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# ***Detailed Project Report***

**On**

## ***Ice Plant with Pre-Primary Processing Unit (40 MT)***

**Under MKUY**



**Name of the Entrepreneur/Entity:**

**Address:**

**Mob No.**

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## 1. Project Summary

1	Name of the Enterprise (as per the Illustrative List of Enterprises)	Ice Plant with pre-primary Fish Processing Unit
2	Sector (as per the Illustrative List of Enterprises)	Fisheries
3	Project Capacity <sup>1</sup>	40 MT/day
4	Key components of the project	
5	Project Address (Village/Ward, Gram Panchayat/Municipality, Block, District)	
6	Products/Output from the project	Block Ice
7	Total Project Cost	Rs. 1,22,95,600
8	Fixed Capital Cost	Rs. 1,17,35,600
9	Working/Recurring capital (for 15 days)	Rs. 5,60,000
10	Bank Finance/ Self Finance	Bank Finance
11	Bank Loan Amount	Rs. 1,10,10,040
12	Promoter Contribution (min 10% of the project cost in case of bank loan)	Rs. 12,85,560
13	Assumed Rate of Interest	11%
14	Subsidy Eligibility (40%, 50%)	50%
15	Repayment Terms (Tenure, Moratorium, Frequency, Mode of Repayment: equal principal/equal instalment)	7 years
16	Key Financial Indicators: 1. Average Annual Net Profit 2. Debt Service Coverage Ratio (DSCR) 3. Internal Rate of Return 4. Break Even Year	Rs. 58,23,433 2.96 43.03% 2 Years and 6 Months
17	Estimated employment to be generated (nos.)	18

**Note:**

1. Customized DPR is to prepared as per the information given by the beneficiary.
2. Customized DPR is to prepared as per the requirement of the beneficiary
3. The CIS will be calculated as per the cost norm of MKUY guideline.
4. All the prices quoted here are indicative in nature.
5. The particulars under each component of the Capital Investment may be changed as per the requirement of the project.

<sup>1</sup> Capacity can be in terms of area or quantity

## 2. Project Profile

### 2.1 Entrepreneur/Entity Profile

1	Name of the Entrepreneur/Entity	
2	Legal status (Individual/ Group/ FPO/ FPC/ Proprietorship/ Partnership firm/ Company/ Cooperative/ Federation/ Society/ Trust)	
3	Name of Representative <sup>2</sup> in Ease of entity	
4	Gender (Male/ Female/ Third Gender/ Not Applicable)	
5	Date of Birth of Individual/Representative of Entity	
6	Date of Incorporation/Registration of Entity	
7	Category opted for (Women/ ST/ SC/ Differently Abled/ Third gender/ Agri & Allied Graduate)	
8	Educational Qualification of Individual/Representative of Entity	
9	Passport size photograph of the Individual/ Representative of entity	
10	Local Address for Correspondence of the Individual/ Representative of entity	
11	Registered Address of Entity	
12	Main Office/Branch Address of Entity	
13	Phone no. of Individual/Representative of Entity	
14	Email Id of Individual/Representative of Entity	
15	AADHAR No. of Individual/Representative	
16	PAN of Individual/Representative of Entity, if available	
17	Farmer Id of Individual, if available	
18	Details of other Partner/Director/ President/Secretary	
19	Registration No./ CIN of the Entity <sup>3</sup>	
20	PAN/TAN of Entity	
21	GSTIN of Entity, if available	
22	Details of experience and exposure relevant to the proposed enterprise/project (family business, work experience, e-learning/certificate courses, trainings undertaken etc.)	

<sup>2</sup> Representative should be authorized by the board/governing body of the entity.

