

Pre-Feasibility Study

SLAUGHTERHOUSE



Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

www.smeda.org.pk

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1 DISCLAIMER

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2 EXECUTIVE SUMMARY

The demand for quality meat is continuously rising all over the world. Therefore export opportunities of meat from Pakistan are also rising as Pakistan is one of the largest producers of animals. Markets like Gulf and Middle East have great potential for Halal meat suppliers.

The pre-feasibility is about setting up a facility where farm animals are slaughtered and processed into meat products. The animals that are commonly slaughtered for food are cattle (beef & veal), sheep (lamb & mutton). This slaughterhouse will be set up on modern standards and promise to provide highly hygienic meat products for export purpose.

The proposed business venture should preferably be located in the industrial area of any of the major urban cities of Pakistan. The unit will have a installed production capacity of slaughtering 240 small animals and 96 large animals per day. However the initial capacity is assumed at 35% (84 small & 34 large animals per day) whereas maximum capacity utilization is considered as 80% (192 small & 77 large animals per day). This production capacity is estimated to be economically viable & justifies the capital as well as operational cost of the project. However, entrepreneur's knowledge of meat industry, development of quality product, competitive pricing and strong linkages with international networks are factors for the success of this project.

The estimated total cost of the proposed slaughter house is Rs. 210.96 million out of which Rs. 196.18 million is the capital cost and Rs. 14.78 million is for working capital. The project is to be financed through 50% debt and 50% equity. The project NPV is around Rs. 277.62 million, with an IRR of 42% and Payback Period of 3.08 years. The project will provide employment opportunities to 45 people including owner manager. The legal business status of this project is proposed as 'Sole Proprietorship'.

3 INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

4 PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **Slaughterhouse** by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and it's successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any Investment Decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

The meat industry of Pakistan is working mostly on unorganized pattern since its inception. The street slaughters are the major source of meat for masses, which is poor in quality and hygiene. In spite of one of the largest animal producer, meat export of Pakistan is at the lower end due to unorganized industry pattern. However the industry trend has changed in urban cities since last ten years and modern slaughterhouses have been installed both by the private and public sector.

This particular pre-feasibility provides the basic details for setting up fully automated slaughterhouse which will provide quality hygienic meat as per international standards for export purpose only. The target market for this project will be Middle East and Gulf countries. The major product line of venture includes meat of small (sheep & goat) and large (cow & buffalo) animals.

Slaughterhouses should be situated at a distance from the residential areas. This is to prevent possible inconvenience to the residents, either by way of pollution from slaughter wastes or by way of nuisance from noise or stench/smell. It is suggested to establish the project in industrial area where all required utilities are easily available like sanitation, water, electricity and transportation infrastructure.

This proposed unit with modern processing machines including slaughtering plant for goat & cattle and cold storage plant can be purchased from local machinery suppliers of different countries. However it is suggested to use Chinese machinery as they are less expensive and equally good in quality.

The proposed project will provide direct employment opportunities to 45 people initially.

5.1 Production Process Flow

The production process starts with 12 to 18 hours rest of animal before slaughtering. This process is known as lairage. Animal should be served with water only in lairage. While in lairage, veterinary doctors use to conduct an anti mortem in which animal is thoroughly checked. Once anti mortem and lairage are completed slaughtering process starts by sending animal in cattle tunnel in front of Muslim slaughtering box. Slaughterer's will slaughter animal one by one through cattle slaughtering box and helper hang the animal through chains on Bleeding Automatic Line. Once the blood is fully drained from animal, slaughterers start removing the skin of animals. This is known as skinning process. The next step is to cut open the animal body to dislodge the contents and produce the carcass. It is important that the carcass remains or is placed in the hanging position on railing. This process is known as evisceration. After evisceration, veterinary doctors and nutritionist conduct post mortem, in which meat quality and hygiene examination are conducted as per the required standards.

After post mortem the hanged carcasses are sent to refrigeration plant for required chilling. After the required chilling process, meat is ready for dispatch. Following is the process flow diagram for proposed slaughterhouse.

Figure: Production Process Flow Diagram

5.2 Installed and Operational Capacities

The total installed capacity of the project is assumed at 240 small and 96 large animals per day. The initial operational capacity of the project will be 35% with an annual growth of 5%. Maximum capacity utilization of the project is assumed at 80%.

Table 1: Installed and Operational Capacity

Description	Total Production Capacity (Annually)	% Of Total Production	Operational Capacity 35 % (Year 1)	Maximum Operational Capacity 80% (Year 10)
Small Animal	110,880	71%	27,720	63,360
Large Animal		29%	11,088	25,344
Total		100%	38,808	88,704

6 CRITICAL FACTORS

Following are the factors critical for the success of this business venture;

- ⇒ Formation of organizational system especially for operations department in order to maintain international quality standards.

