FINANCIAL MANAGEMENT AND PERFORMANCE ASSESSMENT

A. Introduction

1. An assessment on the financial management capacity and financial performance of the two implementing agencies High Voltage Electric Networks CJSC (Vysokovoltnye Electricheskie Sety [HVEN]) and Electro Power Systems Operator CJSC (Operator Systemy Electroenergetiky [EPSO]) was conducted as part of the Armenia Power Transmission Rehabilitation project in accordance with the Asian Development Bank (ADB) guidelines.[1] The assessment reviews the financial management capacity of the implementing agencies in the context of corporate governance, accounting and reporting, auditing and internal controls, and information systems pertaining to the project. An analysis of the financial performance of the implementing agencies was also conducted and key risks identified.

2. As agreed with the Government of Armenia, the project comprises (i) rehabilitation of two existing substations in the transmission network; (ii) expansion of the existing supervisory control and data acquisition system and energy management system; and (iii) provision of support for institutional development and capacity building in both implementing agencies. Eight substations (Agarak-2, Shinuhayr, Yeghegnadzor, Ararat-2, Lichk, Zovuni, Shaumyan-2 and Marash) were identified in the feasibility study conducted under the project preparatory technical assistance (PPTA) as those in need of rehabilitation. Agarak-2 and Shinuhayr substations were selected for the project.

B. Accounting and Auditing Standards of Armenia

3. The Accounting Standards for the Republic of Armenia (ASRA) based on the International Accounting Standards (IAS) was developed by the Ministry of Finance (MOF) in 1999. An updated version of the ASRA was issued in 2006 to reflect subsequent development in IAS, as well as to respond to the increasing need for internationally recognized accounting standards from the domestic businesses. In view of the local demand and changes in the global financial regulations following the crisis in 2008, MOF issued the Law on Accounting on 1 January 2010 to replace the ASRA. The Law on Accounting provided for a replacement of the ASRA with the International Financial Reporting Standards (IFRS).

4. From January 2010, all financial institutions and large nonfinancial sector institutions with annual turnover exceeding AMD100 million were required to prepare and submit financial reports in compliance with IFRS. In addition, large companies with an annual turnover exceeding AMD500 million and/or book value of total assets exceeding AMD500 million were also required to publish audited financial statements annually. The MOF put in place a Translation Committee consisting of professional translators, qualified accountants and auditors to be responsible for translating the IFRS and associated guidelines and interpretations into Armenian. The government is determined to improve the local financial regulations especially in respect of accounting standards and financial reporting procedures by increasing transparency and reliability so to attract investments and to lower the cost of capital. The introduction of IFRS received strong support from the local businesses, however, challenges remain to fully implement the change throughout the system. It is recognized that, in addition to the Translation Committee, communication and IFRS training should be carried out on a continuous basis. Furthermore, other parts of the financial regulations and the tax regime would also need to fully reflect the impacts as a result of the adoption of IFRS.

---
[1] ADB. 2005. *Financial Management and Analysis of Projects*. Manila.

5. The International Standards on Auditing (ISA) replaced the National Standards on Auditing on 1 January 2012. It was, however, suggested during the assessment that the issue of limited adequate capacity in practicing ISA at both the regulator's monitoring level, as well as within the local auditing firms, still remains.

C. Financial Management Assessment of the Implementing Agencies

6. Both HVEN and EPSO are 100% state-owned closed joint stock companies and were established in 1998 and 2003, respectively, through a series of reorganization within the power sector. The sole shareholder is the Republic of Armenia. Management of the shareholding is delegated to the Ministry of Energy and Natural Resources (MENR).

7. The scope of activities of HVEN includes (i) electricity transmission; (ii) construction, reconstruction, modernization, collection and renovation of energy facilities; (iii) construction of high-voltage grids; and (iv) research and development of energy facilities. The company has 9 branches and the headquarters is in Yerevan. The principal activity of the EPSO is operation of the power system and coordination.

