

## INDICATIVE FINANCIAL SUSTAINABILITY ANALYSIS

1. While some design parameters remain open for the project livestock value chain (LVC) infrastructure, including the site for each of the two slaughterhouses, the detailed upgrading requirements for the two provincial capital and eleven district wet markets, the criteria for selecting alternatives at the detailed design stage and the methodology for decision on economic and financial aspects are known and are included in the Project Administration Manual (PAM). The feasibility studies will be carried out by the project with specialist support from the loan implementation consultants (LIC).

2. From project preparatory technical assistance, enough is understood on the stakeholders' prospective support that an indicative financial sustainability analysis will serve to give a more concrete view of the slaughterhouse and wet market subprojects prior to detailed design.<sup>1</sup> With Lao People's Democratic Republic (Lao PDR) entering the Association of Southeast Asian Nations (ASEAN) Economic Community (AEC) in 2015, and with the 2013 promulgation of the Law on Food, certification in international food safety standards, specifically the Hazard Analysis Critical Control Point (HACCP), will be required. Currently the food supply chain is uncertified and there is much to be done to build the capacity for certification. The project will assist in this effort in terms of skill and knowledge transfer and demonstration of proper practice for which proper LVC infrastructure is essential.

3. The indicative financial sustainability analysis is limited in purpose and scope to assessing if and what stakeholder resource will be available to fund ongoing costs of the implemented slaughterhouse or wet market upgrade to a degree and in a manner that allows reasonable expectation of the financial sustainability of the slaughterhouse and wet market upgrade. The analysis is set out in the following paragraphs.

### A. Indicative Financial Sustainability Analysis of the Representative Slaughterhouse

4. Making the key assumption that the slaughterhouse investment will be funded through a public interest grant, as part of the proposed intervention to address a failure in the market for food safety, hygienic and environmentally friendly meat for consumption, the purpose of the indicative financial sustainability analysis is an initial understanding at conceptual design stage of the extent to which fee revenue based on expected service demand and indicative fee rate can be expected to recover recurrent operating costs, including implementation of food safety processes; periodic maintenance; and depreciation.<sup>2</sup>

#### 1. Demand for Slaughterhouse Service

5. The target users of the slaughterhouse are the project area livestock traders. The slaughterhouse will provide third-party processing of livestock to meat as a service to the traders in a controlled facility and employing processes meeting regulatory food safe, public

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<sup>1</sup> Project preparatory technical assistance (PPTA) report including the Working Paper on Livestock Value Chain Optimization & Public Private Partnerships for Livestock Processing Facilities, and the Aide Memoire between the Asian Development Bank, the International Fund for Agricultural Development, and the Government of Lao Peoples' Democratic Republic on the fact-finding mission undertaken from 15 August to 1 September 2014 for the project.

<sup>2</sup> ADB is assisting the government in creating an enabling environment for public private partnerships (PPP) in Lao PDR through two current projects: (i) Second Private Sector and Small and Medium-Sized Enterprises Development Program, and (ii) Governance and Capacity Development in Public Sector Management. The feasibility of privatizing the infrastructure improved by the project will be studied in the second half of implementation.

health and environmental standards. In the northern provinces, traders themselves are slaughtering from livestock for delivery to the wet markets. Third-party providers charge a fee for slaughter facilities; so the facility fee plus the trader's opportunity cost of time spent on the task together determine the demand price for the proposed service. Training in good slaughtering and meat handling will be provided by the project to those currently involved in the slaughtering and handling of animals and meat. These skills are essentially nonexistent at this time and will be in high demand in the future, especially after the Lao PDR enters the AEC.