- ⇒ Develop strong linkages with animal suppliers for sourcing quality live animals on time at economical prices.
- ⇒ Time management is very important in slaughterhouse business. Delay in delivery can cost very high as the product is perishable.
- ⇒ Good relations with the buyers in targeted countries.
- ⇒ Proficient marketing campaign in order to grab new orders from abroad is crucial for this business.
- ⇒ Efficient management of stock to keep inventory cost at the minimum.
- ⇒ Knowledge about the latest market trends is critical.
- ⇒ Induction of trained human resource for the handling of business operations especially in operations and sales.
- ⇒ Increasing competitions from different countries is very critical for business in this market.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

All the metropolitan cities of Pakistan who have large animal markets like Lahore, Karachi, Islamabad and Multan are suitable for this business. As this project is export oriented and the export of meat is normally done by air due to perish ability, therefore it is also important to keep in consideration that the business location should be nearby to some international airport.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

As mentioned earlier this project is export oriented and will sell all of its major products in foreign markets. The European Countries, USA, Canada, Australia, New Zealand, Middle East and Gulf are meat lovers and consume meat on almost daily basis.

The western countries are very much focused on quality meat with all quality and hygiene standards. They also demand the traceability of animal, which is not being offered by the Pakistani entrepreneurs due to lack of infrastructure. It becomes a big hurdle for Pakistani exporters to sell their products in the markets like Europe, America, Canada, Australia and New Zealand. Due to this most of the Pakistani meat is being exported to Middle East and Gulf countries at the moment.

Middle East and Gulf countries are a big market for Halal meat. All these countries don't have the culture of Agriculture & livestock due to unavailability of fertile land. Therefore they use to import all the meat from other neighboring countries like Pakistan, India and Bangladesh due to cost effectiveness.

It is suggested to target Middle East and Gulf market initially. However with the passage of time, the western countries can also be targeted.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Slaughterhouse. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are also attached as annexure.

9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 909.73 million in the year one. The capacity utilization during year one is worked out at 35% with 05% increase in subsequent years up to the maximum capacity utilization of 80%.

The following table shows internal rate of return, payback period and net present value of the proposed venture:

Table 2: Project Economics

Description	Details
Internal Rate of Return (IRR)	42%
Payback Period (yrs.)	3.08
Net Present Value (Rs.)	277,623,956

9.2 Project Financing

Following table provides details of the equity required and variables related to bank loan:

Table 3: Project Financing

Description	Details
Total Equity (50%)	Rs. 105,482,706
Bank Loan (50%)	Rs. 105,482,706
Markup to the Borrower (%age / annum)	16%
Tenure of the Loan (Years)	5 Years

9.3 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business:

Table 4: Project Cost

Description	Amount Rs.
Capital Cost	
Land	20,000,000
Building & Infrastructure	40,275,000
Plant and Machinery	121,707,282
Furniture & Fixture	2,923,000
Office Equipment	667,000
Motor Vehicles	4,200,000
Pre-operating Cost	6,408,856
Total Capital Cost	196,181,138
Working Capital	
Raw Material Inventory	10,603,702
Equipment spare part inventory	52,687
Cash	4,127,885
Total Working Capital	14,784,275
Total Project Cost	210,965,413

9.4 Space Requirement

The space requirement for the proposed Slaughter House is estimated considering various facilities including management office, slaughtering plant, animal shed, fodder storage, open space, etc. Total land requirement for proposed project is two acres. It is suggested to purchase land instead of getting on lease as the project life is very high and Plant & Machinery used in the project is very expensive. Total estimated land cost

is taken at 10 million per acre. Details of space requirement and cost related to land & building is given below:

Table 5: Space Requirement

Description	Estimated Area (Sq. ft)	Unit Cost (Rs.)	Total Cost (Rs.)
Management Office	2,250	1,500	3,375,000
Slaughter Plant	18,000	1,200	21,600,000
Animal Shed, Fodder store and Boundary	40,500	350	14,175,000
Open Space (Land Development)	11,250	100	1,125,000
Total	72,000		40,275,000

9.5 Machinery & Equipment Requirement

China made slaughtering plant is proposed in this project. Many traders in Pakistan provide these plants as per the demand of customer by importing from china. However freezing plant for slaughterhouse will be purchased from local market. Plant, machinery and equipment for the proposed project are stated below:

Table 6: Machinery & Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Cattle Slaughtering Part			
Cattle Tunnel (M)	5	46,893	234,465
Muslim Cattle Rotating Box (Pcs)	1	9,297,750	9,297,750
Safety Pile (Pcs)	30	4,620	138,600
Hoist for Bleeding (Set)	1	664,125	664,125
Bleeding Automatic Line(Set)	1	1,328,250	1,328,250
Bloodletting Trough (Set)	1	265,650	265,650
Electronic stimulator (Pcs)	1	1,054,746	1,054,746
Cutting Foreleg Platform (Pcs)	1	140,910	140,910
Track Exchange platform (Pcs)	1	187,688	187,688
Hind Leg Slide Slot (Pcs)	1	117,233	117,233