<sup>3</sup> Registration document:

Groups (SHG/PG/): FPO: Proprietorship firm: Registration Certificate under Shops & Establishment Act, Partnership firm: Registration Certificate from IGR of state, Company (Pvt. Ltd., Public Ltd., LLP, OPC, FPC): Certification of Incorporation, Cooperative/ Federation: Certificate of Registration from Registrar of Cooperative Societies, Society/Trust: Darpan Unique Id

## **2.2. Project Consultant Details**

DPR prepared by: APICOL, Baramunda



## 2.3. Concept and Scope of the Project

The term ice plant is a unit that converts water into ice. Ice plants are usually classified by the type of ice they produce; hence there are block ice plants, flake ice plants, tube, slice or plate ice plants and so on. Ice plants may be further subdivided into those that make dry or wet ice. Dry ice here means ice at a temperature low enough to prevent the particles becoming moist; the term does not refer in this note to solid carbon dioxide. In general, dry sub cooled ice is made in plants that mechanically remove the ice from the cooling surface; most flake ice plants are of this type. When the cooling surface of an icemaker is warmed by a defrost mechanism to release the ice, the surface of the ice is wet and, unless the ice is then subcooled below 0°C, remains wet in storage; tube ice and plate ice plants are of this type.

### Type of ice maker

#### Block ice

Tapered rectangular metal cans filled with water are immersed in a tank containing refrigerated sodium chloride brine. The dimensions of the can and the temperature of the brine are usually selected to give a 24 hour production time, and batches of cans are emptied and refilled in sequence during that period. Ice block weight can range from 12 to 150 kg depending on requirements; 150 kg is regarded as the largest size of block one man can conveniently handle. A block ice plant requires continuous attention and is labour intensive. The icemaker and the store require a good deal of floor space and impose heavy loads on the building structure. For these reasons block ice plants are going out of use, and more modern automatic plants are replacing them.

#### Rapid block ice

It is possible to reduce the freezing time for blocks considerably, and thus reduce the space required for the icemaker. This is done by reducing the thickness of ice to be frozen; in one type of rapid icemaker this is achieved by passing refrigerant through tubes around which the ice forms and fuses into a block. The blocks can be released by defrosting and harvested automatically, thus markedly reducing the labour requirement, but the storage space required is slightly larger than for the same weight of conventional block ice because the blocks have hollow centres after the tubes are removed.

#### Flake ice

A sheet of ice 2-3 mm thick is formed by spraying water on the surface of a refrigerated drum, and scraping it off to form dry sub cooled flakes, usually 100-1000 mm<sup>2</sup> in area. In some models the drum rotates against a stationary scraper on its outer surface; in others the scraper rotates and removes ice from the inner wall of a double walled stationary drum. In some models the drum is horizontal, but more usually it is mounted vertically. No water is sprayed on that part of the drum immediately before the scraper, so that the ice becomes dry and sub cooled prior to removal.

Refrigerant temperature, drum or scraper speed, and degree of sub cooling are all variable within designed limits so that the capacity of the icemaker and the thickness of the ice can be

altered. Typical refrigerant temperature in a flake ice machine is - 20 to - 25°C, lower than in most other types of icemaker, to give rapid cooling and thus make the machine compact. The low operating temperature requires more power, but this is to some extent compensated for by the absence of a need to defrost.

### **The refrigeration system**

Most modern icemakers are designed to work unattended 24 hours a day with only routine inspection and maintenance. The system is therefore designed for reliability, with safeguards against failure or malfunction. Most manufacturers recommend the refrigeration system best suited to their icemakers, but where local installation engineers propose a system, the purchaser should ensure that the contractor is aware of the need for continuous automatic running and for rapid repair after breakdown.

The refrigeration system for an icemaker should be independent of any other refrigeration requirement; it should not be shared for example with a freezer or a cold store. The only exception to this rule is when a complex system is installed and a competent engineer is in fulltime attendance. Manufacturers often recommend a separate system for each icemaking unit, so that in a multiple unit installation there is considerable flexibility, and a reasonable guarantee that at least some of the units are always in production. Choice of refrigeration machinery and of refrigerant is a job for the refrigeration expert, and the advice of the ice plant manufacturer or competent consultant should be sought before making any decision.

