



ONIL efficient cooking stoves, Mexico

Fuel use from increasingly scarce firewood is a growing problem in Mexico. In order to address this problem, an emission reduction project has been set up to build modern, fuel-efficient cooking stoves at households at reduced prices.

Location



The project area covers most states of Mexico. The projects are concentrated in rural areas of Mexico, especially Mayan people, where 61% of people are living beneath the national rural poverty line, i.e. more than 15 million rural people out of a total rural population of around 25 million.

Project



The ONIL fuel-efficient wood-fired stove was named after its inventor Don O'Neal, who did not patent the technology so that anyone could use it. The stove reduces wood consumption by 70% and virtually eliminates indoor smoke. The NGO Helps International set up a factory in April 2009 that produces ONIL stoves in Santa María Rayón, southwest of Mexico City.

The ONIL improved biomass stoves are made of locally available materials: clay for the combustion chamber, concrete blocks for the structure, and a steel or tin chimney that keeps the smoke out of the house, while reducing carbon dioxide (CO₂) emissions. On the top of the stove, two steel hot plates and a set of covers with graduated holes allow efficient use with different-sized pots, and by covering up the pot hole, the stove can be used to cook tortillas. Families receive visits, where they are explained how to use the stove properly.



"This clean technology helps reduce firewood use and pipes harmful smoke and emissions outside of the dwelling," the coordinator of the rural energy program of the non-governmental Interdisciplinary Group for Appropriate Rural Technology, Víctor Berrueta stated. Each ONIL stove is estimated to reduce CO₂ emissions by nearly three tons a year. The pilot project in rural Mexico installs almost 14,000 stoves that improve the livelihood of almost 70,000 people.

Each stove costs USD 47. Within a couple of months the stove will have paid for itself, as the family spends 67% less on buying firewood.

Project achievements



Socio-economic impact:

- The project creates employment and builds capacity throughout the supply chain, i.e. in manufacturing, distribution, retailing, quality control, training and project management.
- The new ONIL stoves are less smoky, reducing emissions of hazardous air pollutants and improving the health of the cooks, typically mothers.
- Children under the age of 5 avoid burns and respiratory problems.
- Reducing fuel costs for families and freeing up money for other uses, the project improves livelihoods of the poor. For families that purchase their firewood, this required spending up to 40% of their entire income simply to cook their food.
- The inefficient burning of wood for three-stone fires required the women and children to gather huge amounts of wood daily (over 8,000 kg per family per year), contributing to Mexico's deforestation level of 2% per year.

Environmental impact:

- Significant reduction of baseline deforestation levels saves forests and wildlife habitat, and improves the water storage capabilities of the soil.
- The pilot project in rural Mexico contributes to saving over 180,000 MWh of energy and avoids the emissions of over 40,000 tCO₂e per year.

Checklist Project 301 628



✓ Additionality and permanence:	according to the rules of the The Gold Standard and UNFCCC
✓ Transparency:	by TÜV SÜD
✓ Annual CO ₂ -reduction:	40,000 tCO ₂ e
✓ Social and environmental benefits:	as documented in our database
✓ Marketing material:	pictures available

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