Pulley Hook Vehicle lift (Pcs)	1	257,796	257,796
Pulley Hook Vehicle (Pcs)	2	46,893	93,786
Hoist for Track Exchanging (Pcs)	1	318,780	318,780
Shackle Returning system (Set)	1	464,888	464,888
Dual-pillar Pneumatic - Pre-dehiding lift (Pcs)	1	656,271	656,271
7-step Carcass Processing Conveyor (Set)	1	1,328,250	1,328,250
Single-pillar Pneumatic Dehiding (Pcs)	2	421,806	843,612
Dehiding Machine(Pcs)	1	1,992,375	1,992,375
Cattle Skin Wind Transport System (set)	1	1,406,328	1,406,328
Carcass Opening Platform (Pcs)	1	117,117	117,117
White Offal Removal platform (Pcs)	1	187,688	187,688
White Offal Inspection Conveyor (Pcs)	1	1,125,201	1,125,201
White Offal Chute (Pcs)	1	93,786	93,786
White Offal Receiving Trough (Pcs)	1	187,688	187,688
Red Offal Removal platform(Pcs)	1	128,898	128,898
Offal Inspection platform (Pcs)	1	93,786	93,786
Half-splitting Anti-spray Shield(Pcs)	1	117,233	117,233
Dual-pillar Half splitting Lift (Pcs)	1	656,271	656,271
Inspection & Trimming Platform (Pcs)	2	128,898	257,796
Dual-pillar Trimming Lift (Pcs)	1	656,271	656,271
Red Organ & Cattle Head Synchronous Inspection Conveyor (Set)	1	1,406,328	1,406,328
Electronic Track (Set)	1	531,300	531,300
Carcass Shower Device (Pcs)	1	421,806	421,806
Track Descending Machine (Pcs)	1	345,345	345,345
Track Lifting Machine (Pcs)	1	345,345	345,345

Manual Pipe Track (M)	60	15,246	914,760
Stomach Content Wind Transport System (Set)	1	1,523,676	1,523,676
White Offal Dirty (Set)	1	140,679	140,679
White Offal Clean Pool (Set)	1	140,679	140,679
Electric Center Control System (Set)	1	2,922,150	2,922,150
Cattle Pulley Shackle (Pcs)	16	7,161	114,576
Pulley Hook (Pcs)	600	4,620	2,772,000
Goat Slaughtering Equipments			
Goat Bleeding Automatic Line (M)	36	29,453	1,060,290
Bloodletting Trough (Pcs)	1	351,582	351,582
Track Exchange platform (Pcs)	1	117,117	117,117
Hoist for Track Exchanging (Pcs)	1	187,688	187,688
Manual Pipe Track (M)	63	15,246	960,498
Goat Dehiding Machine (Pcs)	1	750,057	750,057
Carcass Processing Conveyor (Pc)	1	1,062,600	1,062,600
Hygienic Synchronous Inspection Line (Set)	1	1,660,313	1,660,313
Offal Chute (Pcs)	2	70,224	140,448
White Offal Receiving Trough (Pcs)	1	105,683	105,683
Red Offal Receiving Trough (Pcs)	1	70,224	70,224
White Offal Dirty (Set)	1	93,786	93,786
White Offal Clean Pool (Set)	1	93,786	93,786
Electronic Track (Set)	1	531,300	531,300
Handle Sprayer (Pcs)	1	18,711	18,711
Electric Center Control System (Set)	1	1,952,528	1,952,528
Goat Shackle (Pcs)	45	1,386	62,370
Pulley Hook (Pcs)	475	4,620	2,194,500
Goat Hook (Pcs)	100	1,155	115,500
Goat Chilling Hook (Pcs)	375	1,848	693,000

Hand Washing Basin With Knife Sterilizer (Pcs)	4	42,273	169,092
Machineries			
Weighing scale	2	70,000	140,000
Lab equipment	1	650,000	650,000
Sorting tables	4	60,000	240,000
Conveyor/Hooks			
Trolleys	10	13,000	130,000
S.S hooks with bearing	100	1,100	110,000
Chiller Hooks	500	1,550	775,000
Slaughtering kit& Equipment		-	
Mincing machines	2	70,000	140,000
Boring	1	200,000	200,000
Tools Kit	1	117,800	117,800
Installation charges of Machinery @ 5%	-	-	2,436,057
Total Cost of Slaughtering Plant & Machinery			53,659,991
Plant and Machinery with Installation of Cold Stores¹	1	60,296,550	60,296,550
Generators 300 KVA Diesel CAT including Instalation, etc	1	7,600,000	7,600,000
Total Plant & Machinery Cost			121,707,282

9.6 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below:

Table 7: Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Furniture Set	1	838,000	838,000
Electric Fans Set	1	500,000	500,000

¹ Quotation of Cold Storage plant is given in Annexure.

Electric Wiring & Lightening Set	1	1,000,000	1,000,000
Air Conditioners	8	60,000	480,000
Electric Water Cooler	3	35,000	105,000
Total			2,923,000

9.7 Office Equipment Requirement

Following office equipment will be required for the proposed project:

Table 8: Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Desktop Computers with UPS	10	40,000	400,000
Printer (Dot Matrix)	3	20,000	60,000
Scanner	1	25,000	25,000
Telephone Sets	20	1,000	20,000
Telephone Exchange	1	150,000	150,000
Fax Machine	1	12000	12000
Total			667,000

9.8 Human Resource Requirement

In order to run operations of slaughter house smoothly, details of human resources required along with number of employees and monthly salary are recommended as under:

Table 9: Human Resource Requirement

Description	No. of Employees	Monthly Salary per person (Rs.)
CEO	1	100,000
Marketing (Export) Manager	1	85,000
Marketing Executive	1	28,000
Manager Accounts	1	55,000
Account Executive	2	25,000
Veterinary doctor	4	30,000
Nutritionist	2	25,000

Lab Technician	1	18,000
Slaughterers	12	20,000
Helpers	12	13,500
Electrician + Sanitary Skilled person	1	15,000
Driver	1	14,000
Personal & Admin Officer	1	22,000
Gardener	1	13,000
Security Guard	2	15,000
Office Boys	2	12,000
Total	45	

9.9 Utilities and other costs

An essential cost to be borne by the project is the cost of electricity and gas. The electricity expenses are estimated to be around Rs. 1.92 million per month. Furthermore, promotional expense being essential for marketing of slaughter house is estimated as 0.5% of total revenue.