### **Storage of ice**

Manufacture of ice can seldom be matched to meet immediate demand; therefore, storage is necessary to cater for peak demand and to allow the icemaker to be operated continuously. Storage also acts as a buffer against interruption of production due to breakdown or routine maintenance.

The size of store required will depend on the pattern of operation, but it is never advisable to store less than 2 days' production, and in most installations, it is useful to be able to store 4-5 times the daily production.

### 3. Techno-commercial Assumptions

Sl. No.	Parameter	Value	Unit
1	Increase in Rate of Product	5	%
2	Increase in Electricity consumption	5	%
3	Collection from Debtors ( First Year)	10	Days
4	Collection from Debtors	15	Days
5	Payable to Creditors	20	Days
6	Drawing By Promoter	40	%
7	Increase in Staff Salary	5	%
8	Rate of Interest on TL	11	%
9	Rate of Interest on WC	9	%
10	Loan Repayment (in year)	7	Years
11	Raw Material in Stock ( on sales)	5	Days
12	Finished Goods in stock ( on sales)	15	Days
13	Promoter's Contribution (Term Loan)	10	%
14	Promoter's Contribution (Working Capital)	10	%
15	Working Capital Requirement	15	Days
17	Working Capital Utilisation	100	%
18	Ice Plant capacity	54000	Kg
19	Cans	360	Cans
20	1 Can	150	Kg
21	Daily production capacity (60%)	216	Cans

### 4. Financial Details

Sl. No.	Item	Amount	Amount
1	Promoter's equity	12,85,000	12,85,000
2	Bank Finance		1,10,05,000
2A	Term Loan	1,05,01,000	
2B	CC Limit	5,04,000	
<b>Total</b>		<b>1,22,90,000</b>	<b>1,22,90,000</b>

#### 4.1. Project Fixed Capital

<b>Details of Fixed Assets</b>					
<b>Sl. No.</b>	<b>Particulars</b>	<b>Unit</b>	<b>Qty.</b>	<b>Cost per unit</b>	<b>Total</b>
<b>A Land</b>					
1	Land Development	Sq. ft	3000	0.60	1,800
2	Fencing (Barbed wire/Green Fencing)	ft	300	70.00	21,000
	<b>Sub Total</b>				<b>22,800</b>
<b>B Civil Construction</b>					
1	Shed Construction (GI & MS material heavy duty profile sheet )	Sq. ft	2300	600.00	13,80,000
2	Overhead Tank	LS			30,000
3	Office Room	Sq. ft	200	850.00	1,70,000
4	Store Room	Sq. ft	200	300.00	60,000
	<b>Sub Total</b>				<b>16,40,000</b>
<b>C Water Supply</b>					
1	Water Supply with Borewell, pump and pipe line				<b>2,50,000</b>
<b>D Electrification</b>					
1	Electrical Installation (with 100 KVA transformer/ DG Set)			6,50,000.00	6,50,000
2	Electric Panel Board with all appliances, cable connection from panel to motor points with earthing points			3,36,300.00	3,36,300
	<b>Sub Total</b>				<b>9,86,300</b>
<b>E Plant &amp; Machinery</b>					
<b>Sl. No.</b>	<b>Particulars</b>	<b>Specification</b>	<b>Qty</b>	<b>Unit Price</b>	<b>Total</b>
1	Harmatic compressor unit	no.	4	4,72,000.00	18,88,000
2	Sealed compressor unit with shell and tube condenser unit	no.	4	1,88,800.00	7,55,200
3	Cooling Tower capacity	no.	2	2,12,400.00	4,24,800
4	Copper cooling coil	no.	8	1,59,300.00	12,74,400
5	Compressor fitting accessories	LS		2,83,200.00	2,83,200
6	Ice Can 360 nos 150 kg block	LS		9,55,800.00	9,55,800
7	Open well pump motor	no.	2	20,060.00	40,120
8	UPVC pipe (12 mtr with elbow)	LS		70,800.00	70,800
9	Agitator with 3 HP motor	no.	2	41,300.00	82,600
10	Copper pipe elbow coupler	kg	160	1,88,800.00	1,88,800

