

Maruichi Group's Risks/Opportunities Associated with Climate Change

Major Classification	Risk Items		Time span	Risk	Opportunity	Business impact evaluation		Business impact evaluation		Countermeasures				
	Medium Classification	Minor Classification				4°C scenario		Less-than-2°C scenario						
						Risk	Opportunity	Risk	Opportunity					
Transitional	Policy/regulation	Carbon tax/emissions trading	Mid-to-long	The introduction of a carbon tax will increase the costs associated with CO2 emissions; and the strengthening of the emissions trading system and the expansion of target areas will result in additional costs to buy credits, etc. if GHG allowances are exceeded.	—	—	—	—	Large	Purchasing electricity derived from renewable energy sources Using solar power generation facilities for in-house purposes				
		Renewable energy policy	Short-to-long	If the unit price of renewable energy procurement we are already working on rises in response to certain policy trends, procurement costs will increase.	—	—	—	—	Large		Large			
		Energy saving policy	Mid-to-long	Logistic costs of marine and land transportation, etc. will increase. If the introduction of energy-saving products is made mandatory, requiring the equipment and fixtures to be replaced with high-efficiency models, costs will increase.	—	—	—	—	Medium		—	Replacing ceiling lights with LED devices, and adopting high-efficiency amorphous transformers Converting to high-efficiency burners Saving energy by reducing compressor air pressure Converting to low-carbon energy applications		
	Technology	Development of low-carbon technology	Short-to-long	The shift from gasoline cars to EVs and the advancement of autonomous driving technologies will reduce demands for mechanical tubes, and their sales.	The increasing popularity of EVs and FCVs will raise overall automobile demands globally, and increase the sales of mechanical tubes and seamless stainless steel pipes.	—	—	—	—	Medium	Medium			
		Development of next-generation technology	Short-to-long	Reconsideration of the reduction process, etc. will increase the prices of iron products in general, reversing the price superiority relative to other materials.	If hydrogen becomes widely used as an available energy source, the sales of seamless steel pipes used in FCVs and hydrogen stations will grow with increasing demand. The sales of seamless stainless steel pipes will increase to meet demand for semiconductors for next-generation communication devices. If the methods of transporting CO2 and ammonia, etc. become more widely accepted, demand for steel pipes used for piping will increase.	—	—	—	—	—	—	Large		
	Market	Changes in the energy mixes	Mid-to-long	Fossil fuel-based thermal power generation is on the decline due to the trends in environmental awareness and divestment movements. As thermal power plants decrease, demands for electric conduits will shrink and sales will decrease.	The shift from fossil-fuel thermal power generation to renewable energy is progressing. An increasing number of renewable-energy-based power plants will boost demand for stainless-steel pipes and electric conduits, and push up sales.	—	—	—	—	—	—	Large		
		Changes in raw material costs	Short-to-long	We are currently buying most of our raw materials from blast furnaces, but if hydrogen-reduction steel production becomes the mainstream in the future, the associated carbon taxes are also expected to increase, raising our purchasing costs.	—	—	—	—	—	—	—	Large	—	Diversifying raw material procurement sources
	Reputation	Changes in evaluation perceived by customers	Mid-to-long	Increasing awareness among business partners leads to a preferential selection of more environmentally friendly companies. Inability to respond to this trend will end transactions or lose market shares to competitors, resulting in a sales downturn.	Increasing awareness among business partners will lead to a preferential selection of more environmentally friendly products. As demands for products entailing less environmental loads, such as Maruichi Handy Pipe STK700, expand, sales will also increase.	—	—	—	—	—	—	—	—	Publicly announcing our TCFD initiatives Calculating and publicizing the carbon footprint Reducing waste generation by extending equipment life
		Changes in evaluation perceived by investors	Short-to-long	If our disclosure of information concerning climate change takes more time than that of our competitors, investments and loans from financial institutions and investors will be lost.	When a company is more advanced in terms of information disclosure concerning climate change, it will be viewed by financial institutions and investors as a more preferable investment/loan target.	—	—	—	—	—	—	—	—	
	Physical	Acute	Intensification of abnormal weather (Typhoons, heavy rain, landslides, storm surges, etc.)	Mid-to-long	There may be significant impact on production sites and supply chains, resulting in operational shutdowns and disruption of distribution functions, increasing countermeasure costs.	Demand for steel-pipe piles, columns, plates, and electric conduits, etc. will increase to meet infrastructure demand to enhance resilience against natural disasters.	Large	—	—	—	—	Medium	—	Installing flood barriers at plant entrances Elevating the land levels of electric control panels, etc.
Rising average temperatures			Mid-to-long	Air conditioning loads will rise, and energy costs will increase.	Demand for steel pipes and line pipes for agricultural/gardening purposes, etc. will increase to counter drought and food crises.	—	—	—	—	—	—	—	—	Installing dual roofs on plant buildings Mounting heat-shield sheets on the ceiling of factory buildings Installing large fans
Chronic		Worsening labor and construction conditions	Mid-to-long	In some plants, air conditioning cannot be installed due to manufacturing process restrictions; the resulting incessant high temperatures may reduce productivity and lead to accidents.	—	Medium	—	—	—	—	—	—		

* This table is created by excerpting items identified as necessary in the respective TCFD Guides compiled by the Ministry of the Environment.

* The periods indicated in the above Table are as follows: "short term," from 0 to 3 years; "medium term," from 4 to 10 years; and "long term," 11 years or longer.

* The business impact evaluations are based on currently available parameters (as of June 2022).

* The indications in the business impact evaluation columns represent our recognition of relative materiality in estimating our future strategies, etc., and do not necessarily indicate impact levels on our overall corporate financial positions.

* The indication of "-" in the business impact evaluation columns means that the evaluation is difficult or relatively insignificant at present.