

Greenhouse Gases & Climate Change

Fact Sheet

Introduction

Evidence that the earth is getting warmer is quite overwhelming. The planet's temperature is set to rise by 3 to 4 degrees by the year 2100 if current practices continue, which will melt a large part of the ice caps and cause sea levels to rise between 30 and 110 cm.

The main cause of the problem is that generating energy burns huge amounts of fossil fuels, such as coal, which releases carbon dioxide (CO₂) into the atmosphere.

The result is the 'Greenhouse Effect', which happens when the CO₂ (the main greenhouse gas) and other gases (such as methane) get thick enough to form a 'gas blanket' around the earth, causing it to heat up more than usual. This is part of climate change.

South Africa produces 1.4 % of the world's total greenhouse gas emissions. Burning coal is the main source of CO₂ (through burning it to generate electricity, or burning it directly for heating, cooking etc.)

Ascribing to our policies and legal requirements, Palabora is committed to assessing and where practically possible, reducing its greenhouse gas emissions in order to reduce its impact on climate change.

Greenhouse emissions

The mining, milling and smelting processes used in the production of copper are the major contributors to greenhouse gas (GHG) emissions. Electricity consumption accounts for two-thirds of total greenhouse gas emissions while the major fuel contributor is coal.

Palabora's GHG emissions are calculated and come indirectly from the purchase of electricity from Eskom, while the remaining balance is due to the direct use of fossil fuels such as coal, diesel and heating fuel.

The main opportunity for reducing greenhouse gas emissions at Palabora lies with more efficient use of electricity consumption.

Energy Management Program

In 2012 Palabora launched an Energy Management Programme (EMP) to curb the forever-growing energy bill. The objective of the EMP was to identify, implement and sustain energy conservation projects. 117 initiatives were identified and following stringent technical and financial adjudication processes. Thirty-one projects were implemented.

As a result Palabora saved 1.8-million gigajoules of energy and 350,000 tons of CO₂ emissions (which is the equivalent weight of 60,000 African elephants).

The Energy Management Programme has not only created a sustainable model making the company energy efficiency leaders in the mining sector but has also emphasized our position in matters of responsible mining and environment responsibility. The success of the programme lies in continuous monitoring and evaluation as part of ensuring sustainability.

For more information contact:
Manager Environment & SHEQ MS
Mark Surmon
Box 65, Phalaborwa 1390
015 780 2281