6. Using reports of slaughter facility fees from recent literature and assuming a discount on an estimate of the average trader's income as an indicator of the trader opportunity cost of time, the present analysis is based on the service fee shown in Table 1.<sup>3</sup>

**Table 1: Assumed Project Slaughterhouse Service Fee**

Item	Pigs	Cattle
Facility fee (Kip per animal) <sup>a</sup>	16,000	50,000
Assumed processing productivity (units per manhour)	3	1
Assumed average trader daily income (Kip)	70,000	70,000
Project slaughterhouse service fee (Kip per animal)	18,042	56,125

Source: <sup>a</sup>W. Stur and P. Phengsavanh. 2014. *Lessons Learnt from the Northern Region Sustainable Livelihood through Livestock Development Project and Assessment of Livestock Value Chains in Northern Lao PDR*. Vientiane: International Fund for Agricultural Development. *Op cit.* for the Louangnamtha slaughterhouse

7. The assumed daily throughput for the project slaughterhouse was a constant 6 heads of cattle and 67 pigs per day.<sup>4</sup> Currently, Laotians prefer to purchase fresh meat products at local wet markets. To serve the present market demand for fresh meat, the slaughterhouse will be required to operate for a limited number of early morning hours to process livestock to supply the retail market with fresh butcher's meat daily—a 3-hour operating day has initially been assumed.

8. For the same demand-driven reason, the slaughterhouse was assumed to operate for 360 service days annually at 3 hours per day. This is equivalent to 135 days with the normal 8-hour service day. There is reason to anticipate a normal 8-hour day as the slaughterhouse and provincial wet markets will be operating under food safety regulations, which include the temperature control of fresh food in storage and transit with its added energy requirement, it is expected that the slaughterhouse management will be under pressure to keep average production costs to within acceptable limits by raising the daily processing volume, and towards that end, consumer taste will be encouraged to accept refrigerated meat.<sup>5</sup>

## 2. Assumptions and Methodology

<sup>3</sup> PPTA report including the Working Paper on Livestock Value Chain Optimization & Public Private Partnerships for Livestock Processing Facilities.

<sup>4</sup> Compare Stur, W and Phengsavanh, P, *op cit.*, which indicates the daily consumption in Louangphabang city in early 2014 of 10 cattle and 100 pigs. The project slaughterhouse conceptual design capacity is similar to the indicated consumption. The relatively small urban markets in relation to slaughterhouse commercial capacity raises issues of market dominance and corresponding need for regulation of a private sector slaughterhouse investments under the circumstances. This is to be addressed during project implementation.

<sup>5</sup> The Technical Regulation on Livestock Management and Animal Production in Lao PDR No.0313/MAF (2000) provides a legal basis for the hygienic sale of meat in markets. Meat inspection certificates provided by the slaughterhouse where the animal was killed must be displayed. Other requirements include maintaining hygienic standards of the stall and retail staff at the point of sale. The Technical Regulation also states that if meat is transported for more than two hours, it must be kept chilled.

9. Projected financial statements were developed for the slaughterhouse. Detailed assumptions are summarized in Table 2.

**Table 2: Assumptions for Slaughterhouse Projected Financial Statements**

<b>Slaughterhouse investment<sup>a</sup></b> (Kip 10,000)		<b>Depreciation</b> (straight line, years)			
Civil works	204,800	Civil works	50		
Equipment and tools	51,200	Equipment and tools	20		
Land	112,000				
<b>Slaughterhouse sales of service</b>		<b>Other costs</b> (Kip 10,000)			
Daily livestock processed (unit cattle, pigs)	6	67			
Service charge per animal (Kip, cattle, pig)	56,125	18,045	General administration (annual lump sum)	15,000	
(basis customers' transportation)			Food safety processes (ditto)	18,000	
Annualization of daily service sales <sup>b</sup>					
- At 3-hours daily operation	360				
- At 8-hours daily operation	135				
<b>Labor cost</b>		Corporate income tax	35%		
Livestock processor daily wage (number, Kip)	9	45,000	Annual price escalation	3%	
General assistant daily wage (Kip)	2	30,000			
Labor paid for one shift per day of (hours)	3				
Labor cost annualization (days)	365				
<b>O&amp;M cost, non-labor</b> (annual % of investor)	3%				
<b>Periodic maintenance</b> (years, amount as percentage of investment)		2018	2019	2020	2021
Civil works	15	20%			
Equipment and tools	10	20%			
		124,800	76,800	140,800	25,600

