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Pre-feasibility Study Report

Slaughter House and Meat Processing Plant

September, 2014

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Abstract:

The USAID Pakistan Firms project aims to assist the Khyber Pakhtunkhwa Board of Investment and Trade (KPBOIT) in promoting investment and trade in the province. In an effort to achieve this aim preliminary feasibility studies have been conducted in order to highlight the investment opportunities available for international and domestic investors. The focus of these preliminary feasibility studies has been kept on the high economic growth sectors in KPK.

This report is a part of series of pre-feasibility studies conducted for identified projects. The information used for the preparation of this report has been gathered from various reliable sources including economic and statistical surveys carried out by the government of Pakistan. Competitor's data and industry averages have been used as a basis for the preparation of preliminary financial projections.

This report provides a financial and economic analysis of the opportunities available in the sector and identifies the potential technical strengths and constraints that may be encountered by the investor(s) in undertaking the identified project. It aims to help the reader develop an understanding of the operational aspects of the sector and its growth potential in the country particularly in the Khyber Pakhtunkhwa province. An outline for a business plan has been prepared for the identified project, which identifies the operational requirements (equipment, human resource, infrastructure etc.). The analysis is supported by preliminary financial projections for the first ten years of the business.

Acronyms

KPBOIT	Khyber Pakhtunkhwa Board of Investment and Trade
KPK	Khyber Pakhtunkhwa
SOW	Scope of Work
USAID	United States Agency for International Development
VCD	Value Chain Development

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Executive Summary

Introduction

Chemonics International is implementing the USAID Pakistan Firms Project that works to develop a dynamic internationally competitive business sector to accelerate sales, increase exports, investment, job growth and produce higher value added products and services. Within the business enabling component, the project has initiated an assistance program for the Khyber Pakhtunkhwa Board of Investment and Trade (KPBOIT) to help it meet its mandate promoting investment and trade in the province. The KPBOIT was created with a mandate to advocate specific investment friendly reforms and advise the KPK government regarding the provision of adequate infrastructure facilities for making the KPK Province business environment more conducive to international investment.

The Khyber Pakhtunkhwa Board of Investment and Trade (KPBOIT) is considering development of a slaughterhouse and meat processing facility.

Pakistan has a large livestock population base with more than 4% annual growth rate. However, meat industry in Pakistan has not been able to make its mark in the international meat trade due to lack of modern state of the art slaughterhouse complexes.

A sizeable Halal Foods market is awaiting international distributors and producers to create opportunities and do business from KPK, Pakistan. Because of its strong Islamic character, multibillion-dollar international market is awaiting Pakistan's Halal products. Muslims all over the world are starting to blend the best of Western attitudes with their Muslim cultures, thus striving for Halal foods of eastern origin.

This pre-feasibility has been based on a series of assumptions with respect to design, size, costs, revenues, returns etc. However, these are indicative only and the investors might require carrying out their own feasibility studies.

Results of financial pre-feasibility

The results of this financial pre-feasibility indicate that development of a slaughter house and meat processing facility will be a profitable financial investment.

The results of this financial pre-feasibility indicate that the project is capable of generating following results:

- **Equity IRR of 30.18% and**
- **Project IRR of 23.14%**

Following are the key assumptions/considerations for the investors which were used in this pre-feasibility and which form basis of projected returns from the project:

- **Total project outlay is estimated at PKR 1.798 billion**, financed through 40% equity and 60% debt. **Total equity contribution will be required at PKR 719 million.**
- The cost of equity has been assumed at 15%, whereas, cost of debt is estimated at 10.5%with a spread of 3%.

- The project is expected to be constructed in a time period of two years.
- The facility will comprise of a slaughterhouse and a lairage area.
- Cost estimates are based on cost structures in comparable facilities in the country.

1. Project Background and Rationale

1.1 Introduction

Pakistan has not been able to exploit its large livestock population to become a major player in the international meat trade. The major reasons include; non-availability of indigenous meat breeds, lack of proper animal husbandry and absence of modern abattoirs and meat processing plants.

The Government of Pakistan announced “Livestock Development Policy” in 2006, which addresses legal framework and development strategies and action plans for farmers, using livestock as supplementary source of income. Pakistan suffers in the international markets as meat slaughtered in the traditional abattoirs fails to meet international standards. In order to overcome this handicap, it is proposed to have a modern abattoir plus meat processing plant. Recovery of usable by-products will form an important part of the process and it is expected that the quality of the by-products like skins, offal’s, blood, heart, kidneys will be superior to that obtained from the conventional slaughterhouses.

Livestock is considered a source of livelihood at rural level, helping to reduce disparity in income, and provides security in case of any untoward eventuality of crop failure. It plays an important role in poverty alleviation and can uplift the socioeconomic conditions of our rural masses.