1. Institutional Arrangements

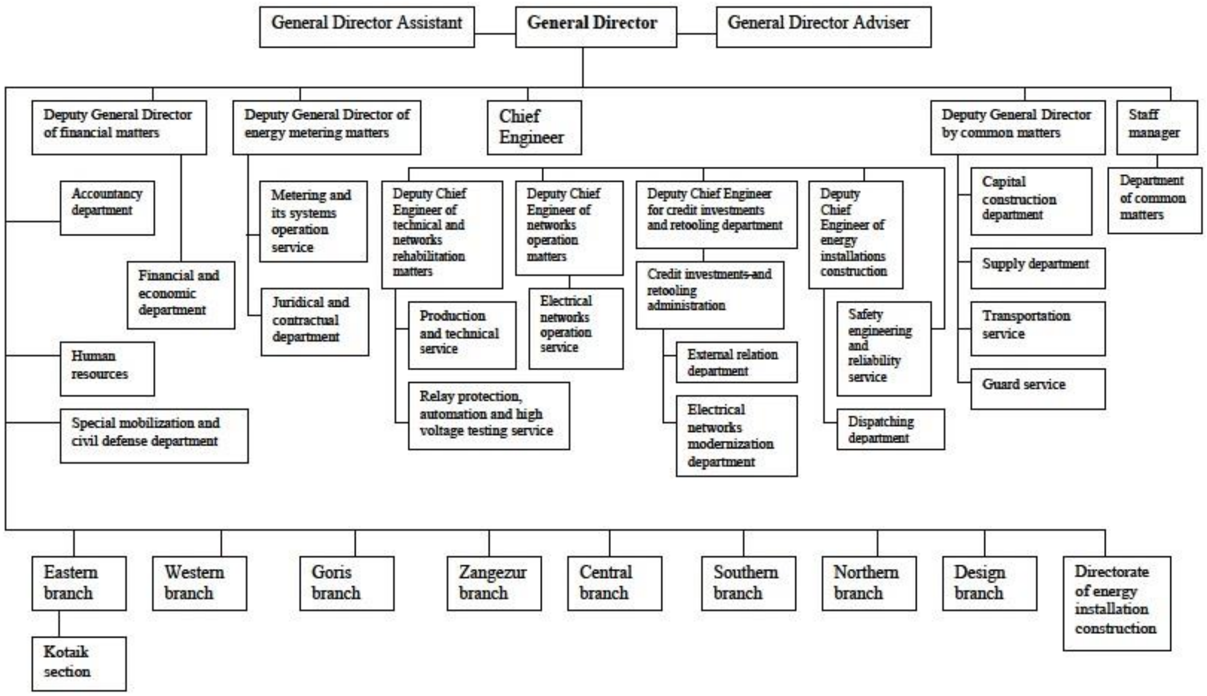
8. Both HVEN and EPSO have well-functioning board of directors with representatives from different government agencies including but not limited to MENR and MOF. The boards set corporate objectives and performance targets; and review and approve risk policies, capital expenditure and investment plans, and annual budget. HVEN's board of directors consists of 7 members including representatives from the MENR, MOF, Department of Supervision of State Shares/Property, independent directors, and the General Director of HVEN. There are 11 directors on the board of EPSO with representatives from MENR, MOF and other relevant government agencies, independent directors, and the General Director of EPSO.

9. There are in total 886 permanent staff at HVEN with 315 residing in Yerevan and the rest in the 9 branches. The General Director is appointed by the board and is responsible for managing HVEN's day-to-day business. The Deputy General Director of Financial Matters oversees the company's financial, economic, and accounting functions and assists the General Director in making financial and investment decisions. The responsibilities of managing and implementing the infrastructure projects lie within the Engineering Department. Currently, the Deputy Chief Engineer for Credit Investments and Retooling Department is in charge of the existing construction works financed by the World Bank and KfW. It is expected that the ADB project will be managed by a project implementation unit (PIU) headed by one of the Deputy Chief Engineers. The Deputy General Director of Financial Matters will also oversee the work of the PIU in respect of accounting and financial management. The appointees from the Financial and Economic Department and the Accounting Department will be responsible for managing the project accounts and financial reporting. The Judicial and Contractual Department is responsible for legal and compliance matters of the company.

10. The technical capacity in processing donor-financed projects in the context of project account and financial monitoring and reporting is considered adequate and sufficient. There are currently two full-time English-speaking staff who work in the various project implementation units to assist in translation and communication. They are under the External Relation Department as illustrated in Figure 1 below. It is expected that additional staff may be recruited with the addition of a new donor (ADB). The management has not issued a formal recruitment

plan. It is understood that assistance will be provided by the supervision consultants for implementing ADB project in addition to the existing English-speaking staff.

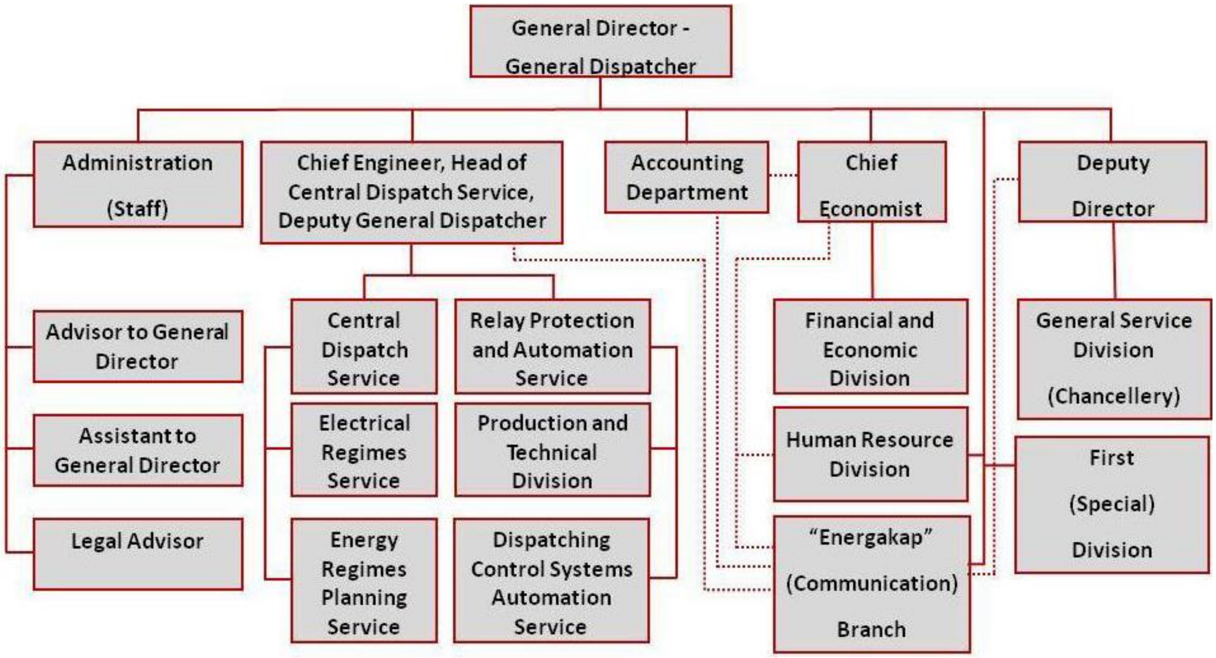
Figure 1: HVEN's Organizational Structure



Source: HVEN company data.