<sup>a</sup>Base case plus interest during construction and contingencies

<sup>b</sup>The 3-hour service day is required to meet the current market demand for "fresh" meat. 360 annualized days of a 3-hour daily operation equate annualization factor of 135 days at a normal 8-hour operating day. For a discussion of the alternative patterns of daily operation see paragraph 2

10. The analysis was carried out in nominal values in Kip, with prices assumed to increase at 3% per annum. The four-year construction period includes site selection, survey, design, construction, commissioning, and HACCP certification. It is a conservative assumption based on ADB experience in Lao PDR. With proper upkeep, buildings are usually assumed to have a 50 years useful life and equipment at 20 years useful life.

### 3. Results

11. Details of the projected financial statements appear in Table 4. As indicated by the financial projections, assuming a slaughter fee set at a level comparable to the traders' current complete slaughter cost, the proposed slaughterhouse is expected to recover from service fees reasonable operating costs with the breakdown detailed in Table 2, including a reasonable provision for meeting food safety and sanitary standards for processing butcher's meat from livestock, depreciation and periodic maintenance. Based on the operating cost assumptions, the financial projections shows a working ratio of 0.85; the operation and maintenance cost recovery index is 1.18; when due in 2031, the first periodic maintenance carries a cost with a ratio to the cash balance of 0.13; the cash balance stands at 20 per cent of total assets by the same year. These results support reasonable expectation of operating cost recovery for the slaughterhouse. The demand for safe food product will logically lead to an opportunity to raise fees and create a profitable environment. This is demonstrated in the net income in Table 5.

## **B. Indicative Financial Sustainability Analysis of the Provincial Wet Market Upgrade**

### **1. Affordability of the Wet Market Upgrade**

12. The wet markets are part of larger municipal markets selling a wide variety of goods. Meat stalls are basically wooden tables, which retailers rent from the market, upon which they trim joints and sell to the public. Environmental hygiene is poor (flies, waste, smell) which poses a risk to food safety. Upgrading slaughter facilities would be pointless unless downstream links in the chain are also upgraded to ensure continuing quality and food safety. District markets are run by the district governments and provincial markets by the provincial governments. The Ministry of Industry and Commerce has overall responsibility for the operation of the markets but the Ministry of Agriculture and Forestry and the Ministry of Health have responsibilities for food which are not fully delineated.

12. In Louangphabang, an example of a provincial capital, the sale of pork amounts to 5,000 kilograms (kg) a day, compared to 2,000 kg for beef.<sup>6</sup> In 2014, pork retails at KN37,000 per kg and beef at KN75,000. With about 60 meat stalls located in the city's seven wet markets combined, the average meat retailer is selling about 115 kg of meat daily; this brings a daily average meat sales revenue of around KN5.5 million per stallholder.<sup>7</sup> The retail profit margin is 5% for pork and 7% for beef, which means the average wet market stallholders earn a daily profit of some KN325,000, while at present they pay a daily market rent of KN10,000 per stall.

13. With the project's support for appropriate outreach to the stallholders to improve hygiene practices, there is reasonable expectation they will perceive a growing unsatisfied demand, given the growing income of the population and rising cosmopolitan habits of residents and visitors alike, for meat that consumers can be assured has been processed from livestock and sold under food safe, hygienic conditions, while appreciating the focus of the project's value chain infrastructure investment on that demand. In that way, the stallholders can be expected to contribute to a strengthening of their meat retail business by supporting an incremental stall rent of KN10,000 per day, for upgrading of the wet markets to international food safety and hygiene standards.

