plant identified water loss occurring in the underground piping of its water return system, resulting in a loss of over 18,000 gallons of water per day (or approximately 6.5 million gallons per year) into the soil. By installing a new above-ground piping system in 2013, the site reduced water usage in the first year by almost 6 million gallons and projects reduced potable water usage of 65 million gallons over the life of the project. Tredegar's Newnan, Georgia aluminum plant has an internal wastewater treatment system which employs reverse osmosis and filtration to reuse treated water within the facility, thereby reducing wastewater discharge to comply with regulations and reduce the impact on the surrounding community.

REGULATORY RISK:

As Tredegar has disclosed for many years, it bears risk associated with changing environmental regulation of air, water emissions and energy usage. Tredegar's films businesses also face risk related to increased regulation of the use and disposal of plastic products. Tredegar does not believe that it has unique climate change-related risks in this regard but seeks to continue to maintain strong compliance programs at its facilities.

TRANSITION RISK:

Tredegar believes that the two main climate change-related economic risks that it faces are changing consumer habits related to plastic film products and growing consumer demand for green buildings. In response to the risk of changing consumer habits, Tredegar is beginning to develop eco-friendly films for inclusion in its product offerings. For example, Tredegar's Terphane subsidiary, which operates in Brazil and the United States, has created an Ecophane™ line of sustainable polyester films for the global packaging market.

Regarding the increasing consumer demand for green buildings, Tredegar's Bonnell Aluminum subsidiary has responded by offering specialized extruded aluminum shapes for the construction industry that contribute to the ability of buildings to achieve LEED® certification. In connection with these efforts to support environmentally focused products, the Carthage plant, which is Bonnell's largest producer of aluminum extrusions for the construction business, has achieved the environmentally rigorous ISO 14001:2015 certification.

Because aluminum extrusions provide excellent strength-to-weight ratios, their use in vehicles instead of traditional steel components effectively addresses climate change concerns regarding gasoline usage by automobiles and light trucks. Bonnell offers specialized extrusions for the automotive industry that allow automakers to "lightweight" vehicles and improve fuel efficiency.