9.10 Revenue Generation

Based on the capacity utilization of 35% for the meat processing of small and large animals, sales revenue during the first year of operations is estimated as under:

Table 10: Revenue Generation – Year 1

Description	No. of Units Produced (No.)	Finished Goods Inventory (No.)	Units available for Sale (No.)	² Sale Price / unit (Rs.)	Sales Revenue (Rs.)
Animal Meat	1,275,120	10,626	1,264,494	635	802,403,910
Animal By Products	38,808	38,808	38,808	2,766	107,331,840
Total					909,735,750

² Prices are taken through Weighted Average Method.

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given:

10.1 Machinery Suppliers

Name of Supplier	Address	Phone	Fax	E-mail	Website
Koldkraft Refrigeration (Pvt.) Ltd.	243-S, Quaid-e-Azam industrial estate, Kot Lakhpat	(042) 35116728, 35400643	(042) 35400645	koldkraft@brian.net.pk	www.koldkraft-refrigeration.com

10.2 Raw Material Suppliers

Raw Material for this project is normally purchased from open animal markets of different cities. Animal merchant normally purchase animals from different villages and fattening farms and then sell those animals in open animal market of metropolitan cities:

10.3 Technical Experts / Consultants

Name of Expert/Organization	Address	Phone	Fax	E-mail
Syed Tariq Siraj Jafri	243-S, Quaid-e-Azam industrial estate, Kot Lakhpat	(042) 35116728, 35400643	(042) 35400645	koldkraft@brian.net.pk
Mr. Younus Qureshi	Red Cow Meat training system. 125/13 B1, Town Ship, Lahore	0324-4822308	—	<u>younus_125@hotmail.com</u>

11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Balochistan	www.balochistan.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jamu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
State Bank of Pakistan (SBP)	www.sbp.org.pk
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Punjab Vocational Training Council (PVTTC)	www.pvtc.gop.pk
Technical Education and Vocational Training Authority (TEVTA)	www.tevta.org
Livestock & Dairy Development Department, Government of Punjab.	www.livestockpunjab.gov.pk
Punjab Industrial Estates (PIE)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk
Punjab Agriculture and Meat Company.	http://www.pamco.bz/
Punjab Livestock & dairy Development Board	http://www.plddb.pk/
University of Agriculture Faisalabad	www.uaf.edu.pk
University of Veterinary & Animal Sciences, Lahore	http://www.uvas.edu.pk/

12 ANNEXURES

12.1 Income Statement

Statement Summaries										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	909,735,750	1,151,084,979	1,424,613,356	1,741,336,559	2,107,158,269	2,528,730,955	3,013,546,595	3,570,038,054	4,207,692,339	4,937,177,101
Cost of goods sold	793,819,391	996,351,787	1,238,368,362	1,509,410,198	1,832,633,993	2,194,014,818	2,609,344,858	3,099,588,937	3,646,620,946	4,272,062,971
Gross Profit	115,916,359	154,733,192	186,244,994	231,926,361	274,524,275	334,716,137	404,201,737	470,449,118	561,071,393	665,114,130
<i>General administration & selling expenses</i>										
Administration expense	9,319,200	10,251,120	13,480,368	14,828,405	18,978,250	20,876,075	22,963,682	28,809,834	31,690,817	34,859,899
Utilities expense	729,300	802,230	882,453	970,698	1,067,768	1,174,545	1,291,999	1,421,199	1,563,319	1,719,651
Travelling & Comm. expense (phone, fax, etc.)	1,270,800	1,397,880	1,838,232	2,022,055	2,587,943	2,846,737	3,131,411	3,928,614	4,321,475	4,753,623
Office vehicles running expense	294,000	323,400	355,740	391,314	430,445	473,490	520,839	572,923	630,215	693,237
Office expenses (stationary, etc.)	423,600	465,960	612,744	674,018	862,648	948,912	1,043,804	1,309,538	1,440,492	1,584,541
Promotional expense	4,548,679	5,755,425	7,123,067	8,706,683	10,535,791	12,643,655	15,067,733	17,850,190	21,038,462	24,685,886
Professional fees (legal, audit, etc.)	4,548,679	5,755,425	7,123,067	8,706,683	10,535,791	12,643,655	15,067,733	17,850,190	21,038,462	24,685,886
Depreciation expense	15,383,478	15,383,478	15,383,478	15,383,478	15,383,478	15,896,307	15,896,307	15,896,307	15,896,307	15,896,307
Amortization expense	1,281,771	1,281,771	1,281,771	1,281,771	1,281,771	-	-	-	-	-
Miscellaneous expense	18,194,715	23,021,700	28,492,267	34,826,731	42,143,165	50,574,619	60,270,932	71,400,761	84,153,847	98,743,542
Subtotal	55,994,222	64,438,389	76,573,187	87,791,837	103,807,052	118,077,995	135,254,440	159,039,556	181,773,395	207,622,570
Operating Income	59,922,137	90,294,803	109,671,807	144,134,524	170,717,223	216,638,142	268,947,297	311,409,562	379,297,998	457,491,560
Gain / (loss) on sale of assets	-	-	-	-	1,680,000	-	-	-	-	-
Earnings Before Interest & Taxes	59,922,137	90,294,803	109,671,807	144,134,524	172,397,223	216,638,142	268,947,297	311,409,562	379,297,998	457,491,560
Interest expense	16,274,359	13,751,730	10,808,716	7,375,260	3,369,630	-	-	-	-	-
Earnings Before Tax	43,647,778	76,543,073	98,863,091	136,759,264	169,027,594	216,638,142	268,947,297	311,409,562	379,297,998	457,491,560
Tax	14,499,222	26,012,575	33,824,581	47,088,242	58,382,157	75,045,849	93,354,053	108,215,846	131,976,799	159,344,545
NET PROFIT/(LOSS) AFTER TAX	29,148,556	50,530,498	65,038,510	89,671,023	110,645,437	141,592,293	175,593,244	203,193,716	247,321,200	298,147,015
Balance brought forward		29,148,556	79,679,054	144,717,564	234,388,587	345,034,023	486,626,316	662,219,560	865,413,276	1,112,734,476
Total profit available for appropriation	29,148,556	79,679,054	144,717,564	234,388,587	345,034,023	486,626,316	662,219,560	865,413,276	1,112,734,476	1,410,881,490
Balance carried forward	29,148,556	79,679,054	144,717,564	234,388,587	345,034,023	486,626,316	662,219,560	865,413,276	1,112,734,476	1,410,881,490