11. The overall management structure of EPSO is similar to HVEN. The board appoints the General Director who is in charge of the supervision and management of the business. The Chief Economist, together with the Chief Accountant, assists the General Director in the financial and accounting matters of the company. There are 210 permanent staff in EPSO. 110 are located at the Energy Communication Department which is responsible for communication, cabling, optical wire, etc. Technical capacity at EPSO to process donor-financed projects is also not considered as an issue. However, they have limited number of English-speaking staff as historically they relied on supervision consultants for translation and communication. The company recognizes the importance of having permanent English-speaking staff within the company. As a result, EPSO recently hired an English-speaking procurement specialist who used to work as a consultant for other donor-financed projects. The company is interviewing candidates for an English-speaking accountant who will also be assigned to work on donor-financed projects including ADB financed project. It is expected that additional staff may be recruited. Assistance will also be provided by the supervision consultants for implementing ADB financed project.

Figure 2: Organizational Structure of EPSO



Source: EPSO data.

2. Accounting Policies and Procedures and Financial Reporting and Monitoring

12. The accounting policies and procedures and financial reporting at both EPSO and HVEN follow IAS and IFRS as per the Law of Accounting. Both EPSO and HVEN have prepared and audited the financial statements in accordance with the IFRS and IAS. EPSO completed updating its accounting practice and policy in line with the latest IFRS, and its audited financial report for the fiscal year (FY) 2012 was in full compliance with the IFRS. Similarly for HVEN, its FY2012 financial report was prepared in compliance with the IFRS. It did not apply several new and revised IFRS which had been issued but not yet become effective at the time of reporting. HVEN management advised that all latest IFRS would be applied in the financial report for the subsequent fiscal year. It was established that sufficient capacity exists in both institutions to continue the preparation of accounts and financial reports in accordance with IAS and IFRS for both the companies, as well as the project.

3. Internal Audit

13. It is a general practice with large state-owned enterprises that the sole shareholder, i.e., the Republic of Armenia, would delegate the supervisory responsibility of its shareholding to the relevant line ministries. In the case of HVEN and EPSO, MENR acts as the assignee and issues order for internal audit to be carried out twice a year in both HVEN and EPSO. The audit is conducted by the department of internal audit from MENR and the report is presented to the shareholder and board members. This is a mandatory requirement as per the Charter of the companies. All large-scale projects are also subject to periodic internal audit. Findings and recommendations are discussed at the board meetings and relevant corporate strategies and policies may be amended as per the board resolution. It is not expected that an internal audit

function would be established within HVEN and/or EPSO as the current system is found to be functional and productive. The size of the operation, number of activities, and the nature of the business which is highly regulated also do not provide economies of scale for the setup of an internal audit department within the companies. The two companies are likely to remain in sovereign ownership, therefore, such system is expected to continue.

4. External Audit

14. Both institutions tender for external auditing services annually from independent auditors. The auditors are selected through a competitive bidding process. The independent auditors conduct the audit on the financial statements based on the ISA. The audited financial statements are submitted to the shareholders and the board of directors for approval. The financial statements of fiscal year ending 31 December 2012 were audited by local auditing firms in accordance with the ISA and qualified opinion was issued for both HVEN and EPSO.

5. Information Systems

15. The Russian accounting software 1C Enterprise-Accounting is used by both HVEN and EPSO for (i) automated accounting processing, (ii) transaction recording, and (iii) financial report generation. It is operated and maintained by experienced and adequately trained staff. EPSO adopted 1C last year and currently runs both 1C and Soft master (an Armenian accounting software) in parallel. It is expected that Softmaster will be fully replaced as soon as the synchronization of 1C with all functions previously carried out by Softmaster is completed. The same accounting software will be used for the preparation of project accounts and financial report. Separate code will be established for the project and the accounts will be managed by the dedicated staff in the PIUs.

6. Financial Performance

16. The financial performance of both HVEN and EPSO is closely linked to the tariff determined by the Public Services Regulatory Commission (PSRC). The objective of the tariff determination methodology is to ensure that the companies recover their costs of business through tariff which is determined and approved based on (i) a predetermined allowable cost base, (ii) allowable return on the assets, and (iii) any other specific variables which need to be justified in the tariff application. The companies are required to submit their financial reports every six months to PSRC for review and confirmation. Tariff is adjusted semiannually to reflect inflation and exchange rate movement.

17. For investment projects and associated financing costs, if they were approved by the government as it would be in the case for the project, PSRC would issue a written commitment that such costs and loan repayment would be recovered through tariff and be included in the next tariff determination and adjustment. The only risk that is expected to have a significant impact on the financial performance of the two companies is on variation in foreign exchange rate. The subsidiary loan to be entered into by MOF and the two companies will require the two companies to repay the ADB loan to the MOF in AMD. The MOF sets the exchange rates between AMD and other major currencies twice a year. As a result, HVEN and EPSO bear the risk of depreciation in AMD as the loan amount in foreign currency is fixed while, with a depreciating AMD, the cash level required for repayment in AMD by HVEN and EPSO to MOF will rise. Although all such variations are expected to be eventually captured in the tariff, it was, however, established that there would still remain certain gaps as the investment costs would usually occur ahead of the new tariff determination. Similarly for repayment of loan, a shortfall or

surplus in cash may occur should there be significant movement in foreign exchange rate prior to the next tariff adjustment date. Such gaps are reflected in the historical financial statements of both HVEN and EPSO as other gains or losses (Appendix 1).