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<sup>6</sup> Stur, W. and Phensavanh, P. 2014. *Op cit.*

<sup>7</sup> PPTA consultant's value chain working paper and ADB 2014 fact finding mission survey

## 2. Assumptions and methodology

**Table 3: Assumptions for a Provincial Capital Wet Market Upgrade Financial Projections**

<b>Wet market upgrade investment<sup>a</sup> (Kip 10,000)</b>		<b>Depreciation (straight line, years)</b>	
Improvement	42,400	Total improvement package	20
<b>Improvement incremental rent</b>		<b>Other costs (Kip 10,000)</b>	
Number of meat stalls	60	General administration (annual % of investment)	1%
Daily incremental rent per stall (Kip)	10,000	Food safety processes (annual, lumpsum)	2,500
Annualization of daily rent <sup>b</sup>		Corporate income tax	n.a.
- At 4-hours daily operation	335	Annual price escalation	3%
<b>Labor cost</b>		<b>Investment funds disbursement</b>	
Incremental rent collection staff (Kip)	1	45,000	All in in year 2021
Incremental cleaning staff daily wage (Kip)	3	30,000	
Incremental labor paid for 1 daily shift of (hours)	2		
Labor cost annualization (days)	365		
<b>O&amp;M, non-operating</b> (annual % of investment)	1.5%		
<b>Periodic maintenance</b> (cycle in years, amount as percentage of investment)			
Improvement	5	25%	

Source: PPTA estimates

14. Projected financial statements were prepared for the provincial capital wet market upgrade. The key assumption was a public interest grant by the provincial government for the investment in the market upgrading. The market upgrades will focus bringing the meat vending environs up to HACCP standards. Depending upon the specific condition of the market these improvements would include tiling of surfaces, provision of clean water, and disposal of waste water, proper display facilities for meat products. In addition the project will provide training to meat handlers and vendors for HACCP certification. Following that initial support, it was intended that the project recovered any further outlay from its incremental rent revenue. Detailed assumptions to the projections are shown in Table 3.

## 3. Results

15. Details of the projected financial statements are shown in Table 5. The projections show that the wet market upgrade can be expected to recover all operating costs, depreciation and periodic maintenance from incremental market rent income, with a working ratio of 0.67 and a period maintenance to cash deposit ratio of less than 0.5. The results support a reasonable anticipation that the provincial capital wet market upgrade will be financially sustainable.

### C. Financial Sustainability of the Meat Processing Training Facility

16. The project will assist MAF's Northern Agricultural and Forestry College (NAFC) in Luang Prabang to develop training courses for butchering and meat processing. Demonstration facilities are needed for this new training program. The project will provide the NAFC with a small facility where student, butchers and meat processors can obtain practical experience and learn the necessary skills. The estimated cost of the facility is \$234,900. The O&M cost is estimated at around 1.5% of the total investment cost, which is roughly \$3,523/year. MAF has indicated that it can support this cost through its regular budget for the NAFC.<sup>8</sup>

<sup>8</sup> Somphanh Chanphengxay, Deputy Director General, Department of Planning and Cooperation, MAF, correspondence on 22 September 2014.

**D. Financial Sustainability of the NAFC Laboratory Equipment**

17. To further support the above described courses, the project will provide to the NAFC laboratory equipment. The cost of the equipment is \$71,000 and the annual O&M based again upon a rate of 1.5% of capital investment is estimated to be \$1,065. Here again MAF has indicated that it can support this cost through its regular budget for the NAFC.

**E. Financial Sustainability of the Equipment and Materials for Smallholder Livestock Production and Marketing Groups (SLPMG)**

18. The project will provide, on a grant basis, equipment and materials to the SLPMG. The purpose of the equipment and materials is to help the SLPMGs carry out improvements in practice that will enable them to boost production and quality and to attain global good agricultural practice certification. The type of equipment and material is described in the PAM. The future O&M of the equipment, the structures, or infrastructure that will be constructed by the SLPMGs (they will provide labor and other inputs) will be entirely the responsibility of the groups themselves. O&M is likely to be continued as the communities will be making contributions in labour and in-kind to the assets and it is directly in the financial interests of the SLPMGs to ensure the functionality of the assets. The project will provide training to the groups for O&M. The Northern Region Sustainable Livelihood's through Livestock Development Project (LDP) project completion review field visit mission observed that the maintenance of the infrastructure constructed in the LDP, such as small water supply, ponds, bridges, and irrigation improvements is within the capacity of the villages and continues several years after many of the schemes were completed.