The Khyber Pakhtunkhwa Board of Investment and Trade (KPBOIT) has conceived the idea to develop a slaughterhouse and meat processing facility in KPK. Land for the project is being identified and will be offered for investment to facilitate investors willing to avail this opportunity. However, this pre-feasibility is based on the assumption that the investor will acquire/ lease land on own sources.

This study has been prepared to determine the financial feasibility of building and operating a plant comprising of multiple facilities.

1.2 Introduction to KPBOIT

Khyber Pakhtunkhwa Board of Investment and Trade (KPBOIT) is established for the promotion of trade and investment activities in Khyber Pakhtunkhwa (KPK). Government of Khyber Pakhtunkhwa is committed to bring economic prosperity in the Province through industrial and trade development and delegated this role to KP-BOIT.

KP-BOIT has accepted this challenging task towards achievement of its mission under the leadership of a dynamic Board Members comprising of eminent people of public and private sectors.

High motivation and commitment is there to achieve the vision to flourish the investment and trade in Khyber Pakhtunkhwa making it most favorite investment destination for investors.

Our land is blessed with abundance of natural resources of Oil & Gas, Hydel Power Generation, Tourist Destinations, Mines and Minerals along with Agriculture. The Province is located at an outstanding geographical location.

KPBOIT is striving for exploiting the tremendous potential of the Province into reality and is focused on meeting its important objective of facilitating local and foreign investors desirous of benefiting from this huge potential of the KPK. Our aim is creating an attractive business environment through proactive policy advocacy both at the Provincial and Federal level. Another important role of awareness among investors is to the tremendous opportunities available for investment in KPK and therefore facilitating them for undertaking such investment as a joint venture partners.

We also act as a focal point of contact for both foreign and domestic investors providing information and assistance in coordination with other Government Departments and Agencies.

KPBOIT's objectives are:

- To flourish and revive the investment climate of Khyber Pakhtunkhwa and to make it a lucrative investment friendly destination.
- To provide one window operation facility to investors by proactively engaging with all stakeholders to ensure successful investments.
- To act as a bridge between investors and all related government and semi Government Departments/Organizations.
- Advise the Provincial Government to create environment for investment through advocacy of specific investment friendly and comprehensive Public Private Partnership policies.

1.3 Overview of Livestock sector in Pakistan

Livestock production is an integral part of the economy of Pakistan. More than 6.5 million families consisting of 35 million people are involved in livestock farming. In rural Pakistan, it complements agriculture income by converting crop residues, agriculture byproducts and wastes into milk, meat, wool, hair etc.

Livestock population in Pakistan is mainly comprised of Cow, Buffalo, Sheep, Goat, Camel and Poultry. Around 47% of the rural households in Pakistan own livestock and 11% of their income come from livestock.

Livestock plays an important role in the economy of the country. According to Pakistan economic survey, the Livestock sector contributes 55.9 percent in the agriculture exhibited a growth of 2.9 percent in 2013-14 based on Livestock Census 2006. and 11.8 percent to the national GDP during 2013-2014 compared to 11.9 percent during the corresponding period last year. Gross value addition of livestock has increased from Rs. 756.3 billion (2012-13) to Rs. 776.5 billion (2013-14), showing an increase of 2.7 percent as compared to last year (data source: Economic Survey of Pakistan 2013-14).

Historically Livestock has been dominated by subsistence small holders to meet their needs of nutrients and proteins, food security and cash income on daily basis. Moreover, livestock is considered a source of livelihood at rural level, helping to reduce disparity in income, and

provides security in case of any untoward eventuality of crop failure. It plays an important role in poverty alleviation and can uplift the socioeconomic conditions of our rural masses.

The population growth, urbanization, increase in per capita income and export opportunities are fueling the demand of livestock and livestock products. The rise in production cost has increased the retailer's and consumer's price index for milk, yogurt, meat, eggs etc. The overall livestock development strategy revolves to foster private sector-led development with public sector providing enabling environment through policy interventions and play capacity building role to improve livestock husbandry practices.

The emphasis will be on improving per unit animal productivity and moving from subsistence to market oriented and then commercial livestock farming in the country to meet the domestic demand and surplus for export. The objective is to exploit potentials of our livestock sector and use it as engine for economic growth and food security for the country leading to rural

The country has a very large number of livestock population presenting ample potential for meat processing projects. As per the data published by Ministry of National Food Security and Research, the estimated livestock population in Pakistan includes 39.7 million cattle, 34.6 million buffalos, 29.1 million sheep and 66.6 million goats at the end of year 2013-14.

In spite of the big potential of the large livestock population, meat industry in Pakistan has not been able to make its mark in the international meat trade. The primary reason for this has been the lack of corporate cattle farming and the absence of modern state of the art abattoirs and meat processing plants. In addition, Pakistan has also not been able to enter the Halal Food Market, which is estimated at US\$500 billion, although it enjoys a unique position because of its strong Islamic character.