18. The latest tariff determined and approved in July 2013 by PSRC provided for full cost recovery for both companies. However, the effective tariff prior to July 2013 was insufficient for HVEN to cover all its costs. It was established that the main reason for net loss in FY2012 was due to tax payment relating to the construction of a gas pipeline which had not been recognized by the PSRC as allowable costs. However, historical tariff as a whole in average allowed for full cost recovery on investment projects. The new tariff which was issued in July 2013 for both HVEN and EPSO provides sufficient amount to cover their costs. It is expected that the financial performance of FY2013 will be significantly improved from 2012 and restores profitability in FY2014. Currency gains and losses associated with the foreign currency loans are also recovered from the tariff. Similarly, the government undertook that all costs associated with the project including inflation and currency risk would be paid for through tariff. Any shortfall in cash as a result of variations in exchange rates, if cannot be made up with the internal resources of the companies, would be addressed through other means including extension of a short-term loan at zero interest rate to HVEN and/or EPSO. The tariff would then take all such costs into consideration. For the project, it is expected that the approved project costs and financing arrangements will be included in the tariff determination and that adjustment in the tariff will provide for fully cost recovery and loan repayment.

19. The core business of both HVEN and EPSO has been operating profitably. The financial statements have undergone a series of reclassification and adjustments as a result of the mandatory conversion to IAS and IFRS since January 2010. However, such changes have limited impact on the performance of the core activities. HVEN as the transmission company carries a significant amount of assets. The company hired an independent evaluator in mid-February 2014 to conduct an assessment of all assets owned by the company for the purpose of subsequent exercise on revaluation of assets. It is also expected that there will be a write-off of assets in FY2013 and/or 2014 and the impact will be reflected in the annual financial statements. EPSO completed its asset revaluation in 2012.

7. Risks Assessment and Mitigation Measures

20. Table 2 and 3 summarize risk assessment and proposed mitigation measures for HVEN and EPSO.

Table 2: Financial Management Risks and Mitigation Measures of HVEN

Risk	Risk Assessment	Management Plan and/or Mitigation Measures	Risk after Mitigation
1. Inherent risks (specific to HVEN)	Moderate	• The project implementation unit to be supported by implementation consultants. Training on ADB procedures to be provided. • HVEN staff has extensive experience in managing donor-funded infrastructure loan projects and is reasonably familiar with international practice in the context of procurement and disbursement procedures, and reporting requirements. • The project management unit to be established at the Ministry of Energy and Natural Resources level will be responsible for	Low

Risk	Risk Assessment	Management Plan and/or Mitigation Measures	Risk after Mitigation
		coordination in project implementation.	
2. Financial risks	High/ Substantial	• Government undertakes to provide additional assurance in the form of a covenant in the loan agreement with ADB on future tariff adjustment to provide for full recovery of costs associated with the project including interest charges, loan repayment and exchange rate variations. • HVEN to file for new tariff petition as soon as the project is approved by the government. • HVEN to continue communication with the regulatory commission on major changes required in tariff as a result of ongoing business planning and extraordinary items to ensure that the tariff determined retains its financial sustainability.	Substantial
3. Flow funds arrangements	Moderate/Low	• ADB direct payment, commitment letters, and reimbursement procedures are to be used for the project. No imprest account will be established. • Relending agreement between the Ministry of Finance and HVEN to be submitted to ADB.	Low
4. Staffing	Substantial/ Moderate	• HVEN to be responsible for retaining adequate staffing and timely payment of salaries to staff. Existing expertise can be leveraged; however, HVEN needs to ensure that dedicated resources are assigned to implement ADB's project. • Recruitment of additional English-speaking accountants was suggested. The international consultant will also assist in report preparation and translation.	Moderate
5. Accounting policies, procedures, and systems	Low	• A separate accounting code/entry to be established and maintained for the project in order to minimize risk. • Documented procedures and staff training to be provided to retain institutional knowledge.	Low
6. Internal audit	Substantial/ Moderate	• The semiannual audit report is presented to the board of directors and key findings and conclusions documented in the minutes of meetings. The minutes of meetings are submitted to ADB semiannually for discussion during the review missions.	Moderate
7. External audit	Moderate	• Loan/Project Agreements require HVEN financial statements and project financial statements to be audited in accordance with international standards on auditing by auditor acceptable to ADB. HVEN will submit to ADB the audited project financial statements within six months of the end of the fiscal year.	Moderate/ Low
8. Reporting and monitoring	Moderate	• A reporting system, which will have a functionality for automatic generation of financial reports to be established and maintained for the project. • Implementation consultants will be recruited to assist the project implementation unit in supervising the project implementation,	Low

Risk	Risk Assessment	Management Plan and/or Mitigation Measures	Risk after Mitigation
		recording project costs, preparing withdrawal applications and progress reports.	
9. Information systems	Moderate/Low	• Information systems and processes to be maintained and, if necessary, enhanced to meet the demands of organization, ensure operational stability, and allow for full consolidation of management information, as well as financial data.	Low
Overall	Moderate		Moderate/ Low

ADB = Asian Development Bank, HVEN = High Voltage Electric Networks CJSC (Vysokovoltnye Electricheskie Sety).

