**Proyecto Mirador Foundation**

**Gold Standard emission reduction calculations**

*Excerpted from:*



# REDUCED EMISSIONS FROM COOKING AND HEATING:

## Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC)

*Method 1. Baseline and project fuel(s) are identical and emission reductions are exclusively from improved efficiency*

3.10.4 |When the baseline fuel and the project fuel are the same, the GHG emissions reduction achieved by the project activity in year y shall be calculated as follows:

$$ER_y = \sum_{b,p} (N_{b,p,y} \times U_{p,y} \times SFS_{p,b,y} \times NCV_{b,fuel} \times (f_{NRB,b,y} \times EF_{b,f,CO2} + EF_{b,f,nonCO2})) - \sum LE_{p,y} \qquad \textbf{\textit{Eq. 1}}$$

Where:

$ER_y$ = Emission reduction for total project activity in year y ($tCO_2e/yr$)

$\sum_{b,p}$ = Sum over all relevant baseline b/project p pairs

$N_{b,p,y}$ = Number of project technology-days included in the project database for baseline b/project p pair in year y (days)

$U_{p,y}$ = Cumulative Usage rate for technologies in project scenario p in year y (fraction)

$SFS_{p,b,y}$ = Specific fuel savings for an individual project technology of baseline b/project p pair in year y (mass or volume units/technology*day) (Refer to Section 4.1 | below for further details)

$NCV_{b,fuel}$ = Net calorific value of the fuel(s) that is substituted or reduced in baseline b (TJ/mass or volume units)

$f_{NRB,b,y}$ = Fractional non-renewability status of woody biomass fuel during year $y$ (fraction). For biomass, it is the fraction of woody biomass that can be established as non-renewable. This parameter is omitted when $f$ is a fossil fuel.

$EF_{b,f,CO2}$ = $CO_2$ emission factor from use of fuel $f$ (tCO$_2$/TJ)

$EF_{b,f,nonCO2}$ = Non-$CO_2$ emission factor arising from use of fuel $f$, when the baseline fuel $f$ is biomass or charcoal (tCO$_2$e/TJ). This parameter is omitted when $f$ is a fossil fuel.

$LE_{p,y}$ = Leakage for project scenario p in year y (tCO$_2$e/yr)