Species	Units	2011-12	2012-13	2013-14
Eggs	Million Nos.	13,114	13,813	14,556
Hides	000 Nos.	13,938	14,410	14,868
Cattle	000 Nos.	6,995	7,258	7,532
Buffalo	000 Nos.	6,842	7,050	7,232
Camels	000 Nos.	101	102	104
Skins	000 Nos.	49,582	50,713	51,872
Sheep Skin	000 Nos.	10,745	10,873	11,001
Goat Skin	000 Nos.	24,237	24,986	25,664
Fancy Skin	000 Nos.	14,509	14,854	15,207
Lamb skin	000 Nos.	3,192	3,229	3,268
Kid skin	000 Nos.	11,318	11,624	11,939
Wool	000 Tonnes	43	44	44
Hair	000 Tonnes	24	24	25
Edible Offal's	000 Tonnes	353	363	373
Blood	000 Tonnes	60	61	63
Guts	000 Nos.	50,089	51,232	52,403
Casings	000 Nos.	14,832	15,333	15,817
Horns & Hooves	000 Tonnes	51	53	54
Bones	000 Tonnes	758	781	803
Fats	000 Tonnes	242	249	256
Dung	000 Tonnes	1,071	1,104	1,136
Urine	000 Tonnes	329	338	348
Head & Trotter	000 Tonnes	220	226	232
Ducks, Drakes	Million Nos.	1	1	1

Figure 1: Estimated Livestock Products Production

Source: Ministry of National Food Security & Research

Currently, meat sector in Pakistan is working on an informal basis from animal raising to meat selling. There is acute shortage of hygienically slaughtered animals for meat supply both locally and internationally. This is complemented by a change in dietary habits leading to an increase in daily consumption and usage of meat as a greater proportion of daily meals.

Animal traders purchase animals from the rural areas and sell them to the animal markets in the urban areas. Butchers purchase these animals from animal markets and slaughter them in the slaughterhouses. Butchers act as meat traders and dominate the meat market both in rural and urban areas. The animals sold in these markets are not tested for being diseased or culled. However, butchers/traders prefer to buy these animals on account of low cost.

1.4 Abattoir and meat processing operational procedures

1.4.1 Introduction

The slaughtering and meat processing process has been summarized in the diagram below:

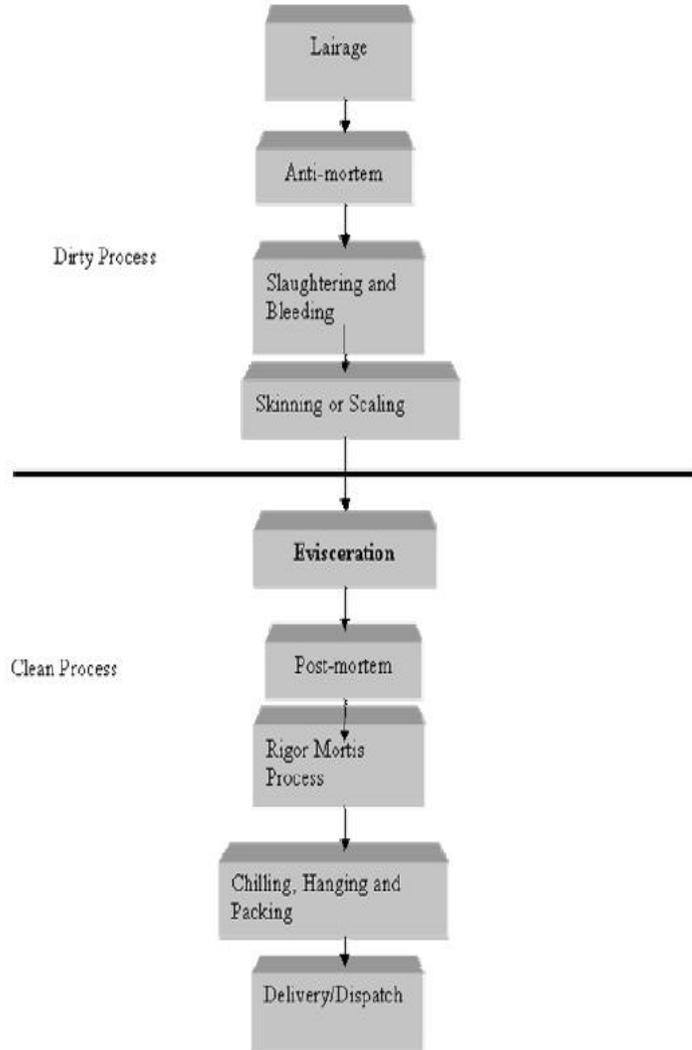


Figure 2: Slaughtering and Meat Processing Process

The pre-feasibility study is based on development of a fully automated slaughterhouse and meat processing plant. The facility can be divided into the following main areas:

- Lairage (Holding Area) and offloading and inspection areas,
- Separate mutton & beef slaughter, skin removal, cleaning etc areas,
- Deboning area,
- Chillers (0c), Blast Freezer (-40c) and Store (-20c),
- Packing area,

- A separate By-products Floor & Chiller.

