

# Clean Energy for Rural Bangladesh (CERB)



## Key Benefits

Clean Energy  
Women Empowerment  
Health and Nutrition

## Non-Cash Benefits per household per year

units

Amount of Firewood saved		1.5	tonnes
Green House Gas reductions		2.5	tonnes
Organic fertilizer available with significant plant nutrients		915	Kg
Milk Production		2,190.0	liters of milk
Women empowerment	income generation		
	enhanced decision making		
	improved lives and living condition		

## Points to Ponder

Only 3% of Bangladesh has access to gas for cooking  
4 Million Rural Households have the necessary resources for participating in the BIO-GAS Project  
Adoption of Bio-Gas technology by **1 Million households** will generate:

Savings on firewood	1,500,000	tonnes
GHG reductions	2,500,000	tonnes
Contribution to National Milk Supply	578,536,794	gallons
Supply of organic fertilizer	915,000	tonnes

Foreign Currency savings on fertilizer imports  
Foreign currency savings from reduced milk powder imports  
Scope for expanding bio-digester for management of human wastes/excreta

## Assumptions

### Types

Units

Value

Number of Households		12
Number of Cows per household		2
Total number of cows		24
Price of a cow	BDT	60,000
Biodigester 3.2M <sup>3</sup> fed by dung from 4 cows	BDT	15,000
Feed per cow per month	BDT	2,500
Veterinary and other maintenance costs per cow per year	BDT	1,000
Cost of milk from household to chilling plant	BDT /liter	30
Milk production per cow	liter	1,095
Shed for two cows	BDT	30,000
Total Milk production per household per year	liter	2,190
Households milk consumption	liter	365
Market costs of milk for consumption	BDT /liter	40
Milk sold from household per year	liter	1,825
Annual cost of wood fuel per household per month	BDT	500
Sale of by-products from biodigester as fertilizer per household (2 cows) per year	BDT	15,000
Sale of two calves per year per household	BDT	30,000
General Inflation		5%
Exchange Rate 1 USD	BDT	70

### Other non-financial assumptions:

no additional labor. The two cows are looked after by the rural women/men themselves  
no additional land purchased for the cow shed & bio-digester  
one bio-digester is shared by two households