Details of Fixed Assets					
Sl. No.	Particulars	Unit	Qty.	Cost per unit	Total
11	Hoist 500 kg capacity with 1 HP motor 3 phase	no.	1	61,950.00	61,950
12	Freezing Tank 30 T storage capacity	no.	1	12,39,000.00	12,39,000
13	Compressor fitting MS structure	no.	1	94,400.00	94,400
14	Ice removing stand	no.	1	17,700.00	17,700
15	Ice removing platform and damping tank	no.	1	35,400.00	35,400
16	Puff chemical (Tank Insulation)	litre	490	1,41,600.00	1,41,600
17	Ply water proof size 4 x 8	no.	32	3,776.00	1,20,832
18	Manufacturing work and installation charges	no.	1	8,15,498.00	8,15,498
19	Effluent Treatment System (ETS)	no.	1	1,18,000.00	1,18,000
20	Ice Box	LS		50,000.00	50,000
21	Crates	LS		15,000.00	15,000
22	SS working table	no.	1	1,00,000.00	1,00,000
<b>Total Plant and Machinery Cost</b>					<b>87,73,100</b>
<b>F</b>	<b>Miscellaneous Expenditure</b>				
1	Insurance premium of assets				35,000
2	Cost of DPR Preparation				14,510
3	Miscellaneous Expenditure				13,890
	<b>Total Miscellaneous Expenditure</b>				<b>63,400</b>

#### 4.2. Project Variable Expenses

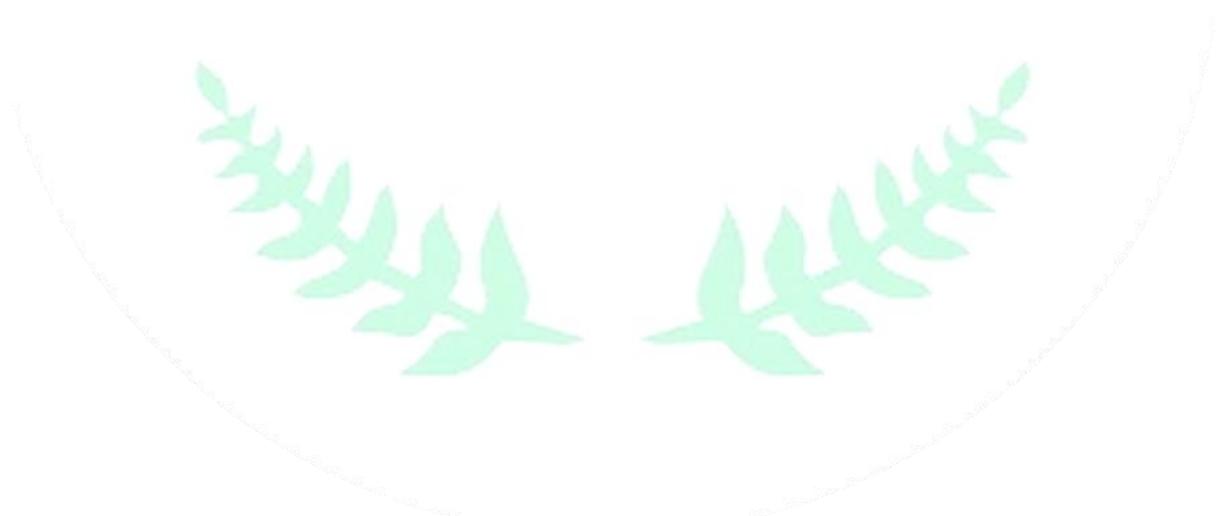
Details of Recurring Expenditure						
A	Details of raw material (per annum @ 100%)					
Sl. No.	Items	Unit	Rate/Unit (Rs)	Qty/day	Qty/annum (kg)	Total Cost (Rs)
1	Salt	Kg	10.00	3,000	7,50,000	75,00,000
2	Water	Lit	0.25	35,640	89,10,000	22,27,500
	<b>Total</b>			<b>38,640</b>	<b>96,60,000</b>	<b>97,27,500</b>