Table 3: Financial Management Risks and Mitigation Measures of EPSO

Risk	Risk Assessment	Management Plan and/or Mitigation Measures	Risk after Mitigation
1. Inherent risks (specific to EPSO)	Substantial/ Moderate	• The project implementation unit to be supported by international consultants. • EPSO staff has limited experience in managing donor-funded infrastructure loan projects but is reasonably familiar with international practice in the context of procurement and disbursement procedures, and reporting requirements. Training on ADB procedures to be provided by the implementation consultants. • The project management unit to be established at the Ministry of Energy and Natural Resources level will be responsible for coordination in project implementation.	Moderate
2. Financial risks	Substantial/ Moderate	• Government undertakes to provide additional assurance in the form of a covenant in the loan agreement with ADB on future tariff adjustment to provide for full recovery of costs associated with the project including interest charges, loan repayment and exchange rate variations. • EPSO to file for new tariff petition as soon as the project is approved by the government.	Moderate
3. Flow funds arrangements	Moderate/Low	• ADB direct payment, commitment letters, and reimbursement procedures are to be used for the project. No imprest account will be established. • Relending agreement between the Ministry of Finance and EPSO to be submitted to ADB.	Low
4. Staffing	Substantial/ Moderate	• EPSO to be responsible for retaining adequate staffing and timely payment of salaries to staff. Existing expertise can be leveraged; however, EPSO needs to ensure that dedicated resources are assigned to implement ADB's project. • Recruitment of the English-speaking accountant to be completed before project implementation commences. The international consultant will also assist in report preparation and translation.	Moderate
5. Accounting	Low	• A separate accounting code/entry to be	Low

Risk	Risk Assessment	Management Plan and/or Mitigation Measures	Risk after Mitigation
policies, procedures, and systems		established and maintained for the project in order to minimize risk. • Documented procedures and staff training to be provided to retain institutional knowledge.	
6. Internal audit	Substantial/ Moderate	• The semiannual audit report is presented to the board of directors and key findings and conclusions documented in the minutes of meetings. The minutes of meetings are submitted to ADB semiannually for discussion during the review missions.	Moderate
7. External audit	Moderate	• Loan/Project Agreements require EPSO financial statements and project financial statements to be audited in accordance with international standards on auditing by auditor acceptable to ADB. EPSO will submit to ADB the audited project financial statements within six months of the end of the fiscal year.	Moderate/ Low
8. Reporting and monitoring	Moderate	• A reporting system, which will have a functionality for automatic generation of financial reports to be established and maintained for the project. • Implementation consultants will be recruited to assist the project implementation unit in supervising the project implementation, recording project costs, preparing withdrawal applications and progress reports.	Moderate/ Low
9. Information systems	Moderate	• Progress of the implementation of the 1C software to replace the existing Softmaster accounting software and its completion report to be presented to the board of directors and documented in the meeting of minutes. The minutes of meetings are to be submitted to ADB for discussion during review missions.	Moderate/ Low
Overall	Moderate		Moderate/ Low

ADB = Asian Development Bank, EPSO = EPSO, CJSC (Operator Systemy Electroenergetiky).

8. Implementation Plan

21. The project will be the first ADB-financed transaction in the energy sector in Armenia, therefore, staff training will be necessary in order for the project management unit (PMU) at MENR, and the PIUs at both EPSO and HVEN to be familiarized with ADB procedures. As such, the project will include the following measures:

(i) establish PMU, PIUs and maintaining separate project accounts;
(ii) conduct PMU and PIU staff training for ADB procedures (procurement and disbursement);
(iii) recruiting an international consulting firm to provide assistance in project implementation;
(iv) establishing a direct payment procedure and/or commitment procedure for disbursements to contractors and consultants; and
(v) project financial statements and entity-level financial statements annually audited in accordance with international auditing standards by an external independent auditor acceptable to ADB.

D. Conclusion

22. The financial management of both HVEN and EPSO are generally satisfactory. As required by the laws, their accounting policies and procedures and financial reporting are in compliance with international standards and quality. The corporate governance structure is functioning adequately under the supervision of the board of directors and the MENR. Both companies have extensive experiences in processing and implementing international donor-financed projects and are reasonably familiar with the international reporting requirements. Training on ADB procedure and standards will be provided by the supervision consultant. Key findings of the internal audit reports will be shared with ADB during review missions. The problem of lack of sufficient English-speaking staff is recognized by both HVEN and EPSO and recruitment is underway. The PIUs will also be assisted by an international consultant. Overall control risks could be mitigated to low level through various mitigation measures. However, the risk remains in that future tariff may not be determined in time to provide sufficient revenues at both HVEN and EPSO (especially HVEN) to cover all costs. The government has undertaken to guarantee the issuance of relevant tariff which allow for recovery of all project associated costs and financing charges. In addition, the implementing agencies will continue to submit to the PSRC latest financial information and update the PSRC on ongoing business planning and investment plan in order to ensure timely tariff adjustment.