12.2 Balance Sheet

Statement Summaries											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	4,127,885	13,324,970	62,690,368	113,058,970	182,400,677	258,739,469	396,287,157	563,075,708	751,470,275	976,832,461	1,404,107,950
Accounts receivable	-	74,772,801	84,691,263	105,850,617	130,107,531	158,157,322	190,515,995	227,764,831	270,558,273	319,632,756	375,816,552
Finished goods inventory	-	6,670,751	8,311,589	10,329,301	12,588,909	15,283,528	18,296,162	21,758,488	25,845,292	30,405,400	35,619,076
Equipment spare part inventory	52,687	73,395	99,920	134,349	178,833	236,074	309,470	403,282	522,847	674,845	-
Raw material inventory	10,603,702	14,685,727	19,991,428	26,877,884	35,775,028	47,223,658	61,903,035	80,665,186	104,577,517	134,975,692	-
Total Current Assets	14,784,275	109,527,644	175,784,569	256,251,120	361,050,977	479,640,051	667,311,820	893,667,495	1,152,974,204	1,462,521,153	1,815,543,579
<i>Fixed assets</i>											
Land	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000
Building/Infrastructure	40,275,000	38,261,250	36,247,500	34,233,750	32,220,000	30,206,250	28,192,500	26,178,750	24,165,000	22,151,250	20,137,500
Machinery & equipment	121,707,282	109,536,554	97,365,826	85,195,097	73,024,369	60,853,641	48,682,913	36,512,185	24,341,456	12,170,728	-
Furniture & fixtures	2,923,000	2,630,700	2,338,400	2,046,100	1,753,800	1,461,500	1,169,200	876,900	584,600	292,300	-
Office vehicles	4,200,000	3,360,000	2,520,000	1,680,000	840,000	6,764,142	5,411,314	4,058,485	2,705,657	1,352,828	-
Office equipment	667,000	600,300	533,600	466,900	400,200	333,500	266,800	200,100	133,400	66,700	-
Total Fixed Assets	189,772,282	174,388,804	159,005,326	143,621,847	128,238,369	119,619,033	103,722,726	87,826,420	71,930,113	56,033,807	40,137,500
<i>Intangible assets</i>											
Pre-operation costs	6,408,856	5,127,085	3,845,313	2,563,542	1,281,771	-	-	-	-	-	-
Total Intangible Assets	6,408,856	5,127,085	3,845,313	2,563,542	1,281,771	-	-	-	-	-	-
TOTAL ASSETS	210,965,413	289,043,533	338,635,208	402,436,510	490,571,117	599,259,084	771,034,546	981,493,915	1,224,904,317	1,518,554,959	1,855,681,079
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable	-	64,067,685	80,789,612	100,156,169	122,656,974	148,742,355	178,925,524	213,791,649	254,008,335	300,337,777	339,316,882
Total Current Liabilities	-	64,067,685	80,789,612	100,156,169	122,656,974	148,742,355	178,925,524	213,791,649	254,008,335	300,337,777	339,316,882
<i>Other liabilities</i>											
Long term debt	105,482,706	90,344,585	72,683,835	52,080,071	28,042,851	-	-	-	-	-	-
Total Long Term Liabilities	105,482,706	90,344,585	72,683,835	52,080,071	28,042,851	-	-	-	-	-	-
<i>Shareholders' equity</i>											
Paid-up capital	105,482,706	105,482,706	105,482,706	105,482,706	105,482,706	105,482,706	105,482,706	105,482,706	105,482,706	105,482,706	105,482,706
Retained earnings	-	29,148,556	79,679,054	144,717,564	234,388,587	345,034,023	486,626,316	662,219,560	865,413,276	1,112,734,476	1,410,881,490
Total Equity	105,482,706	134,631,263	185,161,761	250,200,270	339,871,293	450,516,730	592,109,022	767,702,266	970,895,982	1,218,217,182	1,516,364,197
TOTAL CAPITAL AND LIABILITH	210,965,413	289,043,533	338,635,208	402,436,510	490,571,117	599,259,084	771,034,546	981,493,915	1,224,904,317	1,518,554,959	1,855,681,079