Details of salary and other benefits				
Sl. No.	Type of Workers	No. of Worker	Salary Per Month/head (Rs)	Total Salary per Annum (Rs)
1	Unskilled	10	8,000	960000
2	Skilled	7	10,000	840000
3	Manager	1	20,000	240,000

<b>Details of salary and other benefits</b>				
<b>Sl. No.</b>	<b>Type of Workers</b>	<b>No. of Worker</b>	<b>Salary Per Month/head (Rs)</b>	<b>Total Salary per Annum (Rs)</b>
	<b>Grand Total</b>	18		<b>2,040,000</b>

#### 4.3. Details of Sales

<b>Details of sales (Per annum @100% capacity)</b>						
<b>Sl. No.</b>	<b>Type of products</b>	<b>Unit</b>	<b>Rate/Unit (Rs)</b>	<b>Quantity Per day</b>	<b>Quantity Per annum</b>	<b>Total (Rs)</b>
1	Ice Block	Kg	3.20	32,400	81,00,000	2,59,20,000
<b>Total</b>				<b>32,400</b>	<b>81,00,000</b>	<b>2,59,20,000</b>



#### 4.4. Project Balance Sheet

<b>Liabilities</b>	I	II	III	IV	V	VI	VII
<b>Opening Capital</b>	-	<b>30,96,902</b>	<b>39,29,992</b>	<b>50,38,003</b>	<b>63,44,323</b>	<b>78,08,429</b>	<b>98,14,352</b>
Add: Introduced	12,85,560						
Add: Profit	30,20,342	34,53,090	44,67,011	55,36,320	66,70,106	85,49,923	90,96,150
Less: Drawing	12,09,000	26,20,000	33,59,000	42,30,000	52,06,000	65,44,000	75,65,000
<b>Closing Capital</b>	<b>30,96,902</b>	<b>39,29,992</b>	<b>50,38,003</b>	<b>63,44,323</b>	<b>78,08,429</b>	<b>98,14,352</b>	<b>1,13,45,502</b>
Term Loan from Bank	94,50,891	82,73,641	69,60,161	54,94,687	38,59,630	20,35,366	-
<b>Current Liabilities</b>							
Cash Credit from Bank	5,04,000	5,04,000	5,04,000	5,04,000	5,04,000	5,04,000	5,04,000
Sundry Creditors	3,89,100	4,42,667	5,00,600	5,63,200	6,30,800	7,45,133	7,82,400
Expenses Payable	3,11,900	3,38,800	3,67,700	3,98,600	4,31,600	4,80,800	5,05,500
Current Provisions	10,26,575	12,12,038	16,46,576	21,04,851	25,90,760	33,96,396	36,30,493
<b>Total Current Liabilities</b>	<b>22,31,575</b>	<b>24,97,505</b>	<b>30,18,876</b>	<b>35,70,651</b>	<b>41,57,160</b>	<b>51,26,329</b>	<b>54,22,393</b>
<b>Total Liabilities</b>	<b>1,47,79,368</b>	<b>1,47,01,138</b>	<b>1,50,17,040</b>	<b>1,54,09,661</b>	<b>1,58,25,218</b>	<b>1,69,76,047</b>	<b>1,67,67,895</b>
<b>Assets</b>							
Fixed Assets	1,16,72,200	1,16,72,200	1,16,72,200	1,16,72,200	1,16,72,200	1,16,72,200	1,16,72,200
Less Depreciation	16,52,910	30,67,334	42,78,098	53,14,903	62,03,076	69,64,224	76,16,779
<b>Net Fixed Assets</b>	<b>1,00,19,290</b>	<b>86,04,867</b>	<b>73,94,102</b>	<b>63,57,297</b>	<b>54,69,124</b>	<b>47,07,976</b>	<b>40,55,421</b>
<b>Current Assets</b>							
Sundry Debtors	5,18,400	8,84,600	10,00,300	11,25,300	12,60,400	14,88,800	15,63,300
Inventories	8,74,900	8,88,300	10,09,750	11,41,050	12,83,000	14,46,650	16,84,400
Cash and Bank Balance	1,03,700	1,77,000	2,00,100	2,25,100	2,52,100	2,97,800	3,12,700
Other Current Assets	32,63,078	41,46,371	54,12,788	65,60,914	75,60,595	90,34,820	91,52,074
<b>Total Current Assets</b>	<b>47,60,078</b>	<b>60,96,271</b>	<b>76,22,938</b>	<b>90,52,364</b>	<b>1,03,56,095</b>	<b>1,22,68,070</b>	<b>1,27,12,474</b>
<b>Total Assets</b>	<b>1,47,79,368</b>	<b>1,47,01,138</b>	<b>1,50,17,040</b>	<b>1,54,09,661</b>	<b>1,58,25,218</b>	<b>1,69,76,047</b>	<b>1,67,67,895</b>
<b>Current Ratio</b>	<b>2.13</b>	<b>2.44</b>	<b>2.53</b>	<b>2.54</b>	<b>2.49</b>	<b>2.39</b>	<b>2.34</b>