At the time of slaughter, animals should be healthy and physiologically normal. Slaughter animals should be adequately rested. They should be rested, preferably overnight, particularly if they have travelled for some times over long distances. However, poultry are usually slaughtered on arrival as time and distances travelled are relatively short. Animals should be watered during holding and can be fed, if required. The holding period allows for injured and victimized animals to be identified and for sick animals to be quarantined.

The slaughter halls will be fully automated and will be equipped with the latest machinery to maximize production, safety and hygiene. Slaughtering will be done Muslim style where animals will be led into custom built slaughter box where the feet will be automatically gripped. The box will be turned to lay the animal on its side where a trained butcher will slaughter the animal according to the Islamic standards. At next stage, the animal will be lifted onto the automated conveyor for further processing.

The animals hide will be removed by trained technicians with the help of an automated de-hiding machine. Off-all removal will be done instantly and will immediately slide into the off-all area via a stainless steel slide. The carcass will then be cut into the desired number of pieces with state of the art saws which are sanitized after every operation. Hydraulic lifts will be installed so that the technicians can perform all the above duties with ease and in a hygienic manner.

Slaughterhouses have a dependable source of clean water, to maintain hygienic and sanitary services in the plant. The water is well distributed in terms of point-location inside the premises and must be hot, if possible, for hygienic washing of products and facilities.

Reservoir or tanks are sometimes installed on the premises as a security against shortages and breakdown of pumps. Drainage of water is one of the main considerations in any slaughterhouse. All washings or wet cleaning must course over the slaughter floor into a collecting drainage and empty eventually outside the building. The floor should be designed to slope toward the main collecting drain, the latter in turn to slope toward exterior connecting pipes. The walls must have a hard smooth surface to prevent staining with blood and fat and hence facilitate cleaning; on the other hand, the floor must be rough or grooved to forestall slipping.

Lighting is another important requirement of the slaughterhouse. Transparent insets are also made in the roofing at vantage points to provide natural lighting or sky lighting. Wide lintel windows (e.g. aluminum frame), covered with gauze to exclude insects, also serve the same purpose, as well as provide ventilation.

The standard installation and equipment required in modern slaughterhouse are those necessary to effect a rapid and hygienic conversion of livestock into meat. The following is a standard list of equipment is used in meat processing

- Meat processing plant
- Blast freezers and chillers
- Deboning and vacuum packing machine

- Waste water treatment plant
- Laboratory equipment
- Weighing scale
- Conveyor/hooks
- Trolleys
- S.S hooks with bearing
- Over head mobile hook
- Chiller Hooks

1.4.2 By product and meat processing

Rendering

Rendering is a process that converts waste animal tissue into stable, value-added materials. Rendering can refer to any processing of animal products into more useful materials, or more narrowly to the rendering of whole animal fatty tissue into purified fats like lard or tallow.

Offal

Offal also called variety meats or organ meats, refers to the internal organs and entrails of a butchered animal.

2. Financial pre-feasibility

2.1 Project design assumptions

The project aims at the establishment of a Slaughterhouse and Meat Processing Facility in KPK. The facility will be constructed over a total land area valued at PKR 64 million. Part of this area will be allocated to the slaughterhouse while the remaining area will be used as Lairage.

The slaughterhouse will 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. Nevertheless, some proximity to the city or town will be maintained in order to take advantage of vital services such as power and water supplies. The search for a suitable location is underway.

This slaughter house will be established on modern standards with an aim to provide highly hygienic meat products for local sales as well as for export purpose. The slaughterhouse will be technically equipped for slaughtering cows, goat and sheep and will also have the potential for further operations such as by-product processing/utilization, meat preservation and meat processing. The facility will be equipped with state of the art machinery enabling it to carry out these processes.

The facility will provide a wide range of services featuring cold storage, processing, proper byproduct utilization and waste management activities.

Lairage

The Lairage area will provide protection against adverse weather conditions for cattle waiting for slaughtering. It will be constructed of suitable impervious material so as to facilitate easy and thorough cleaning. Facilities will be provided for the ante-mortem inspection to take place and detention facilities of animals that requires further inspection and evaluation. The Lairage will also be equipped with feed trough and water troughs in each pen or stall. Facilities for washing and disinfecting of all types of cattle transport vehicles will be constructed.

Equipment

The following tools will be used in slaughtering and meat processing

- Meat processing plant
- Blast freezers and chillers
- Deboning and vacuum packing machine
- Waste water treatment plant
- Laboratory equipment
- Weighing scale
- Conveyor/hooks
- Trolleys

- S.S hooks with bearing
- Over head mobile hook
- Chiller Hooks

Following Office equipment will be required:

- Telephone with connection
- Fax machine
- Computers
- Printers
- Furniture and Fixtures

The plant will have the state of art slaughtering and storage facility.

