

Bringing Low Smoke Cookstoves to Darfur, Sudan



Carbon Clear's Clean Cookstoves Project introduces clean LP Gas cookstoves to families in the town of El Fasher, reducing greenhouse gas emissions, providing health benefits, lowering household costs and improving livelihoods.

Carbon-Clear, in partnership with primary project partner WDAN (Women Development Association Network) and further partners Practical Action and Nile Petroleum aims to deliver 10,000 LP Gas cookstoves to the communities of El Fasher, saving over 400,000 tonnes of carbon dioxide equivalent over ten years.

World LP Gas Association

182 avenue Charles de Gaulle

92200 Neuilly-sur-Seine - France

www.worldlpgas.com

www.exceptionalenergy.com

1. The Story

This pioneering carbon-credit project is delivering clean cooking to conflict-hit Darfur generating carbon credits¹ that will help deliver health and economic benefits to households in this strife-torn region.

The project demonstrates how carbon finance can improve livelihoods in an area of Sudan where climate change, drought and desertification are already a fact of life.

The **Low-Smoke Stoves Projects** creates an opportunity for families in North Darfur to replace their traditional wood and charcoal fires with modern, energy efficient and clean-burning LP Gas cookstoves. LP Gas is an exceptional energy that can help the shift towards a low-carbon economy because the fuel features significantly lower greenhouse gas emissions (CO₂, N₂O and CH₄) than other commercially available fossil fuels such as coal and kerosene, or biomass fuels like firewood and charcoal.



The WDAN played a significant role as key implementer and project owner and it was due to their exceptional performance in this initiative that the project is proving successful. Practical Action works with, and for, the CBOs in Sudan and is known for working with grassroots organisations. The major role of WDAN was to:

- Build awareness amount the families
- Manage membership registrations
- Micro-credit responsibility
- Select, distribute and collect money from users
- Measure usage of equipment
- Training and making ceramic stoves

The LP Gas stoves have a lifetime of

5-10 years

Nile Petroleum is the operational partner working directly in Sudan and delivers gas cylinders and accessories. The Nile Gas depot in Elfashir is the refilling and maintenance centre for the cylinders and has been expanded and improved to handle increased demand.

The existing 12.5kg cylinders are workable and show zero safety incidents to date due to comprehensive training programmes. However, in 2013 Nile Gas is also adding new cylinder sizes of 6kg and 4kg for easier handling and transportation to sub-rural areas.

Nile Petroleum is also working to improve regional logistics to ensure the continuity of both cylinders and supply.



The project has proven very popular with low-income households, and the project team has plans to replicate the model elsewhere in the country to bring the benefits of LP Gas as a clean energy to tens of thousands more families. In addition to reducing carbon emissions the project provides social, economic and of course health benefits to participating families.



2. Project Highlights

- This is the first registered carbon credit project in Sudan using LP Gas stoves in households
- The LP Gas cookstoves are purchased through a micro-finance initiative managed by the local community
- The project aims to reduce overall household spending on energy and reduce cooking time for families, particularly women
- The introduction of LP Gas stoves will reduce pressure on forest resources in an area already subject to climate change stress and desertification
- The project strengthens the capacity, through employment and training opportunities, for the local women's micro-finance association
- Carbon finance has been used to pay all project management and monitoring costs in the field and establish the micro-finance fund

A 12.5kg LP Gas cylinder refill costs

10 USD

An 70kg sack of charcoal costs between

22-30 USD

(approx.)

3. Microfinance

Participating households sign up to a microfinance initiative funded by **Carbon Clear** and managed by a local community group, the Women's Development Association Network.

The microfinance programme provides loans for families who otherwise would not be able to afford the relatively high initial cost of the LP Gas stoves and cylinders. Repayment rates are in excess of 90%. Training to run the microfinance programme has also helped the women's group develop the capacity to launch other initiatives.



A new LP Gas cookstove in the home



Delivering cylinders and stoves

An LP Gas 12,5kg cylinder and a 70kg sack of charcoal lasts

30 days

(approx.)

The savings can cover the initial stove cost within

8-10 months

4. Health

The project has proven very popular with low-income households, and the project team has plans to replicate the model elsewhere in the country to bring the benefits of LP Gas as a clean energy to tens of thousands more families. In addition to reducing carbon emissions the project provides social, economic and of course health benefits to participating families.

Some four million people die from indoor air pollution-caused illnesses each year, mostly in low income countries, arising from cooking with harmful dirty fuels, mostly wood. These deaths are entirely preventable.

Cooking For Life, a campaign created by the **WLPGA**, aims to transition ONE BILLION people from cooking with traditional fuels to cleaner-burning LP Gas by 2030. This shift will have significant economic and social benefits for lifting millions out of the poverty trap to save lives, improve health, empower women and preserve the environment.

Cooking For Life aims to transition
ONE BILLION
people from cooking with traditional fuels to
cleaner-burning LP gas by 2030

The cost to households of a full LP Gas set of cylinder and stove is

160 USD

(approx.)

The Global Alliance for Clean Cookstoves notes that cooking with LP Gas reduces most key pollutants by over 95% and reduces energy consumption by 50-70%.

Projects such as the Darfur Low-Smoke Stoves Project support **Cooking For Life** and help the WLPGA achieve the billion goal which already numbers hundreds of thousands in its success.

www.cooking-for-life.org



5. The Teams

Carbon Clear is a world leading provider of carbon management and offsetting services. Based in London, the team promotes carbon management at the heart of businesses.

www.carbon-clear.com

Nile Petroleum is a petroleum exploration and production company operating in Sudan. Nile Petroleum is a member of the WLPGA.

<http://nipcol.com.cyan.mysitehosted.com>

Practical Action, a UK based NGO, promotes the use of technology to challenge poverty in developing countries by enabling poor communities to build on skills and knowledge to produce sustainable and practical solutions.

www.practicalaction.org

WDAN is a CBO established in 2006 in Northern Darfur comprising 62 VDCs (village development committees and members are more than 25,000 families).



6. Acknowledgements

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¹ The carbon credits issued as a result of the cookstoves project are Verified Emission Reduction (VER) credits, which are non-compliance carbon credits. These credits are available to businesses that want to voluntarily offset their carbon emissions.

² <http://www.who.int/mediacentre/factsheets/fs292/en/>.