#### 4.5. Calculation of Depreciation

Rates of Depreciation		10%	15%	10%	Total depreciation for the year
Year	1	1,89,000.00	14,63,910	-	16,52,910
	2	1,70,100.00	12,44,324	-	14,14,424
	3	1,53,090.00	10,57,675	-	12,10,765
	4	1,37,781.00	8,99,024	-	10,36,805
	5	1,24,002.90	7,64,170	-	8,88,173
	6	1,11,602.61	6,49,545	-	7,61,147
	7	1,00,442.35	5,52,113	-	6,52,555

#### 4.6. Projected P&L

Description	Year ending March 31st						
	I	II	III	IV	V	VI	VII
No of Working months	12	12	12	12	12	12	12
Capacity Utilisation	60	65	70	75	80	90	90
<b>Revenue</b>							
Sales	1,55,52,000	1,76,91,000	2,00,05,000	2,25,06,000	2,52,07,000	2,97,76,000	3,12,65,000
Opening Stock of Finished Goods	-	(7,77,600)	(8,84,550)	(10,00,250)	(11,25,300)	(12,60,350)	(14,88,800)
Closing Stock of Finished Goods	7,77,600	8,84,550	10,00,250	11,25,300	12,60,350	14,88,800	15,63,250
<b>Total Income (A)</b>	<b>1,63,29,600</b>	<b>1,77,97,950</b>	<b>2,01,20,700</b>	<b>2,26,31,050</b>	<b>2,53,42,050</b>	<b>3,00,04,450</b>	<b>3,13,39,450</b>
<b>Expenditure</b>							
Opening stock of Raw Material	-	97,300	1,10,700	1,25,200	1,40,800	1,57,700	1,86,300
Purchase ( Net) of Material	58,36,500	66,40,000	75,09,000	84,48,000	94,62,000	1,11,77,000	1,17,36,000
Closing Stock of Raw material	97,300	1,10,700	1,25,200	1,40,800	1,57,700	1,86,300	1,95,600
<b>Raw Material Consumption</b>	<b>57,39,200</b>	<b>66,26,600</b>	<b>74,94,500</b>	<b>84,32,400</b>	<b>94,45,100</b>	<b>1,11,48,400</b>	<b>1,17,26,700</b>
Repair & Maintenance- Machinery (@1% of Cost)	1,16,494	1,22,400	1,28,600	1,35,100	1,41,900	1,49,000	1,56,500
Electricity expense	12,44,160	14,15,300	16,00,400	18,00,500	20,16,600	23,82,100	25,07,200
Insurance cost	30,000	31,500	33,100	34,800	36,600	38,500	40,500