Laboratory:

In order to prevent contamination the plant will comprise of laboratory, where experts will perform tests to enable them to testify to the meat being healthy for human consumption.

Chillers and Cold Storage:

Due to perishable nature of the product and to increase the shelf life chillers, freezers and cold storage rooms will be developed.

Vehicles

Transportation will be carried out by a chiller van equipped with refrigeration systems for delivery of meat, especially for export purposes.

Human Resource:

Proper training will be provided to workers who are to operate the facility to help them carry out the processes and improve slaughter hygiene and meat quality, reduce raw material losses, increase utilization of by-products, and thereby increase profitability.

Human Resource required for Production Process is as follows:

- Veterinary Doctor
- Nutritionist
- Lab technician
- Un Skilled labor
- Helper
- Slaughterers

Human resource required for administration and marketing purpose are as follows:

- General manager
- Accountant

- Drivers
- Personal & Admin. Officer
- Peon
- Gardener
- Security Guards

Final Products:

Meat from cow, goat and sheep will be sold with bones while boneless beef will also be produced. Offal from cows, sheep and goats will also be processed to be sold separately.

2.2 Project set up costs

The total project outlay has been estimated at PKR 1.79 billion. Please refer table below for detailed breakdown of project set up costs.

The project will be funded through both equity and debt in a 40% to 60% ratio. The debt will be repaid over a course of 8 years. An additional grace period of 2 years will be provided.

Project capital cost (Slaughterhouse/ processing)	
Land (Slaughter house)	24,000,000
Land for Lairage	40,000,000
Building and structures	300,000,000
Meat Processing Plant with ETP	350,000,000
Blast freezer, Chillers	285,000,000
Deboning & Vacuum Packing	210,000,000
WWTP	170,000,000
Laboratory equipment	15,000,000
Generator (2.5 MV)	35,000,000
Back up Generator (1.5 MV)	15,000,000
Weighing scales (Lairage)	1,000,000
Tractor for Lairage	2,000,000
RO Plant	250,000
Misc Equipment	25,000,000
Sub Station	4,000,000
SAP and Business Automation	10,000,000
Furniture & Fixture	15,000,000
Vehicles/ trucks	39,000,000
Spare Parts	60,000,000
	1,600,250,000
Rendering	
Plant & Machinery	28,500,000
Construction Cost	12,000,000
Spare Parts	15,000,000
Total including rendering	1,655,750,000
Interest During Construction	142,726,658
	1,798,476,658

Figure 3: Project Capital Cost
Operating revenues

The slaughterhouse will generate revenue from 3 sources:

- Meat (cow, goat, sheep)
- Offal
- Rendered products (blood, tallow, bones)

The production composition for meat shall be as follows:

Production composition	
Beef - with bones	45%
Beef - boneless	40%
Goat	10%
Sheep	5%

Figure 4: Production composition for Meat

A capacity utilization rate of 60% has been assumed for the first year of operation keeping in view the duration of establishment of the plant. This rate is expected to increase to 70% in Year 2. An 80% utilization rate is predicted for the continuing years.

Meat (PKR/KG)	
Beef (boned)	515
Beef (Boneless)	680
Goat (boned)	780
Sheep (boned)	820

Offal (PKR/animal)	
Cow	5,400
Goat / Sheep	1,250

Rendering (PKR/KG)	
Bones	30
Tallow	80
Blood	80

Figure 5: Rates for Meat, Offal and Rendering

Selling prices of meat and rendered products are expected to escalate by 8% per year. Total revenue of PKR 8.8 billion is estimated for the first year of operation. This figure is expected to rise to PKR 20.9 billion by Year 10.

2.3 Operating costs

Production costs

The production estimates for meat have been based on animal weight, input/output ratio, and shrinkage. The price of all animals is expected to increase by 8% per year.

Animal costs			
	Animal Costs (PKR/KG)	Input to output ratio	Shrinkage
Cow	230	50%	1%
Goat	350	50%	3%
Sheep	425	40%	3%

Figure 6: Animal costs

Total animal cost of PKR 7.126 billion is estimated for the first year of operation. This figure is expected to rise to PKR 17.587 billion by the year 10.

Packing costs		
Bones 50 Kg PP Bags	PKR/ KG	0.6
Tallow 50 Kg PP Bags	PKR/ KG	0.6
Blood	PKR/ LTR	2.0
<i>Meat Packaging Cost(PKR/KG)</i>		
Stockinet Cloth		10
Deboning Meat Packaging		30

Figure 7: Packaging Costs

Packaging costs are also expected to rise from PKR 226.8 million in year 1 to PKR 559.7 million in Year 10.

HR costs

HR costs comprise of salaries of all individuals involved in the Operation and Administration of the facility. These costs are expected to rise by 10% per year.