**F. Financial Sustainability of the Vehicles and Equipment**

19. At the end of the project the vehicles and equipment will be registered by the Ministry of Finance's (MOF) Asset Management Department and included in the national government registry. As registered national assets they will be operated and maintained within the government's regular budget. Most of the items that are still in working order will continue to be used by the current operators within the Ministry of Agriculture, or the Provincial Agriculture and Forestry Offices, or the District Agriculture and Forestry Offices. This is normal practice in Lao PDR.

20. They will support the continued the work of those organizations which logically have long term responsibilities related to the projects purpose. Operating costs for vehicles are estimated at approximately \$4,000/year. The NSLCP will only be purchasing one vehicle per participating District Agriculture and Forestry Office because two from the recently closed LDP will be used in the new project.

21. In completed ADB projects where identical arrangements have been made, these have been found to be within budgetary capacity. However, as wasting assets operating under harsh conditions vehicle life is shorter than vehicles operating under conditions in more developed countries. The government normally sells off the vehicles when they reach 300,000 km, because operation costs rise to an unaffordable level. Their post project use will not affect the project's long-term impact.

**G. Financial Sustainability of the Project Steering Committees**

22. The steering committees that are formed to support the project implementation are disbanded at its completion. Their purpose will have been served by ensuring good stakeholder coordination. The need for the committees and their costs will be steady over the entire project period. Overall the lasting impact of the steering committees will have been to further establish good understanding and cooperation across sectors and support for continued developments catalyzed by the project. The disbandment of the committees will have no effect on the long term project impact. If there is any risk of a particular project component not achieving its designed purpose, MAF may consider continuing the steering committee work with membership as relevant to dealing with the specific issue. In this scenario, costs will be covered by the regular government budget.