<b>Description</b>	<b>Year ending March 31st</b>						
	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>	<b>VI</b>	<b>VII</b>
No of Working months	12	12	12	12	12	12	12
Administrative salaries and wages	20,40,000	21,42,000	22,49,100	23,61,600	24,79,700	26,03,700	27,33,900
Other Misc Expenses [@1% of sales]	3,11,040	3,53,820	4,00,100	4,50,120	5,04,140	5,95,520	6,26,789
<b>Total Cost</b>	<b>94,80,894</b>	<b>1,06,91,620</b>	<b>1,19,05,800</b>	<b>1,32,14,520</b>	<b>1,46,24,040</b>	<b>1,69,17,220</b>	<b>1,77,91,589</b>
<b>Profit Before Depreciation, Interest and Tax</b>	<b>68,48,706</b>	<b>71,06,330</b>	<b>82,14,900</b>	<b>94,16,530</b>	<b>1,07,18,010</b>	<b>1,30,87,230</b>	<b>1,35,47,861</b>
Depreciation	16,52,910	14,14,424	12,10,765	10,36,805	8,88,173	7,61,147	6,52,555
<b>Profit Before Interest and Tax</b>	<b>51,95,796</b>	<b>56,91,907</b>	<b>70,04,135</b>	<b>83,79,725</b>	<b>98,29,837</b>	<b>1,23,26,083</b>	<b>1,28,95,306</b>
Interest on Term Loan	11,03,519	9,81,418	8,45,188	6,93,194	5,23,611	3,34,404	1,23,302
Interest on Working Capital Loan	45,360	45,360	45,360	45,360	45,360	45,360	45,360
<b>Total Interest Paid</b>	<b>11,48,879</b>	<b>10,26,778</b>	<b>8,90,548</b>	<b>7,38,554</b>	<b>5,68,971</b>	<b>3,79,764</b>	<b>1,68,662</b>
<b>Profit Before Tax</b>	<b>40,46,917</b>	<b>46,65,128</b>	<b>61,13,587</b>	<b>76,41,171</b>	<b>92,60,866</b>	<b>1,19,46,319</b>	<b>1,27,26,643</b>
Income Tax	10,26,575	12,12,038	16,46,576	21,04,851	25,90,760	33,96,396	36,30,493
<b>Profit after Tax</b>	<b>30,20,342</b>	<b>34,53,090</b>	<b>44,67,011</b>	<b>55,36,320</b>	<b>66,70,106</b>	<b>85,49,923</b>	<b>90,96,150</b>

#### 4.7. Projected Cash Flow

<b>Period Ending:</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>	<b>VI</b>	<b>VII</b>
Cash & Bank Balance at Beginning	-	1,03,700	1,77,000	2,00,100	2,25,100	2,52,100	2,97,800
<b>Cash Inflow during the Period</b>	<b>1,64,32,278</b>	<b>51,33,443</b>	<b>61,99,147</b>	<b>71,24,900</b>	<b>81,44,788</b>	<b>1,02,80,240</b>	<b>1,00,44,770</b>
<b>Cash Outflow during the Period</b>	<b>1,63,28,578</b>	<b>50,60,143</b>	<b>61,76,047</b>	<b>70,99,900</b>	<b>81,17,788</b>	<b>1,02,34,540</b>	<b>1,00,29,870</b>
<b>Closing Cash &amp; Bank Balance</b>	<b>1,03,700</b>	<b>1,77,000</b>	<b>2,00,100</b>	<b>2,25,100</b>	<b>2,52,100</b>	<b>2,97,800</b>	<b>3,12,700</b>

#### 4.8. Projected Loan Repayment

Year	Interest	EMI	Principal
1	11,03,518.82	21,58,668.02	10,55,149.20
2	9,81,418.19	21,58,668.02	11,77,249.84
3	8,45,188.20	21,58,668.02	13,13,479.82
4	6,93,193.85	21,58,668.02	14,65,474.18
5	5,23,610.88	21,58,668.02	16,35,057.14
6	3,34,403.97	21,58,668.02	18,24,264.05
7	1,23,302.26	21,58,668.02	20,35,365.77
<b>Total</b>	<b>46,04,636.17</b>	<b>1,51,10,676.17</b>	<b>1,05,06,040.00</b>