12.3 Cash Flow Statement

Statement Summaries											SMEDA
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit	-	29,148,556	50,530,498	65,038,510	89,671,023	110,645,437	141,592,293	175,593,244	203,193,716	247,321,200	298,147,015
Add: depreciation expense	-	15,383,478	15,383,478	15,383,478	15,383,478	15,383,478	15,896,307	15,896,307	15,896,307	15,896,307	15,896,307
amortization expense	-	1,281,771	1,281,771	1,281,771	1,281,771	1,281,771	-	-	-	-	-
Accounts receivable	-	(74,772,801)	(9,918,461)	(21,159,354)	(24,256,914)	(28,049,791)	(32,358,674)	(37,248,835)	(42,793,442)	(49,074,483)	(56,183,796)
Finished good inventory	-	(6,670,751)	(1,640,838)	(2,017,711)	(2,259,609)	(2,694,619)	(3,012,634)	(3,462,326)	(4,086,804)	(4,560,108)	(5,213,677)
Equipment inventory	(52,687)	(20,707)	(26,525)	(34,429)	(44,483)	(57,241)	(73,396)	(93,812)	(119,565)	(151,998)	674,845
Raw material inventory	(10,603,702)	(4,082,025)	(5,305,701)	(6,886,455)	(8,897,144)	(11,448,630)	(14,679,376)	(18,762,151)	(23,912,331)	(30,398,175)	134,975,692
Accounts payable	-	64,067,685	16,721,927	19,366,556	22,500,805	26,085,381	30,183,169	34,866,125	40,216,686	46,329,442	38,979,105
Cash provided by operations	(10,656,389)	24,335,205	67,026,148	70,972,366	93,378,927	111,145,785	137,547,688	166,788,551	188,394,567	225,362,186	427,275,489
<i>Financing activities</i>											
Change in long term debt	105,482,706	(15,138,121)	(17,660,750)	(20,603,764)	(24,037,220)	(28,042,851)	-	-	-	-	-
Issuance of shares	105,482,706	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing :	210,965,413	(15,138,121)	(17,660,750)	(20,603,764)	(24,037,220)	(28,042,851)	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(196,181,138)	-	-	-	-	(6,764,142)	-	-	-	-	-
Cash (used for) / provided by investing :	(196,181,138)	-	-	-	-	(6,764,142)	-	-	-	-	-
NET CASH	4,127,885	9,197,084	49,365,398	50,368,602	69,341,707	76,338,792	137,547,688	166,788,551	188,394,567	225,362,186	427,275,489
Cash balance brought forward		4,127,885	13,324,970	62,690,368	113,058,970	182,400,677	258,739,469	396,287,157	563,075,708	751,470,275	976,832,461
Cash available for appropriation	4,127,885	13,324,970	62,690,368	113,058,970	182,400,677	258,739,469	396,287,157	563,075,708	751,470,275	976,832,461	1,404,107,950
Cash carried forward	4,127,885	13,324,970	62,690,368	113,058,970	182,400,677	258,739,469	396,287,157	563,075,708	751,470,275	976,832,461	1,404,107,950

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Administration Benefit Expenses	10% of Administration Cost
Office Expenses (Stationery, Entertainment etc)	5% of Administration expenses
Communication Expenses	5% of Administration Cost
Office Vehicle running expenses	7% of Vehicle Cost
Promotional Expenses	0.5% of Revenues
Professional Fee	0.5% of Revenue
Depreciation Method	Straight Line
Depreciation Rate	10% on Plant & Machinery 5% on Building & Infrastructure

13.2 Production Cost Assumptions

Description	Details
Live Animal Purchase Price (Average)	390/Kg Small Animal 195/Kg Large Animal
Packing, Delivery, Chilling and Freight cost (Average)	125/Kg
Cost of Goods sold Growth Rate	10% per year
Average Weight of Live Animal	20 Kg small animal 180 Kg large animal
Average wastage per animal	50%

13.3 Revenue Assumptions

Description	Details
Growth in Sales Price	10%
Days Operational / Year	330
Per Day Production Capacity (Animal Slaughtering)	240 Small Animal 96 Large Animals
Production Capacity in First Year	35%
Percentage Increase in Production Capacity every	5%

Year	
Maximum Production Capacity	80%

13.4 Financial Assumptions

Description	Details
Debt	50%
Equity	50%
Interest Rate on Debt	16%
Debt Tenure	5 Years
Debt Payment / Year	2
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%

13.5 Quotation of Refrigeration Plant



243-S, Quaid-e-Azam Industrial Estate
Kot Lakhpat, Lahore - 54770,
Pakistan.