**Table A4.Representative Slaughterhouse Projected Financial Statements**  
(Kip 10,000)

Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>A. Income Statement</b>														
<b>Slaughterhouse service revenue</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55,648</b>	<b>57,317</b>	<b>59,036</b>	<b>60,808</b>	<b>62,632</b>	<b>64,511</b>	<b>66,446</b>	<b>68,439</b>	<b>70,493</b>	<b>72,607</b>
Pigs (67 processed daily)	0	0	0	0	43,525	44,830	46,175	47,560	48,987	50,457	51,971	53,530	55,136	56,790
Cattle (6 daily)	0	0	0	0	12,123	12,487	12,861	13,247	13,645	14,054	14,475	14,910	15,357	15,818
<b>Operating costs</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>53,701</b>	<b>55,112</b>	<b>56,566</b>	<b>58,063</b>	<b>59,605</b>	<b>61,194</b>	<b>62,830</b>	<b>64,515</b>	<b>66,251</b>	<b>69,063</b>
Labor cost (9 processors, 2 assistant)	0	0	0	0	6,365	6,556	6,752	6,955	7,164	7,378	7,600	7,828	8,063	8,304
Operation and maintenance cost, non-labor	0	0	0	0	7,680	7,910	8,148	8,392	8,644	8,903	9,170	9,445	9,729	10,021
Food safety and HACCP processes	0	0	0	0	18,000	18,540	19,096	19,669	20,259	20,867	21,493	22,138	22,802	23,486
General administration	0	0	0	0	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448	19,002	19,572
Depreciation	0	0	0	0	6,656	6,656	6,656	6,656	6,656	6,656	6,656	6,656	6,656	7,680
Net profit before tax	0	0	0	0	1,947	2,205	2,471	2,745	3,027	3,317	3,616	3,924	4,242	3,545
Net profit after tax	0	0	0	0	1,265	1,433	1,606	1,784	1,967	2,156	2,351	2,551	2,757	2,304
<b>B. Cash Flow Statement</b>														
Net profit after tax	0	0	0	0	1,265	1,433	1,606	1,784	1,967	2,156	2,351	2,551	2,757	2,304
Add back depreciation	0	0	0	0	6,656	6,656	6,656	6,656	6,656	6,656	6,656	6,656	6,656	7,680
Net operating cash flow	0	0	0	0	7,921	8,089	8,262	8,440	8,623	8,812	9,007	9,207	9,413	9,984
Slaughterhouse investment	-124,800	-76,800	-140,800	-25,600	0	0	0	0	0	0	0	0	0	0
Slaughterhouse renewal (periodic maintenanc	0	0	0	0	0	0	0	0	0	0	0	0	0	-10,240
Change in net working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Government grant input	124,800	76,800	140,800	25,600	0	0	0	0	0	0	0	0	0	0
Net cash flow	0	0	0	0	7,921	8,089	8,262	8,440	8,623	8,812	9,007	9,207	9,413	-256
<b>Cash balance</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,921</b>	<b>16,011</b>	<b>24,273</b>	<b>32,713</b>	<b>41,336</b>	<b>50,148</b>	<b>59,155</b>	<b>68,361</b>	<b>77,775</b>	<b>77,519</b>
<b>C. Balance sheet</b>														
<b>Assets</b>														
Cash deposit	0	0	0	0	7,921	16,011	24,273	32,713	41,336	50,148	59,155	68,361	77,775	77,519
Net working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Slaughterhouse property, plant and equipment	124,800	201,600	342,400	368,000	368,000	368,000	368,000	368,000	368,000	368,000	368,000	368,000	368,000	378,240
Cumulative depreciation	0	0	0	0	6,656	13,312	19,968	26,624	33,280	39,936	46,592	53,248	59,904	67,584
Net fixed assets	124,800	201,600	342,400	368,000	361,344	354,688	348,032	341,376	334,720	328,064	321,408	314,752	308,096	310,656
<b>Total assets</b>	<b>124,800</b>	<b>201,600</b>	<b>342,400</b>	<b>368,000</b>	<b>369,265</b>	<b>370,699</b>	<b>372,305</b>	<b>374,089</b>	<b>376,056</b>	<b>378,212</b>	<b>380,563</b>	<b>383,113</b>	<b>385,871</b>	<b>388,175</b>
<b>Liabilities</b>														
Retained earnings	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Government input grant/equity	124,800	201,600	342,400	368,000	368,000	368,000	368,000	368,000	368,000	368,000	368,000	368,000	368,000	368,000
<b>Total liabilities and equity</b>	<b>124,800</b>	<b>201,600</b>	<b>342,400</b>	<b>368,000</b>	<b>369,265</b>	<b>370,699</b>	<b>372,305</b>	<b>374,089</b>	<b>376,056</b>	<b>378,212</b>	<b>380,563</b>	<b>383,113</b>	<b>385,871</b>	<b>388,175</b>
Working ratio	n.a.	n.a.	n.a.	n.a.	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
O&M cost recovery index	n.a.	n.a.	n.a.	n.a.	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18
Periodic maintenance/cash balance	n.a.	n.a.	n.a.	n.a.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
Cash deposit/total assets	0.0	0.0	0.0	0.0	0.02	0.04	0.07	0.09	0.11	0.13	0.16	0.18	0.20	0.20

Source: PPTA estimates.



Table A5. Representative Provincial Wet Market Upgrade Projected Financial Statements

(Kip 10,000)

