

Climate Change Risk



Tredegar's management assesses climate change-related risks annually in its Enterprise Risk Assessment process. In that process, each business unit will identify various risks, including climate change-related risks, that are particular to its business. Senior management and risk managers at the corporate level then roll-up business unit identified risks into a Tredegar Enterprise Risk Assessment, including climate change-related risks. Climate change-related risks will be 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 will be presented to the full Board when it receives and discusses its annual Enterprise Risk Assessment from management. 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 assesses its climate change risk exposure in accordance with the primary risk categories outlined in the [Climate Change Risk Oversight Framework for Directors](#) developed by State Street Global Advisors in June 2019. These primary risk categories are:

Physical Risk – the tangible 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.

Economic Risk – the risks of changing consumer habits and growth in climate consciousness as individuals recognize their role in aiding climate change, and reputational risk stemming from a company's sustainability practices relative to stakeholder expectations. This type of risk also includes investment allocation decisions in companies and sectors that are better suited for a low carbon economy.

Regulatory Risk – the changes in the regulatory landscape that can impact existing business operations or could increase the cost of operations.

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. Tredegar does not have production facilities or offices near the seacoasts, so it is not faced with the threat of rising sea levels. However,

flooding from extreme weather events can potentially impact Tredegar's facilities and its supply chain. Tredegar seeks to proactively mitigate those risks.

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 the Company'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.

In addition, to address general flood-related risks across its facilities, Tredegar has increased its overall flood insurance coverage limits.

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. If such limitations were imposed, they could have the potential to affect production plants that failed to develop alternative water sources or find other ways to reduce water usage. However, given the locations of the Company's plants, the Company believes the imposition of such limitations on its facilities in a manner that would affect the Company's operations in a material fashion are unlikely in the foreseeable future.

In addition, the Company does not foresee any current ongoing risk to operations related to water scarcity. The Company has no operations in areas prone to water scarcity crises, but some plants are located in areas historically prone to seasonal droughts. For example, at Tredegar's flexible packaging plant in Cabo de Santo Agostinho, Brazil, seasonal water shortage issues prompted the Company to invest in a closed-loop system, reducing consumption by approximately 60% and eliminating the threat of future shortages.

The Company maintains ongoing efforts to reduce both water consumption and water discharge. Tredegar's Pottsville, PA 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 use 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, GA 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.

ECONOMIC RISK:

Tredegar believes that the two main climate change-related economic risks 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 its Ecophane™ line of sustainable PET 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 the Company'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 which allow automakers to "lightweight" vehicles and improve fuel efficiency.

REGULATORY RISK:

As Tredegar has disclosed for many years, it bears risk associated with the changing environmental regulation of air and 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 continues to maintain strong compliance programs at its facilities.