

2006 Carbon Disclosure Project Greenhouse Gas Emissions Questionnaire

Topic Area	Question	Ashland Response
1) General	How does climate change represent commercial risks and/or opportunities for your company?	<p>Ashland produces specialty chemicals for use in many different types of industrial applications, engine oil, lubricating fluids, and other car care products. We also operate an extensive chemical distribution business and a large transportation construction business.</p> <p>Ashland has developed an energy use inventory for our businesses and has estimated our contribution to global emissions of greenhouse gases (GHG). As an extremely minor contributor, we feel that the main commercial risks to our company involve additional burdensome regulatory controls such as emissions caps would negatively impact Ashland as they would all of industry. While these regulatory burdens may not impact Ashland directly due to our minor contribution, we feel that we could be indirectly impacted by the effect on our suppliers and customers. Ashland expects any direct impact to occur mainly to our paving and construction business and the distribution of our chemical products due to higher fuel prices.</p> <p>We have currently identified only minimal market opportunities for Ashland in this area. Some Ashland products have been used to create lighter-weight composites for the automotive and other industries, and others have been used in the production of wind turbine blades.</p>
2) Regulation	<p>What are the financial and strategic impacts on your company of existing regulation of GHG emissions?</p> <p>What do you estimate to be the impact of proposed future regulation?</p>	<p>Due to the nature of our operations, Ashland has experienced only minimal financial impacts from existing GHG regulations. The primary impact is the cost and time for data collection needed when regulatory jurisdictions require GHG pollutants be included in annual/periodic emission reports.</p> <p>We have no way of estimating the impact of proposed future regulations. However, depending on the form they take, future regulations could adversely affect our ability to expand our businesses in regions where regulations exist and potentially limit the equipment and vehicles we are able to use in those jurisdictions.</p>

3) Physical Risks	<p>How are your operations affected by extreme weather events, changes in weather patterns, rising temperatures, sea level rise and other related phenomena both now and in the future?</p> <p>What actions are you taking to adapt to these risks, and what are the associated financial implications?</p>	<p>The extreme weather events of 2005 affected Ashland sites in hurricane-prone areas as they did the general public and other businesses. However, we experienced only minor damage to our sites, and most were back in operation with the restoration of utilities. Our transportation construction business is heavily influenced by weather since their primary business is road construction. Rainy weather can negatively impact this business, but in contrast, warmer, drier weather can positively impact their ability to perform work. APAC also performs work to reconstruct damaged infrastructure resulting from weather-related events.</p> <p>We have enhanced our crisis management plans, and have put processes in place to account for our employees and manage their safety.</p>
4) Innovation	<p>What technologies, products, processes or services have your company developed, or is developing, in response to climate change?</p>	<p>We have developed and marketed a series of polyester resins and gel coats that are sold into the wind turbine blade market. We have not estimated the quantity of GHG emission reductions, nor the estimated costs and/or profits from these products specifically related to reductions in GHG emissions.</p> <p>We also have very strong technology in the area of low-emission products that assist our customers in minimizing their emissions of hazardous air pollutants and volatile organic compounds. A substantial portion of our R&D efforts are in the low emission and alternative raw material area.</p>
5) Responsibility	<p>Who at the Board level has specific responsibility for climate change related issues and who managed your company's climate change strategies? How do you communicate the risks and opportunities from GHG emissions and climate change in</p>	<p>We have an active Environmental, Health and Safety (EHS) Committee of the Board. Our vice president of EHS participates on this committee, and is also responsible for managing our climate change strategies. The EHS Department has estimated our global GHG emissions, and has communicated those emissions to the Board. We understand our contribution by business segment, and are working with our businesses on setting GHG reduction targets. We communicate our GHG emissions in our annual Citizenship Report, and report them publicly through the American Chemistry Council's annual metrics reporting. We also participate</p>

	your annual report and other communications channels?	and report our progress via Climate Resolve.
6) Emissions	What is the quantity in tonnes of CO ₂ e of annual emissions of the six main GHG's produced by your owned and controlled facilities, listing data by country?	<p>Of the six primary GHGs, Ashland has significant emissions of only CO₂. Ashland began calculating GHG emissions in 2003; Ashland's CO₂ emissions from U.S. operations have been estimated to be:</p> <p>CY03 1.527 million tons (1.385 million tonnes) CY04 1.532 million tons (1.390 million tonnes) CY05 1.410 million tons (1.279 million tonnes)</p> <p>The reduction from CY04 to CY05 is due to both the sale of one business segment and a reduction in transportation construction projects.</p> <p>Outside the U.S., Ashland's emissions of CO₂ are currently only estimated to be 43,000 tons/yr (39,000 tonnes/yr). Since our GHG emissions outside the U.S. are so small, we have not summarized them by country.</p> <p>Ashland uses a centralized data collection and GHG emission calculation methodology, and our conversion factors are provided by industry associations.</p>
7. Products and Services	<p>What are your estimated emissions in tonnes of CO₂e associated with the following areas, and please explain the calculation methodology used:</p> <ul style="list-style-type: none"> • Use and Disposal of our products and services • Supply Chain 	<ul style="list-style-type: none"> • Ashland has not identified GHG emissions from the use and/or disposal of our products and services. • Our best estimate of the GHG emissions from our Supply Chain begins with first-level shipments of our raw materials and ends with our finished products. This estimate is based on the best information available at this time, and may not be complete. <p>Ashland-owned transportation-related emissions are estimated to be:</p> <p>CY04 0.140 MM tons (0.127 MM tonnes) CY05 0.135 MM tons (0.122 MM tonnes)</p> <p>Non-owned Ashland transportation-related emissions are estimated to be:</p> <p>CY04 0.349 MM tons (0.317 MM tonnes) CY05 0.378 MM tons (0.343 MM tonnes)</p>

<p>8. Emissions Reductions</p>	<p>What is your firm's current emissions reduction strategy?</p> <p>How much investment have you committed to its implementation, what are the costs/profits, what are your emissions reduction targets and time-frames to achieve them?</p>	<p>We have drafted a greenhouse gas policy and strategy, but we have not yet formally proposed an emission reduction goal. At this time we plan on continuing to gather energy use and greenhouse gas emissions data, and will consider an emission reduction goal in the future.</p> <p>To date, estimates have not been made on costs or profits associated with this issue. Our greenhouse gas policy will help drive higher fuel efficiency and energy use reductions through the normal process of replacing equipment. We also have invested in Six Sigma¹ techniques, which have already resulted in some energy use reductions. We expect more Six Sigma¹ projects to address energy efficiency in the future.</p> <p>¹ - Six Sigma is a registered trademark and service mark of Motorola, Inc.</p>
<p>9. Emissions Trading</p>	<p>What is your firm's strategy for, and expected cost/profit from trading in the EU Emissions Trading Scheme?</p>	<p>Our businesses located in the EU are not covered by the EU Emissions Trading Scheme since they are extremely small sources of GHG. Therefore we do not anticipate any costs or profits impact.</p>
<p>10. Energy Costs</p>	<p>What are the total costs of your energy consumption, e.g. fossil fuels and electric power?</p> <p>Please quantify the potential impact on profitability from changes in energy prices and consumption.</p>	<p>The total cost of Ashland's energy consumption for calendar year 2005 is estimated to be around \$190 million. We do not have estimates for any other year at this time.</p> <p>The profitability of our transportation construction business would be most impacted by changes in energy prices. They have estimated that each 1 percent increase in energy-related costs, including liquid asphalt purchases, could result in a decrease in profit margins of up to 0.2 percent, before the impact of hedging and price protection programs.</p>