Appendix 1: Historical and Projected Profit and Loss Statement

HVEN

Year Thousand AMD	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	3,327,137	5,410,570	3,498,873	4,351,860	5,505,650	5,538,684	5,566,377	5,622,041	5,734,482	6,193,240	6,502,902	6,665,475	6,765,457	6,833,112	6,901,443	6,935,950
Cost of sales	-3,337,821	-2,823,467	-2,901,512	-2,814,467	-2,730,650	-2,740,780	-2,780,350	-2,805,560	-2,825,630	-2,830,980	-2,850,180	-2,860,430	-2,880,180	-3,033,610	-3,050,810	-3,074,230
Gross profit	**-10,684**	**2,587,103**	**597,361**	**1,537,393**	**2,775,000**	**2,797,904**	**2,786,027**	**2,816,481**	**2,908,852**	**3,362,260**	**3,652,722**	**3,805,045**	**3,885,277**	**3,799,502**	**3,850,633**	**3,861,720**
Administrative expenses	-955,091	-764,545	-815,942	-791,464	-810,250	-840,180	-820,890	-890,750	-840,580	-900,380	-955,780	-945,350	-935,475	-920,870	-920,680	-950,520
Other income	129,028	112,012	1,229,962	0	115,350	129,028	135,620	140,580	150,640	135,520	155,640	155,880	158,690	162,480	160,850	168,480
Other expenses	-865,880	-678,035	-2,781,658	0	-520,350	-550,180	-540,680	-535,240	-500,350	-480,850	-477,890	-470,480	-458,790	-433,650	-435,850	-450,180
Finance costs	0	-342,767	-841,966	0	-330,650	-350,280	-355,680	-365,230	-380,520	-405,680	-420,840	-425,580	-427,880	-430,580	-435,560	-437,880
Finance income	635,054	251,183	139,933	200,000	180,250	210,540	218,640	205,650	210,550	215,600	230,680	240,880	230,550	235,800	240,880	230,650
Other gains/losses	1,723,930	-1,287,858	-1,500,129	-1,500,129	-1,250,360	-1,280,450	-1,260,520	-1,280,600	-1,265,990	-1,235,850	-1,249,880	-1,245,880	-1,256,560	-1,263,190	-1,262,360	-1,235,860
Profit/loss before tax	**656,357**	**-122,907**	**-3,972,439**	**-554,199**	**158,990**	**116,382**	**162,517**	**90,891**	**282,602**	**690,620**	**934,652**	**1,114,515**	**1,195,812**	**1,149,492**	**1,197,913**	**1,186,410**
Income tax	216,134	-163,388	119,383	120,000	105,280	102,850	115,650	108,450	120,450	110,560	108,250	107,680	109,550	110,600	105,280	102,850
Net profit/loss for the year	**872,491**	**-286,295**	**-3,853,056**	**-434,199**	**264,270**	**219,232**	**278,167**	**199,341**	**403,052**	**801,180**	**1,042,902**	**1,222,195**	**1,305,362**	**1,260,092**	**1,303,193**	**1,289,260**
Other comprehensive income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total result for the year	**872,491**	**-286,295**	**-3,853,056**	**-434,199**	**264,270**	**219,232**	**278,167**	**199,341**	**403,052**	**801,180**	**1,042,902**	**1,222,195**	**1,305,362**	**1,260,092**	**1,303,193**	**1,289,260**
Financial Indicators																
Operating Ratio	*19.7%*	*4.1%*	*-89.5%*	*-12.7%*	*8.9%*	*8.4%*	*9.3%*	*8.1%*	*11.6%*	*17.7%*	*20.8%*	*23.1%*	*24.0%*	*23.1%*	*23.7%*	*23.4%*
Net Profit Margin	*26.2%*	*-5.3%*	*-110.1%*	*-10.0%*	*4.8%*	*4.0%*	*5.0%*	*3.5%*	*7.0%*	*12.9%*	*16.0%*	*18.3%*	*19.3%*	*18.4%*	*18.9%*	*18.6%*

Source: HVEN company data and ADB estimates.

EPSO

Year Thousand AMD	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	1,037,464	1,232,414	1,357,216	1,510,900	1,515,000	1,520,000	1,525,000	1,530,000	1,641,447	2,083,485	2,082,385	2,081,284	2,080,184	2,079,083	2,077,982	2,076,882
Cost of sales	-652,789	-890,234	-1,003,263	-1,144,637	-1,145,000	-1,145,000	-1,145,000	-1,140,000	-1,140,000	-1,554,000	-1,559,000	-1,564,000	-1,569,000	-1,574,000	-1,579,000	-1,584,000
Gross profit	**384,675**	**342,180**	**353,953**	**366,263**	**370,000**	**375,000**	**380,000**	**390,000**	**501,447**	**529,485**	**523,385**	**517,284**	**511,184**	**505,083**	**498,982**	**492,882**
Administrative expenses	-269,425	-324,164	-321,581	-357,463	-355,000	-355,000	-355,000	-350,000	-350,000	-350,000	-350,000	-350,000	-350,000	-350,000	-350,000	-350,000
Other income	50,555	60,689	99,446	50,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Other expenses	-30,821	-43,890	-37,637	-50,000	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000
Investment income		7,172	7,665	7,650	7,650	7,650	7,650	7,650	7,650	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Finance costs	-444,535	-728,160	-182,232	-6,754	-6,271	-5,789	-5,306	-4,824	-4,341	-125,870	-119,287	-112,704	-106,121	-99,538	-93,116	-86,694
Profit/loss before tax	**-309,551**	**-686,173**	**-80,386**	**9,696**	**16,379**	**21,861**	**27,344**	**42,826**	**154,755**	**60,615**	**61,098**	**61,580**	**62,063**	**62,545**	**62,867**	**63,188**
Income tax	-18,290	-485	80,851	-2,090	-3,330	-4,330	-5,330	-7,530	-8,530	-8,600	-8,600	-8,600	-8,600	-8,600	-8,600	-8,600
Net profit/loss for the year	**-327,841**	**-686,658**	**465**	**7,606**	**13,049**	**17,531**	**22,014**	**35,296**	**146,225**	**52,015**	**52,498**	**52,980**	**53,463**	**53,945**	**54,267**	**54,588**
Reserve from revaluation	5,492	5,723	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total result for the year	**-322,349**	**-680,935**	**465**	**7,606**	**13,049**	**17,531**	**22,014**	**35,296**	**146,225**	**52,015**	**52,498**	**52,980**	**53,463**	**53,945**	**54,267**	**54,588**
Financial Indicators																
Operating Ratio	*13.0%*	*3.4%*	*7.5%*	*1.1%*	*1.5%*	*1.8%*	*2.1%*	*3.1%*	*9.7%*	*9.0%*	*8.7%*	*8.4%*	*8.1%*	*7.8%*	*7.5%*	*7.2%*
Net Profit Margin	*-31.1%*	*-55.3%*	*0.0%*	*0.5%*	*0.9%*	*1.2%*	*1.4%*	*2.3%*	*8.9%*	*2.5%*	*2.5%*	*2.5%*	*2.6%*	*2.6%*	*2.6%*	*2.6%*