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
<b>A. Income Statement</b>														
<b>Revenue</b>														
Incremental rent (60 stalls)	0	20,100	20,703	21,324	21,964	22,623	23,301	24,000	24,720	25,462	26,226	27,013	27,823	28,658
<b>Operating cost</b>	<b>0</b>	<b>15,535</b>	<b>15,937</b>	<b>16,352</b>	<b>16,779</b>	<b>17,219</b>	<b>18,202</b>	<b>18,668</b>	<b>19,149</b>	<b>19,644</b>	<b>20,684</b>	<b>21,739</b>	<b>22,279</b>	<b>22,837</b>
Rent collector (1)	0	3,285	3,384	3,485	3,590	3,697	3,808	3,922	4,040	4,161	4,286	4,415	4,547	4,684
Cleaners (3)	0	6,570	6,767	6,970	7,179	7,395	7,616	7,845	8,080	8,323	8,572	8,830	9,094	9,367
O&M, excluding operating labor	0	636	655	675	695	716	737	759	782	806	830	855	880	907
General administration	0	424	437	450	463	477	492	506	521	537	553	570	587	605
Food safety processes	0	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360	3,461	3,564
Depreciation	0	2,120	2,120	2,120	2,120	2,120	2,650	2,650	2,650	2,650	3,180	3,710	3,710	3,710
Net income	0	4,565	4,766	4,972	5,185	5,404	5,100	5,332	5,572	5,818	5,542	5,274	5,544	5,821
<b>B. Cash Flow Statement</b>														
Net income	0	4,565	4,766	4,972	5,185	5,404	5,100	5,332	5,572	5,818	5,542	5,274	5,544	5,821
Add back: depreciation	0	2,120	2,120	2,120	2,120	2,120	2,650	2,650	2,650	2,650	3,180	3,710	3,710	3,710
Net operating cash flow	0	6,685	6,886	7,092	7,305	7,524	7,750	7,982	8,222	8,468	8,722	8,984	9,254	9,531
Market upgrade investment	-42,400	0	0	0	0	0	0	0	0	0	0	0	0	0
Market upgrade renewal (periodic maintenance)	0	0	0	0	0	-10,600	0	0	0	0	-10,600	0	0	0
Change in net working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Provincial government grant input	42,400	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flow	0	6,685	6,886	7,092	7,305	-3,076	7,750	7,982	8,222	8,468	-1,878	8,984	9,254	9,531
<b>Cash balance</b>	<b>0</b>	<b>6,685</b>	<b>13,571</b>	<b>20,663</b>	<b>27,968</b>	<b>24,892</b>	<b>32,641</b>	<b>40,624</b>	<b>48,845</b>	<b>57,314</b>	<b>55,436</b>	<b>64,420</b>	<b>73,674</b>	<b>83,205</b>
<b>C. Balance Sheet</b>														
Cash on hand and bank deposit	0	6,685	13,571	20,663	27,968	24,892	32,641	40,624	48,845	57,314	55,436	64,420	73,674	83,205
Net working capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Upgrade property, plant and equipment	42,400	42,400	42,400	42,400	42,400	53,000	53,000	53,000	53,000	53,000	63,600	63,600	63,600	63,600
Cumulative depreciation	0	2,120	4,240	6,360	8,480	10,600	13,250	15,900	18,550	21,200	24,380	28,090	31,800	35,510
Net fixed assets	42,400	40,280	38,160	36,040	33,920	42,400	39,750	37,100	34,450	31,800	39,220	35,510	31,800	28,090
<b>Total assets</b>	<b>42,400</b>	<b>46,965</b>	<b>51,731</b>	<b>56,703</b>	<b>61,888</b>	<b>67,292</b>	<b>72,391</b>	<b>77,724</b>	<b>83,295</b>	<b>89,114</b>	<b>94,656</b>	<b>99,930</b>	<b>105,474</b>	<b>111,295</b>
<b>Liabilities</b>														
Retained earnings	0	4,565	9,331	14,303	19,488	24,892	29,991	35,324	40,895	46,714	52,256	57,530	63,074	68,895
Provincial government input grant/equity	42,400	42,400	42,400	42,400	42,400	42,400	42,400	42,400	42,400	42,400	42,400	42,400	42,400	42,400
<b>Total liabilities and equity</b>	<b>42,400</b>	<b>46,965</b>	<b>51,731</b>	<b>56,703</b>	<b>61,888</b>	<b>67,292</b>	<b>72,391</b>	<b>77,724</b>	<b>83,295</b>	<b>89,114</b>	<b>94,656</b>	<b>99,930</b>	<b>105,474</b>	<b>111,295</b>
Working ratio	n.a	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
O&M cost recovery index	n.a	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Periodic maintenance/cash deposit	n.a	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00

Source: PPTA estimates.