#### 4.9. Calculation of DSCR, IRR and BEP

Year	I	II	III	IV	V	VI	VII
Net Sales	1,55,52,000	1,76,91,000	2,00,05,000	2,25,06,000	2,52,07,000	2,97,76,000	3,12,65,000
Net Profit	30,20,342	34,53,090	44,67,011	55,36,320	66,70,106	85,49,923	90,96,150
Interest Paid	11,48,879	10,26,778	8,90,548	7,38,554	5,68,971	3,79,764	1,68,662
<b>Cash Accruals (a)</b>	<b>41,69,221</b>	<b>44,79,868</b>	<b>53,57,559</b>	<b>62,74,874</b>	<b>72,39,077</b>	<b>89,29,687</b>	<b>92,64,813</b>
Principal	10,55,149	11,77,250	13,13,480	14,65,474	16,35,057	18,24,264	20,35,366
Interest	11,48,879	10,26,778	8,90,548	7,38,554	5,68,971	3,79,764	1,68,662
<b>Total (b)</b>	<b>22,04,028</b>						
Average DSCR	1.89	2.03	2.43	2.85	3.28	4.05	4.20
				<b>2.96</b>			

Calculation of Break-Even Point (BEP)							
Sales	1,63,29,600	1,77,97,950	2,01,20,700	2,26,31,050	2,53,42,050	3,00,04,450	3,13,39,450
Variable Cost	60,50,240	69,80,420	78,94,600	88,82,520	99,49,240	1,17,43,920	1,23,53,489
<b>Contribution</b>	<b>1,02,79,360</b>	<b>1,08,17,530</b>	<b>1,22,26,100</b>	<b>1,37,48,530</b>	<b>1,53,92,810</b>	<b>1,82,60,530</b>	<b>1,89,85,961</b>
Fixed Cost	62,32,443	61,52,402	61,12,513	61,07,359	61,31,944	63,14,211	62,59,318
<b>BEP Sales</b>	<b>99,00,743</b>	<b>1,01,22,471</b>	<b>1,00,59,467</b>	<b>1,00,53,143</b>	<b>1,00,95,365</b>	<b>1,03,75,079</b>	<b>1,03,32,033</b>
<b>Average BEP sales</b>	<b>1,01,34,043</b>						

Calculation of Internal Rate of Return (IRR)							
Sl. No.	Year		PAT	Depreciation		Cash Accrual	
	Cash outflow at beginning					-1,22,95,600	
1	31-03-2024		30,20,342	16,52,910		46,73,252	
2	31-03-2025		34,53,090	14,14,424		48,67,513	
3	31-03-2026		44,67,011	12,10,765		56,77,776	
4	31-03-2027		55,36,320	10,36,805		65,73,125	
5	31-03-2028		66,70,106	8,88,173		75,58,279	
6	31-03-2029		85,49,923	7,61,147		93,11,070	
7	31-03-2030		90,96,150	6,52,555		97,48,706	
IRR	43.06%						
Payback Period	2 Years 6 months						

#### 4.10. Summary of Project Cost

Sl. No.	Name of Assets	Amount (Rs)
1	Land Development	22,800
2	Civil Construction	16,40,000
3	Irrigation/Water Supply	2,50,000
4	Electrification	9,86,300
6	Plant & Machinery	87,73,100
8	Insurance	35,000
9	DPR Cost	14,510
10	Miscellaneous Expenditure	13,890
	<b>Total Fixed Cost</b>	<b>1,17,35,600</b>
	<b>Recurring</b>	<b>5,60,000</b>
	<b>Cost of Project</b>	<b>1,22,95,600</b>

#### 2 Working Capital Requirement

	Heads of Expenses	Amount/year
A	Raw Material	97,27,500
B	Salary	20,40,000
C	Utilities	12,44,160
D	Other Expenses	3,11,040
	<b>Sub total per year</b>	<b>1,33,22,700</b>

Working capital requirement (for  
15 days)

5,60,000