Management & staff costs		
	No.	PKR/ Month
Senior Management Staff	2	500,000
Marketing staff	10	800,000
Supply Chain	12	1,000,000
Lairage	40	1,000,000
Slaughterhouse	8	1,400,000
Cattle line	80	2,800,000
Goat/sheep line	12	420,000
Quality control/ Lab	10	400,000
Rendering	18	700,000
Admin/ others	26	1,000,000
Waste management	20	8,000,000
	238	18,020,000

Figure 8: Management and Staff Costs

Total HR costs of PKR 216.24 million have been estimated for the first year of operation. This figure is expected to rise to PKR 463.5 million by the year 10.

Lairage

Lairage expense has been calculated based on estimated of feed consumed by animals.

Lairage Expenses (PKR/ animal)	
Feed cost - Cow	80
Feed cost - Goat / Sheep	30

Lairage expense of PKR 38.5 million is estimated for the first year of operation and is expected to rise to PKR 95.0 million at an increase of 8% per year.

Power

Estimates for power costs have been made based on the power consumption pattern of the facility. Costs are expected to rise by 8% per year.

Power consumption KWH	
Plant and Machinery	800
Cooling System / Ch	910
Deboning and Packing	110
Rendering , R/O, Bick	164
WWTP	90
Cleaning and Trucks	36
Lighting	166

Power running Hours	
Plant and Machinery	8
Cooling System / Ch	24
Deboning and Packing	8
Rendering , R/O, Bick	10
WWTP	24
Cleaning and Trucks	3
Lighting	24

Figure 9: Power Consumption

Estimates for backup generator expense have also been included in the calculation.

Total generator and Electricity costs of PKR 357 million have been estimated for the first year of operation. This figure is expected to rise to PKR 660.8 million by the year

2.4 Project returns

Based on cash flow projections prepared after taking into consideration project set up costs and operating results, the project is expected to generate IRR of 30.18% for the equity investor. Please refer charts below for profitability analysis.

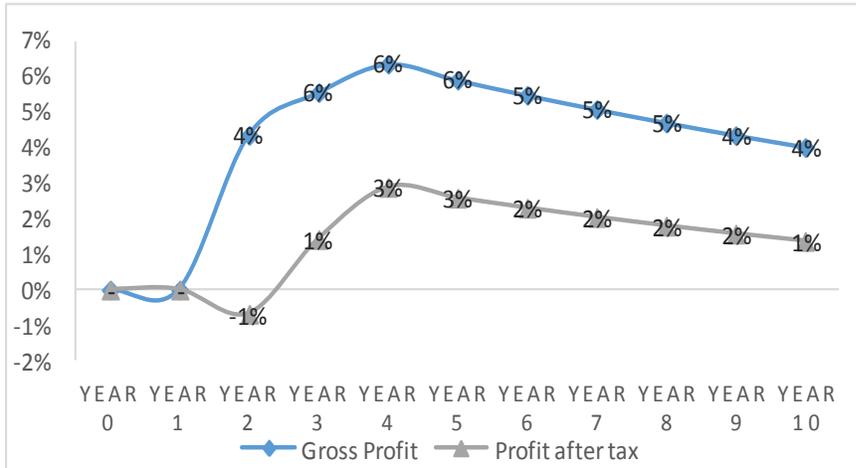
Project Returns	
Project IRR	23.14%
Project NPV	512,422,206

Equity Returns	
Equity IRR	30.18%
Equity NPV	499,104,936

Figure 10: Project Returns

Assumptions

For calculation of IRR and net present value of the project cost of equity has been assumed at 15%. Whereas, cost of debt is assumed at 10.5% with a spread of 3%.



3. Appendices

Appendix -1 Indicative Financial Statements

Projected balance sheet

Projected balance sheet (first six years)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Fixed Assets	862,819,177	1,798,476,658	1,642,413,075	1,486,349,493	1,330,285,910	1,174,222,328
Current Assets						
Stocks in trade	-	-	58,572,325	73,801,130	91,091,681	98,379,015
Trade debts	-	-	242,203,406	303,279,930	372,166,427	399,772,258
Cash & bank balances	-	-	53,129,994	278,339,604	727,479,781	1,146,559,609
	-	-	353,905,725	655,420,663	1,190,737,889	1,644,710,883
Total Assets	862,819,177	1,798,476,658	1,996,318,800	2,141,770,156	2,521,023,800	2,818,933,210
Share Capital & Reserves						
Share capital	345,127,671	719,390,663	719,390,663	719,390,663	719,390,663	719,390,663
Retained earnings	-	-	(60,152,903)	97,422,131	490,559,935	868,424,581
	345,127,671	719,390,663	659,237,761	816,812,795	1,209,950,598	1,587,815,244
Long term debt	517,691,506	996,032,943	901,767,730	794,776,713	673,341,908	535,513,405
Current liabilities						
Creditors/ liabilities	-	-	341,048,096	423,189,632	516,296,489	557,776,058
Current portion - long term debt	-	83,053,051	94,265,213	106,991,017	121,434,805	137,828,503
	-	83,053,051	435,313,310	530,180,649	637,731,294	695,604,561
Total equity & liabilities	862,819,177	1,798,476,658	1,996,318,800	2,141,770,156	2,521,023,800	2,818,933,210