Source: EPSO company data and ADB estimates.

Appendix 2: Historical and Projected Balance Sheet

HVEN

Year	Thousand AMD	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Assets																	
Non-current assets																	
Property, plant and equipment		49,645,370	47,678,250	50,784,869	48,541,847	49,004,516	53,033,767	51,101,114	61,177,191	62,990,546	65,167,529	69,358,667	61,178,962	59,758,133	55,448,533	54,254,499	54,289,535
Intangible assets		19,176	28,596	23,636	20,636	21,656	19,906	31,700	27,142	18,017	10,607	7,607	6,107	5,107	5,107	5,400	6,200
Investment in subsidiary		200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Finance assets		2,367,182	783,219	0	0	783,210	0	0	0	0	0	0	0	0	0	0	0
Deferred tax assets		554,487	391,099	2,027,442	500,000	335,350	0	0	0	0	0	0	0	0	0	0	0
Income tax		46,524	64,224	74,545	50,000	105,280	102,850	115,650	108,450	120,450	110,560	108,250	107,680	109,550	110,600	105,280	102,850
Other non-current assets		86,692	1,229,414	1,929,662	529,662	236,575	86,692	350,210	450,540	530,470	590,870	625,350	660,250	700,540	745,980	745,980	800,250
Total non-current assets		**52,719,631**	**50,175,002**	**54,840,354**	**49,642,345**	**50,486,787**	**53,243,415**	**51,598,874**	**61,763,523**	**63,008,763**	**65,178,336**	**69,366,474**	**61,185,269**	**59,763,440**	**55,453,840**	**54,260,099**	**54,295,935**
Current assets																	
Inventory		1,197,493	1,246,364	1,644,535	1,244,535	1,219,891	1,197,493	1,246,364	1,300,880	1,350,690	1,420,540	1,470,498	1,521,917	1,549,523	1,575,794	1,670,880	1,685,210
Trade and other receivables		657,494	903,797	2,305,972	405,972	348,753	350,235	468,032	392,150	350,250	328,913	360,077	340,117	343,617	336,973	363,613	368,410
Income tax prepayment		1,112	1,112	25,881	25,881	10,713	10,700	10,850	11,050	11,090	12,115	12,125	12,140	12,153	12,160	12,180	12,250
Finance assets		2,724,160	3,860,092	1,136,122	300,000	120,350	0	0	0	0	0	0	0	0	0	0	0
Cash and cash equivalents		184,831	445,534	262,486	448,068	1,027,427	2,415,624	3,427,435	4,751,490	6,285,246	7,534,570	6,819,310	6,863,844	7,305,498	7,463,858	7,692,640	8,096,152
Total current assets		**4,765,090**	**6,456,899**	**5,381,991**	**9,498,580**	**2,727,134**	**3,974,052**	**5,152,681**	**6,455,570**	**7,997,276**	**9,296,137**	**8,662,009**	**8,738,018**	**9,210,790**	**9,388,786**	**9,739,314**	**10,162,022**
Total assets		**57,484,721**	**56,631,901**	**60,222,345**	**59,140,925**	**53,213,920**	**57,217,467**	**56,751,555**	**68,219,093**	**71,006,040**	**74,474,474**	**78,028,484**	**69,923,287**	**68,974,230**	**64,842,626**	**63,999,413**	**64,457,957**
Equity and liabilities																	
Equity																	
Share capital		7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346	7,126,346
Emission losses		0	0	0	0	-83,152	-119,687	-119,687	-119,687	-119,687	-119,687	-119,687	-119,687	-119,687	-119,687	-83,152	-119,687
Paid in capital		-119,687	-119,687	-119,687	-119,687	0	0	0	0	0	0	0	0	0	0	0	0
Capital reserve		162,744	162,744	162,744	162,744	162,744	162,744	162,744	162,744	162,744	162,744	162,744	162,744	162,744	162,744	162,744	162,744
Retained earnings		17,991,372	17,705,077	13,852,021	13,417,822	13,682,092	13,901,324	14,179,491	14,378,832	14,781,884	15,583,064	16,625,967	17,848,162	19,153,524	20,413,616	21,716,809	23,006,069
Total equity		**25,160,775**	**24,874,480**	**21,021,424**	**20,587,225**	**20,888,030**	**21,070,727**	**21,348,894**	**21,548,235**	**21,951,287**	**22,752,467**	**23,795,370**	**25,017,565**	**26,322,927**	**27,583,019**	**28,922,747**	**30,175,472**
Non-current liabilities																	
Loans and borrowings		19,506,264	18,124,864	20,364,765	20,204,666	20,808,544	21,939,956	25,692,592	31,893,446	37,630,111	40,720,462	40,720,500	32,550,716	32,550,749	30,506,295	29,124,892	28,964,791
Grants related to assets		35,956	1,060,766	3,258,573	370,130	42,124	35,956	55,800	70,960	95,870	110,580	180,970	220,580	290,860	370,130	370,130	375,890
Total non-current liabilities		**19,542,220**	**19,185,630**	**23,623,338**	**20,574,796**	**20,850,668**	**21,975,912**	**25,748,392**	**31,964,406**	**37,725,981**	**40,831,042**	**40,901,470**	**32,771,296**	**32,841,609**	**30,876,425**	**29,495,022**	**29,340,681**
Current liabilities																	
Loans and borrowings		3,247,798	3,139,591	3,785,253	3,621,744	3,550,319	3,247,798	3,139,591	6,185,253	4,850,410	5,080,250	4,672,380	4,593,265	4,126,811	3,200,500	3,103,710	3,000,210
Trade and other payables		9,533,928	9,432,200	11,792,330	14,357,160	7,924,904	10,923,031	6,514,678	8,521,199	6,478,361	5,810,715	8,659,264	7,541,161	5,682,883	3,182,683	2,477,934	1,941,595
Total current assets		**12,781,726**	**12,571,791**	**15,577,583**	**17,978,904**	**11,475,223**	**14,170,829**	**9,654,269**	**14,706,452**	**11,328,771**	**10,890,965**	**13,331,644**	**12,134,426**	**9,809,694**	**6,383,183**	**5,581,644**	**4,941,805**
Total equity and liabilities		**57,484,721**	**56,631,901**	**60,222,345**	**59,140,925**	**53,213,921**	**57,217,467**	**56,751,555**	**68,219,093**	**71,006,039**	**74,474,474**	**78,028,483**	**69,923,287**	**68,974,230**	**64,842,626**	**63,999,413**	**64,457,958**
Financial Indicators																	
	Return on Net Assets	*1.1%*	*0.8%*	*-10.4%*	*-1.9%*	*1.8%*	*0.8%*	*0.9%*	*0.7%*	*1.0%*	*1.5%*	*1.8%*	*2.1%*	*2.3%*	*2.4%*	*2.5%*	*2.5%*
	Return on Equity	*2.6%*	*0.9%*	*-14.9%*	*-2.7%*	*2.4%*	*2.2%*	*2.4%*	*2.1%*	*3.0%*	*4.8%*	*5.7%*	*6.2%*	*6.2%*	*5.7%*	*5.7%*	*5.4%*
	Debt to Assets Ratio	*0.56*	*0.56*	*0.65*	*0.65*	*0.61*	*0.63*	*0.62*	*0.68*	*0.69*	*0.69*	*0.70*	*0.64*	*0.62*	*0.57*	*0.55*	*0.53*
	Debt to Equity Ratio	*1.28*	*1.28*	*1.86*	*1.87*	*1.55*	*1.72*	*1.66*	*2.17*	*2.23*	*2.27*	*2.28*	*1.79*	*1.62*	*1.35*	*1.21*	*1.14*
	Debt Service Ratio	*2.11*	*1.50*	*-3.00*	*0.67*	*1.37*	*1.35*	*1.37*	*0.93*	*1.05*	*0.91*	*1.02*	*1.11*	*1.16*	*1.16*	*1.19*	*1.19*
	Curent Ratio	*0.37*	*0.51*	*0.35*	*0.53*	*0.24*	*0.28*	*0.53*	*0.44*	*0.71*	*0.85*	*0.65*	*0.72*	*0.94*	*1.47*	*1.74*	*2.06*
	Self-financing Ratio	*-*	*0.64*	*3.76*	*0.33*	*1.48*	*0.38*	*0.26*	*0.77*	*0.79*	*-*	*-*	*-*	*-*	*-*	*-*	*-*

