

Environmental responsibility

Environmental commitment

Our comprehensive approach to reducing the environmental impact of every manufacturing process at each plant site focuses on fundamentally reducing resource usage and pollution emissions at the source. Our focus on reducing per-unit consumption of energy, materials, and water encompasses process innovations and optimizations as well as increased utilization of by-products and recycling.

Energy consumption declined 3.4% to 43,763 TJ (terajoules) in 2015, driven by energy saving efforts at all plants. Materials consumption declined by 3.4% due to TDI production process improvements at the Gunsan plant and the shutdown of certain production lines at the Incheon plant. Toxic chemical use declined by over 27% due to reductions in caustic soda, hydrochloric acid, and hydrogen peroxide use related to lower plant operating rates. Waste generation rose by 10.1% due to an increase in treated sludge related to tank cleaning at the Pohang plant. Our overall waste recycling ratio fell from 70.1% to 46.5% due to the completion of a landfill project at the Gunsan plant that used certain waste. Water consumption increased by 6.7% due to the startup of production at the No. 3 phthalic anhydride line at the Pohang plant.

Korea's Act on the Registration and Evaluation of Chemicals (K-REACH) came into effect on January 1, 2015. We began working to comply with K-REACH in 2014 and are currently following a master schedule to meet the act's deadlines. In addition to government assistance to assist companies in their compliance efforts, the Korean petrochemical industry association has a taskforce working on this to help member companies avoid or reduce duplicate effort and costs. Although compliance

will require significant work and investment, we share the belief that the new regulations will be beneficial to the industry over the long term.

We are an active participant in efforts to reduce both direct and indirect greenhouse gas emissions. During the first year of Korea's cap-and-trade emissions trading scheme in 2015, we exceeded our emissions quota by approximately 8.2%, largely due to our presence in the sector with the lowest allocation, requiring us to purchase emissions permits or borrow against next year's emissions quota. Overall, our operations emitted approximately 2.5 million tons of CO₂ in 2015, roughly 7.6% less than the previous year primarily due to a 15% reduction in polysilicon production related to an accident that shut down a portion of

production for an extended period. We believe our ongoing GHG reduction projects combined with efforts to optimize our manufacturing processes will enable us to gradually decrease CO₂ emissions going forward as we work to achieve our emissions target.

CO₂ emissions

Total emissions (in ktCO₂)

Year on year



We believe that environmental stewardship is good business. Across our organization, we are pursuing operational and environmental excellence to reduce the resources we consume and emissions and waste we generate as we do our part to create a sustainable future.

