DECARBONIZING ROAD FREIGHT: TOWARDS NET ZERO EMISSIONS

AK KAMDAR

KDG Logistics
Email: akkamdar@gmail.com

ABSTRACT

Transportation is a significant contributor to greenhouse gas emissions, particularly in the road freight sector. The urgent need to address climate change and reduce CO_2 emissions requires comprehensive strategies and effective implementation. This presentation focuses on the internal and external impacts of road freight, and explores the decarbonization options available to reduce emissions from the internal combustion engine (ICE) fleet by up to 20%.

The presentation begins with a discussion on CO_2 reporting and the development of a robust CO2 reduction strategy. Key considerations for implementing such strategies will be explored, including the measurement of CO_2 reduction impact and reporting methods to track the changes in emissions.

Transitioning towards net zero emissions in road freight requires exploring various technology options. The presentation highlights seven potential technologies, including Battery Electric Vehicles (BEVT), Hydrogen Fuel Cell Electric Vehicles (HFCEVT), High Capacity Transport (HCT), Biodiesel and Biomethane, Hybrid ICE BEVT, LNG/CNG, and Electric Road Systems (ERS). An example comparison between hydrogen (H2) and battery electric vehicles (BEV) will be presented to assist in choosing the most suitable new energy ecosystem.

Furthermore, the presentation sheds light on the challenges posed by lobbying and misdirection in the decarbonization journey. These factors can influence decision-making and delay progress towards achieving ambitious emissions reduction targets.

By addressing the complex issue of CO_2 emissions and climate change within the road freight sector, this presentation aims to provide valuable insights into the decarbonization process, technology options, and considerations for a sustainable and environmentally friendly future. It emphasizes the importance of collective action and informed decision-making to achieve meaningful progress in reducing CO^2 emissions and mitigating climate change in South Africa's transport industry.