Tel: +92-42-3511 6728
+92-42-3540 0643
Fax: +92-42-3540 0645

www.koldkraftgroup.com
www.koldkraft-refrigeration.com
E-mail: koldkraft@brain.net.pk

Refrigerated (Reefer) Containers
Prefabricated Walk-In Cold Stores
Refrigeration Plants and Equipment



KOLDKRAFT REFRIGERATION (PVT.) LTD.

KKR-2014/15-148

Sep 27th, 2014

Mr. Muhammad Ijlal Sb
SMEDA
Lahore.
E-mail: mijlal@smeda.org.pk

Subject: **SUPPLY AND INSTALLATION OF COLD STORES**

Dear Sir,

This refers to your email regarding the supply and installation of cold stores. We are pleased to quote our offer as following:

1. INSULATION

KOLDKRAFT prefabricated, modular cold store of the size of : **45M x 30M x 4.267M** with partition wall to make different rooms complete with wall, floor and ceiling panels and fitted with air-cooled split type refrigeration units:

1.01

1. Chiller Room	: 13.5M x 8M x 4.267M	[5 Nos.]
2. Cutting & Deboning area	: 25Mx 15M x 4.267M	[1 No.]
3. Blast Freezer room	: 5M x 6.78M x 4.267M	[2 Nos.]
4. Packing area	: 13.5M x 5M x 4.267M	[1 No.]
5. Cold Store	: 13.5Mx 10Mx 4.267M	[1 No.]
6. Ante Room	: 45M x 3M x 4.267M	[1 No.]

- Insulation material polyurethane, CFC-Free, foamed in-place.
- Insulation thickness 100 mm & 125 mm (4" & 5")
- Internal and external surface of hot-dip galvanized steel sheet, pre-painted polyester coating.

Price: Rs. 18,000,000

1.02 Assembling of panels, Inclusive of fitment of profiles, filling and caulking of silicon

Price: Rs. 2,000,000

1.03 Supply of sliding door for the opening size of **5' / 3 1/2' x 8'** (high) complete with door frame, door hardware and slide rail, etc.

Quantity **17 Nos.**
Price: @ Rs. 95,000 Rs. 1,615,000

2. REFRIGERATION SYSTEM FOR CHILLER ROOM [5 Nos.]

DESCRIPTION

- Size : **13.5M x 8M x 4.267M [5 Nos.]**
- Incoming Temperature : Ambient
- Temperature Required : 0°C
- Product : Meat
- Product Input : 8 to 10Tons/24Hrs.

- 2.01 **KOLDKRAFT** air cooled condensing unit model **KE 15 X** (15 H.P), equipment suitable for operation on 380V, 50 Hz, 3 phase.

Quantity **10 Nos. [2 Nos. in each room]**
 Price @ Rs. 925,000 Rs. 9,250,000

- 2.02 **KOLDKRAFT** Evaporator unit cooler model **KHM 88-4** with hot gas defrosting suitable for operation on 380V, 50 Hz, 3 phase.

Quantity **10 Nos. [2 Nos. in each room]**
 Price: @ Rs. 550,000 Rs. 5,500,000

- 2.03 Installation of refrigeration system including wiring, piping, pipe insulation between the evaporator and the condensing unit up to a distance of 20 feet, inclusive of gas charging and commissioning.

Quantity **10 Sets. [02 in each room]**
 Price @ Rs.300,000 Rs. 3,000,000

3. REFRIGERATION SYSTEM FOR CUTTING AND DEBONING AREA

DESCRIPTION

- Size : **25Mx 15M x 4.267M**
- Temperature Required : +10°C
- Product : Meat

- 3.01 **KOLDKRAFT** air cooled condensing unit model **KE 10 X** (10 H.P), equipment suitable for operation on 380V, 50 Hz, 3 phase.

Quantity **2 Nos.**
 Price @ Rs. 785,000 Rs. 1,570,000

- 3.02 **KOLDKRAFT** Evaporator unit cooler model **KHM 88-4** with hot gas defrosting suitable for operation on 380V, 50 Hz, 3 phase.

Quantity **2 Nos.**
 Price: @ Rs. 550,000 Rs. 1,100,000

- 3.03 Installation of refrigeration system including wiring, piping, pipe insulation between the evaporator and the condensing unit up to a distance of 20 feet, inclusive of gas charging and commissioning.

Quantity	2 Set.	
Price	@ Rs. 125,000	Rs. 250,000

4 REFRIGERATION SYSTEM FOR BLAST FREEZER ROOM [2 Nos.]

DESCRIPTION

- Size : **5M x 6.78M x 4.267M [2 Nos.]**
- Temperature Required : **-40°C**
- Product : **Meat**
- Product Input : **8Tons/24Hrs.**
- Product incoming Temperature : **-40°C**

- 4.01 **KOLDKRAFT** air cooled condensing unit model **KE 30 SS** [Double stage] (30 H.P), equipment suitable for operation on 380V, 50 Hz, 3 phase.

