



CLIMATE CERTIFICATE 2015

CO2focus' Climate Certificate™ is hereby issued to KLS Grafisk Hus A/S, which has calculated and compensated for the organisation's total CO2 emissions. The carbon footprint has been calculated according to the principles of The Greenhouse Gas Protocol (GHG Protocol), and includes the use of company cars and other vehicles, air and train travel, electricity and district heating, paper and general waste. The purchased electricity has guarantees of origin (RECs) from a renewable energy plant.

The organisation has purchased UN issued emission credits Certified Emission Reduction, (CER) equivalent to a total amount of 500 tonnes CO2, compensating for all their own emissions. In addition, KLS Grafisk Hus purchases CER emission credits on behalf of their customers for carbon neutral printed matters.

The emission credits related to this certificate are issued by UN and called CER (Certified Emission Reduction). The reduction of greenhouse gases is performed in the project called El Guacal Landfill project, Colombia, registered as an UNFCCC' project (no 3995).

The CERs are part of the Kyoto Protocol's mechanism to combat global warming, called the Clean Development Mechanism. A CER is an official emission credit which guarantees the reduction of greenhouse gas emissions and also supports sustainable growth in developing countries. When a CER is issued the reduction in greenhouse gas emissions has already taken place. By purchasing CERs, KLS Grafisk Hus A/S is funding the reduction of GHG emissions equivalent to the face value of this certificate. The CERs are consequently retired from the market and can never be used again.

Oslo, December 2015



Per Otto Larsen

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CDM 3995: El Guacal Landfill Project, Colombia

The landfill project is located in the Medellin Province, Colombia. The project consists in reducing greenhouse gases (GHGs) through capture and destruction of landfill gases, generated by the landfill through flaring.

The landfill started its operations in July 2006 and has a potential capacity of approximately 5,8 million tonnes of waste. The landfill is essential in order to support the waste deposit requirement of the whole region, by managing waste from Envigado City and 21 surrounding municipalities. Through the CDM project the landfill has been transformed into a sanitary landfill and is now

- *reducing emissions from methane gas (CH₄)*
- *contributing to sustainable environmental development*
- *improving social situation in the region.*

Uncontrolled landfills pollute the local environment and are potential grounds for disease proliferation and fire accidents. In addition landfills produce greenhouse gases as a result of the breakdown process of the waste.

The project has resulted in a well developed active gas collection. Without this project methane would escape uncontrolled to the atmosphere. Methane (CH₄) has a high global warming potential, contributing 21 times more to the climate change than CO₂.

Construction of new wells



Destruction of landfill gas



Location of the site



The landfill El Guacal was originally equipped with a passive gas venting system that released the methane gas directly into the atmosphere. Through the CDM project it became possible to invest in an active landfill gas collection and flaring system which use blowers to withdraw the gas from the landfill or the surrounding formations. Landfill gas/methane is captured and flared in a highly efficient flaring station transforming methane into CO₂.

The project has an annual emission reduction of around 52 330 tCO₂e. The total estimated reduction is calculated to be 896 994 tCO₂e in the time period of 2011-2018. The project was registered by UNFCCC as an official CDM project activity in February 2011 with the project ID 3995. The implementation has been possible to implement thanks to the CDM validation and the following issuing of CER (Certified Emission Reduction) credits.

The CER (Certified Emissions Reductions) related to this certificate is issued by the CDM Executive board. Detailed information about the project is found in the UNFCCC CDM project database: <https://cdm.unfccc.int/Projects/DB/SQS1285154018.41/view>