Projected balance sheet (year 7 to 10)

	Year 6	Year 7	Year 8	Year 9	Year 10
Fixed Assets	1,018,158,745	862,095,163	706,031,580	549,967,997	393,904,415
Current Assets					
Stocks in trade	106,249,336	114,749,283	123,929,226	133,843,564	144,551,049
Trade debts	429,586,556	461,785,997	496,561,393	534,118,822	574,680,844
Cash & bank balances	1,533,597,699	1,885,486,675	2,198,814,105	2,469,832,391	2,923,155,335
	2,069,433,591	2,462,021,955	2,819,304,724	3,137,794,777	3,642,387,228
Total Assets	3,087,592,336	3,324,117,117	3,525,336,304	3,687,762,774	4,036,291,643
Share Capital & Reserves					
Share capital	719,390,663	719,390,663	719,390,663	719,390,663	719,390,663
Retained earnings	1,230,093,947	1,574,627,909	1,901,076,183	2,208,488,205	2,495,925,463
	1,949,484,610	2,294,018,573	2,620,466,846	2,927,878,868	3,215,316,126
Long term debt	379,078,054	201,523,930	0	0	-
Current liabilities					
Creditors/ liabilities	602,594,322	651,020,491	703,345,527	759,883,906	820,975,517
Current portion - long term debt	156,435,351	177,554,124	201,523,930	-	-
	759,029,673	828,574,614	904,869,458	759,883,906	820,975,517
Total equity & liabilities	3,087,592,336	3,324,117,117	3,525,336,304	3,687,762,774	4,036,291,643

Projected income statement
Projected profit and loss (year 1 to 6)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
				1	2	3
Revenue						
Meat sales	-	-	7,846,650,000	9,886,779,000	12,203,110,080	13,179,358,886
Offal sale	-	-	741,684,650	865,303,600	988,914,250	988,914,250
Rendering revenue	-	-	252,089,654	317,634,832	392,050,272	423,414,294
	-	-	8,840,424,304	11,069,717,432	13,584,074,602	14,591,687,431
Costs						
Animal costs	-	-	7,126,299,594	8,979,137,488	11,082,821,128	11,969,446,819
Packing costs	-	-	226,800,000	285,768,000	352,719,360	380,936,909
Salary Costs	-	-	216,240,000	237,864,000	261,650,400	287,815,440
Insurance costs	-	-	17,984,767	18,524,310	19,080,039	19,652,440
Electricity cost	-	-	233,175,600	251,829,648	271,976,020	293,734,101
Generator cost	-	-	123,840,000	133,747,200	144,446,976	156,002,734
Water expenses	-	-	7,925,160	8,559,173	9,243,907	9,983,419
Maintenance expenses	-	-	89,923,833	97,117,740	104,887,159	113,278,131
Lairage Expenses	-	-	38,503,290	48,514,334	59,880,375	64,670,805
Boiler steam costs	-	-	90,000,000	97,200,000	104,976,000	113,374,080
Renewing operation costs	-	-	128,144,771	139,352,476	151,533,210	163,655,867
Depreciation	-	-	156,063,583	156,063,583	156,063,583	156,063,583
	-	-	8,454,900,597	10,453,677,951	12,719,278,156	13,728,614,328
Margin	-	-	385,523,707	616,039,481	864,796,447	863,073,103
Other costs						
Admin & general expenses	-	-	300,000,000	324,000,000	349,920,000	377,913,600
Financial costs	-	-	145,676,609	134,464,447	121,738,644	107,294,856
	-	-	445,676,609	458,464,447	471,658,644	485,208,456
Profit before tax	-	-	(60,152,903)	157,575,034	393,137,803	377,864,647
Tax	-	-	-	-	-	-
Profit after tax	-	-	(60,152,903)	157,575,034	393,137,803	377,864,647

Projected profit and loss (year 7 to 12)