Quantity	4 Nos. [2 Nos. in each room]	
Price	@ Rs. 1,850,000	Rs. 7,400,000

- 4.02 **KOLDKRAFT** Evaporator unit cooler model **KHU 108-4** with hot gas defrosting suitable for operation on 380V, 50 Hz, 3 phase.

Quantity	4 Nos. [2 Nos. in each room]	
Price:	@ Rs. 820,000	Rs. 3,280,000

- 4.03 Installation of refrigeration system including wiring, piping, pipe insulation between the evaporator and the condensing unit up to a distance of 20 feet, inclusive of gas charging and commissioning.

Quantity	4Sets. [2 in each rooms]	
Price	@ Rs. 600,000	Rs. 2,400,000

5. REFRIGERATION SYSTEM FOR PACKING AREA

DESCRIPTION

- Size : **13.5M x 5M x 4.267M**
- Temperature Required : **0°C**
- Product : **Meat**

- 5.01 **KOLDKRAFT** air cooled condensing unit model **KE 10 X** (10 H.P), equipment suitable for operation on 380V, 50 Hz, 3 phase.

Quantity	1 No.	
Price	@ Rs. 785,000	Rs. 785,000

- 5.02 **KOLDKRAFT** Evaporator unit cooler model **KHM 88-4** with hot gas defrosting suitable for operation on 380V, 50 Hz, 3 phase.
- | | | | |
|----------|---------------|-----|---------|
| Quantity | 1 No. | | |
| Price: | @ Rs. 550,000 | Rs. | 550,000 |
- 5.03 Installation of refrigeration system including wiring, piping, pipe insulation between the evaporator and the condensing unit up to a distance of 20 feet, inclusive of gas charging and commissioning.
- | | | | |
|----------|---------------|-----|---------|
| Quantity | 1 Set. | | |
| Price | @ Rs. 125,000 | Rs. | 125,000 |

6. REFRIGERATION SYSTEM FOR COLD STORE

- DESCRIPTION**
- Size : **13.5M x 10M x 4.267M**
 - Temperature Required : **-20°C**
 - Product : **Meat**
 - Product incoming Temperature : **-20°C**
- 6.01 **KOLDKRAFT** air cooled condensing unit model **KE 15 S** (15 H.P), equipment suitable for operation on 380V, 50 Hz, 3 phase.
- | | | | |
|----------|---------------|-----|-----------|
| Quantity | 2 No. | | |
| Price | @ Rs. 925,000 | Rs. | 1,850,000 |
- 6.02 **KOLDKRAFT** Evaporator unit cooler model **KHU 48-3** with hot gas defrosting suitable for operation on 380V, 50 Hz, 3 phase.
- | | | | |
|----------|---------------|-----|---------|
| Quantity | 2No. | | |
| Price: | @ Rs. 410,000 | Rs. | 820,000 |
- 6.03 Installation of refrigeration system including wiring, piping, pipe insulation between the evaporator and the condensing unit up to a distance of 20 feet, inclusive of gas charging and commissioning.
- | | | | |
|----------|---------------|-----|---------|
| Quantity | 2 Set. | | |
| Price | @ Rs. 150,000 | Rs. | 300,000 |

7. REFRIGERATION SYSTEM FOR ANTI ROOM

- DESCRIPTION**
- Size : **45M x 3M x 4.267M**
 - Temperature Required : **0°C**
 - Product : **Meat**
- 7.01 **KOLDKRAFT** air cooled condensing unit model **KE 10 X** (10 H.P), equipment suitable for operation on 380V, 50 Hz, 3 phase.
- | | | | |
|----------|---------------|-----|-----------|
| Quantity | 2 No. | | |
| Price | @ Rs. 785,000 | Rs. | 1,570,000 |

7.02	KOLDKRAFT Evaporator unit cooler model KHM 88-4 with hot gas defrosting suitable for operation on 380V, 50 Hz, 3 phase.		
	Quantity	2 No.	
	Price:	@ Rs. 550,000	Rs. 1,100,000
7.03	Installation of refrigeration system including wiring, piping, pipe insulation between the evaporator and the condensing unit up to a distance of 20 feet, inclusive of gas charging and commissioning.		
	Quantity	2 Sets.	
	Price	@ Rs. 125,000	Rs. 250,000
	Subtotal:		Rs. 62,715,000
	Sales Tax	@ 17%	Rs. 10,661,550
	TOTAL:		<u>Rs. 73,376,550</u>

Note:

- If there are any changes or other taxes leviable by the government same shall apply to the client.
- Transportation from our works to the site of installation including, handling, unloading and safe storage at site by the customer.

TERMS & CONDITIONS

Delivery:	Delivery can be scheduled for inspection and shipment between 14 to 16 weeks from the date of a firm order and advance.
Payments:	50% of total contract value as advance along with firm order. 40% balance of total contract value prior to delivery. 10% within one week after installation & commissioning.

EXCLUSION

- All civil works
- Trusses & shade over the cold store.
- Trolleys/Racks inside the cold store.
- Wiring upto our electrical panel.
- Lights

Validity:	This offer is valid for 30 days from the date of this offer, and thereafter subject to our confirmation.
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