VI-10c Net Present Value (NPV) and Payback Period at Different Interest Rates for the Three Models[\N] [\B]With Revenues of Rs 20,000 from Sales of Rice Husk Cement[\N]

Note: NPV in rupees is listed first. Calculations assume a 15-year life of the system. Payback period in years is in parentheses. If the system will not pay back over 15 years, (0) is listed.

	MODEL TWO							
INTEREST RATE	BIOGAS	MODEL ONE		LIGHTING	MODEL			
OF THE LOAN	PRICE	COOKING & LIGHTING Min Cost Max Output		USTRY		& INDUSTRY		
(R_LC)	(Rs/[m.sup.3])	Model Model	Model	Max Output Model	Min Cost Model	Max Output Model		
48	0.00		121,8 <b>49</b> (0)	138,220 (0)	107,546 (0)	145,066 (0)		
4 %	0.25			152,803 (0)		178,560 (12)		
48	0.74			181,384 (11)		244,210 (1)		
4%	1.48			224,5 <b>4</b> 7 (7)		343,354 (1)		
10%	0.00		112,941 (0)	128,354 (0)	101,405 (0)	136,549 (0)		
10%	0.25			1 <b>42,9</b> 36 (0)		170,044 (14)		
10%	0.74			171,518 (13)		235,693 (1)		
10%	1.48			214,681		334,837		

<sup>4% =</sup> Interest rate charged to associations. 10% = Higher interest rate. Rs 0/[m.sup.3] assumes no revenues from the sale of biogas; Rs 0.25/[m.sup.3] = Equivalent price of electricity:

Rs 0.74/[m.sup.3] = One-half Equivalent price of diesel fuel; Rs 1.48/[m.sup.3] = Equivalent price of diesel fuel.

(8)

(1)

[\B]With Revenues of Rs 30,000 from Sales of Rice Husk Cement[\N] Note: NPV in rupees is listed first. Calculations assume a 15-year life of the system

[\N]

fuel.

[\B]Table VI-10d Net Present Value (NPV) and Payback Period at Different Interest Rates for the Three Models

Payback period in years is in pa		em will not pay back over	
INTEREST RATE BIOGAS OF THE LOAN PRICE (R_LC) (Rs/[m.sup.3])	MODEL ONE COOKING & LIGHTING Min Cost Max Output Model Model	MODEL TWO COOKING, LIGHTING & INDUSTRY Min Cost Max Output Model Model	MODEL THREE LIGHTING & INDUSTRY Min Cost Max Output Model Model

OF THE LOAN (R_LC)	PRICE (Rs/[m.sup.3])	Min Cost Max Output Model Model	Min Cost Model	Max Output Model	Min Cost Model	Max Output Model	
4%	0.00		197,910 (7)	214,281 (7)	183,607 (1)	221,127 (1)	
4%	0.25			228,864 (1)		254,621 (1)	
4%	0.74			257 <b>,44</b> 5 (1)		320,271 (1)	
4%	1.48			300,608 (1)		419,415 (1)	
10%	0.00		189,002 (8)	20 <b>4,4</b> 15 (9)	177,466 (1)	212,610 (7)	

10%	0.25	218,998 (7)	246,105 (1)
10%	0.74	247,579 (1)	311,754 (1)
10%	1.48	290,742 (1)	410,899 (1)
4% = Interes Rs 0/[m.sup.	t rate charged to association 3] assumes no revenues from t	s. 10% = Higher interest rate. he sale of biogas; Rs 0.25/[m.sup.3] = Equivalen	t price of

electricity; Rs 0.74/[m.sup.3] = One-half Equivalent price of diesel fuel; Rs 1.48/[m.sup.3] = Equivalent price of diesel

Note: NPV in rupees is listed first. Calculations assume a 15-year life of the system. Payback period in years is in parentheses. If the system will not pay back over 15 years, (0) is listed.

[\B]Table VI-11a Net Present Value (NPV) and Payback Period at Different Cement Revenue and Interest Rates[\N] [\B]With the Cost of the Digester Reduced by One-half[\N]

REVENUE FROM CEMENT SALES (Rs)	INTEREST RATE OF THE LOAN (R_LC)	BIOGAS PRICE (Rs/[m.sup.3])	. •	CL ONE & LIGHTING Max Output Model	COOKING,	L TWO LIGHTING DUSTRY Max Output Model	MODEL LIGHTING Min Cost Model	& INDUSTRY
0	0.04	0.00	19,641 (0)	<b>42,</b> 566 (0)	-24,468 (0)	-5,3 <b>4</b> 8 (0)	-42,835 (0)	1,497 (0)
0	0.04	1.48		1 <b>41,</b> 740 (0)		80,978 (0)		199,785 (8)

34,737

(0)

133,411

(0)

-32,364

(0)

51 503

20,000	0.01		(0)
10,000	0.04	1.48	
10,000	0.10	0.00	43.697

12,899

(0)

0

0

10,000

10,000

fuel.

0.10

0.10

0.04

0.10

0.00

1.48

0.0

0.00 43,697 (0) 1.48

148,665 (0)

-13,723

(0)

72,603

70,713

(0)

157,039

(0)

62,338

(0)

(0)

-48,672

(0)

33,226

27,389

(0)

(0)

-5,528

(0)

192,760

(9)

77,558

(0)

275,846

(1)

70,533

(0)

268,821 (1)

<sup>4% =</sup> Interest rate charged to associations. 10% = Higher interest rate. Rs 0/[m.sup.3] assumes no revenues from the sale of biogas; Rs 0.25/[m.sup.3] = Equivalent price of electricity; Rs 0.74/[m.sup.3] = One-half Equivalent price of diesel fuel; Rs 1.48/[m.sup.3] = Equivalent price of diesel

[\B]With the Cost of the Digester Reduced by One-half[\N]

[\B]Table VI-11b Net Present Value (NPV) and Payback Period at Different Cement Revenue and Interest Rates[\N]

Note: NPV in rupees is listed first. Calculations assume a 15-year life of the system.

REVENUE FROM CEMENT	INTEREST RATE OF	BIOGAS		L ONE & LIGHTING	COOKING,	L TWO LIGHTING OUSTRY	MODEL LIGHTING	THREE & INDUSTRY
SALES (Rs)	THE LOAN (R_LC)	PRICE (Rs/[m.sup.3])	Min Cost Model	Max Output Model	Min Cost Model	Max Output Model	Min Cost Model	Max Output Model
20,000	0.04	0.00			127,654 (0)	146,774 (0)	109,288 (0)	153,619 (0)
20,000	0.04	1.48				233,100 (1)		351,907 (1)

30,000	0.04	1.48	
30,000	0.10	0.00	195,820

4% = Interest rate charged to associations. 10% = Higher interest rate.

119,759

(0)

213,715

**(1)** 

138,339

(0)

224,726

(7)

222,835

(1)

309,162

(1)

214,460

(7)

300,787

(1)

103,450

(0)

185,349

(1)

179,511

(1)

146,594

(0)

344,882

(1)

229,680

(1)

427,969

**(1)** 

222,655

(1)

420,943

(1)

Rs 0/[m.sup.3] assumes no revenues from the sale of biogas; Rs 0.25/[m.sup.3] = Equivalent price of electricity; Rs 0.74/[m.sup.3] = One-half Equivalent price of diesel fuel; Rs 1.48/[m.sup.3] = Equivalent price of diesel fuel.

10,000

20,000

30,000

30,000

0.10

0.10

0.04

0.00

1.48

0.00

<sup>(7)</sup> 1.10 1.48