	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue					
Meat sales	14,233,707,597	15,372,404,205	16,602,196,542	17,930,372,265	19,364,802,046
Offal sale	988,914,250	988,914,250	988,914,250	988,914,250	988,914,250
Rendering revenue	457,287,438	493,870,433	533,380,067	576,050,473	622,134,511
	15,679,909,285	16,855,188,888	18,124,490,859	19,495,336,988	20,975,850,807
Costs					
Animal costs	12,927,002,564	13,961,162,769	15,078,055,791	16,284,300,254	17,587,044,274
Packing costs	411,411,862	444,324,810	479,870,795	518,260,459	559,721,296
Salary Costs	316,596,984	348,256,682	383,082,351	421,390,586	463,529,644
Insurance costs	20,242,013	20,849,274	21,474,752	22,118,994	22,782,564
Electricity cost	317,232,830	342,611,456	370,020,372	399,622,002	431,591,762
Generator cost	168,482,953	181,961,589	196,518,516	212,239,997	229,219,197
Water expenses	10,782,093	11,644,660	12,576,233	13,582,332	14,668,918
Maintenance expenses	122,340,382	132,127,612	142,697,821	154,113,647	166,442,739
Lairage Expenses	69,844,469	75,432,027	81,466,589	87,983,916	95,022,629
Boiler steam costs	122,444,006	132,239,527	142,818,689	154,244,184	166,583,719
Renewing operation costs	176,748,336	190,888,203	206,159,259	222,652,000	240,464,160
Depreciation	156,063,583	156,063,583	156,063,583	156,063,583	156,063,583
	14,819,192,074	15,997,562,192	17,270,804,751	18,646,571,954	20,133,134,486
Margin	860,717,211	857,626,695	853,686,108	848,765,034	842,716,321
Other costs					
Admin & general expenses	408,146,688	440,798,423	476,062,297	514,147,281	555,279,063
Financial costs	90,901,158	72,294,310	51,175,537	27,205,731	-
	499,047,846	513,092,733	527,237,834	541,353,011	555,279,063
Profit before tax	361,669,365	344,533,963	326,448,274	307,412,022	287,437,258
Tax	-	-	-	-	-
Profit after tax	361,669,365	344,533,963	326,448,274	307,412,022	287,437,258

Projected cash flows statement

Projected cash flows (year 1 to 6)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Profit before taxation	-	-	(60,152,903)	157,575,034	393,137,803	377,864,647
Adjustment of non-cash items						
Depreciation	-	-	156,063,583	156,063,583	156,063,583	156,063,583
Financial charges	-	-	145,676,609	134,464,447	121,738,644	107,294,856
	-	-	241,587,289	448,103,064	670,940,029	641,223,085
Working capital changes						
current assets	-	-	(300,775,731)	(76,305,329)	(86,177,048)	(34,893,165)
current Liabilities	-	-	341,048,096	82,141,535	93,106,858	41,479,569
	-	-	40,272,365	5,836,206	6,929,809	6,586,403
	-	-	281,859,655	453,939,270	677,869,839	647,809,489
Taxes paid	-	-	-	-	-	-
Interest paid	(34,944,177)	(107,782,481)	(145,676,609)	(134,464,447)	(121,738,644)	(107,294,856)
Cash flow from Operations	(34,944,177)	(107,782,481)	136,183,045	319,474,823	556,131,195	540,514,633
Capital expenditure	(827,875,000)	(827,875,000)				
Equity	345,127,671	374,262,993	-	-	-	-
Debt	517,691,506	561,394,489	(83,053,051)	(94,265,213)	(106,991,017)	(121,434,805)
Total cash generated	-	-	53,129,994	225,209,609	449,140,178	419,079,828
Opening cash	-	-	-	53,129,994	278,339,604	727,479,781
Closing cash	-	-	53,129,994	278,339,604	727,479,781	1,146,559,609

Projected cash flows statement**Projected cash flows (year 7 to 12)**

	Year 6	Year 7	Year 8	Year 9	Year 10
Profit before taxation	361,669,365	344,533,963	326,448,274	307,412,022	287,437,258
Adjustment of non-cash items					
Depreciation	156,063,583	156,063,583	156,063,583	156,063,583	156,063,583
Financial charges	90,901,158	72,294,310	51,175,537	27,205,731	-
	608,634,106	572,891,855	533,687,393	490,681,335	443,500,840
Working capital changes					
current assets	(37,684,619)	(40,699,388)	(43,955,339)	(47,471,766)	(51,269,508)
current Liabilities	44,818,264	48,426,169	52,325,037	56,538,378	61,091,611
	7,133,645	7,726,781	8,369,698	9,066,612	9,822,103
	615,767,751	580,618,636	542,057,091	499,747,947	453,322,944
Taxes paid	-	-	-	-	-
Interest paid	(90,901,158)	(72,294,310)	(51,175,537)	(27,205,731)	-
Cash flow from Operations	524,866,593	508,324,326	490,881,554	472,542,217	453,322,944
Capital expenditure					
Equity	-	-	-	-	-
Debt	(137,828,503)	(156,435,351)	(177,554,124)	(201,523,930)	-
Total cash generated	387,038,090	351,888,975	313,327,430	271,018,287	453,322,944
Opening cash	1,146,559,609	1,533,597,699	1,885,486,675	2,198,814,105	2,469,832,391
Closing cash	1,533,597,699	1,885,486,675	2,198,814,105	2,469,832,391	2,923,155,335

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