Source: HVEN company data and ADB consultant estimates.

EPSO

Year Thousand AMD	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Assets																
Non-current assets																
Property, plant and equipment	8,792,370	8,419,619	9,377,016	8,892,729	9,162,977	10,178,744	11,861,217	14,259,324	10,952,513	9,983,316	9,213,311	8,761,264	7,705,777	7,296,699	6,773,699	6,197,524
Incomplete non-current tangible assets	1,462	0	98,153	0	0	0	0	0	0	0	0	0	0	0	0	0
Intangible assets	52,159	43,599	198,557	171,228	143,228	95,028	87,028	59,028	51,028	43,028	35,028	27,028	19,089	11,028	3,028	0
Non-current tax assets	12,305	14,776	12,529	67,148	67,148	67,148	67,148	67,148	67,148	67,148	67,148	67,148	67,148	67,148	67,148	67,148
Prepayments on non-current assets	1,450,789	482,556	2,740	0	0											
Total non-current assets	**10,309,085**	**8,960,550**	**9,688,995**	**9,131,105**	**9,373,353**	**10,340,920**	**12,015,393**	**14,385,500**	**11,070,689**	**10,093,492**	**9,315,487**	**8,855,440**	**7,792,014**	**7,374,875**	**6,843,875**	**6,264,672**
Current assets																
Inventory	48,681	1,030,414	37,969	20,617	25,617	25,617	25,617	25,617	25,617	25,617	25,875	26,278	25,617	25,617	26,478	25,906
Trade and other receivables	139,777	134,523	152,555	153,617	153,617	153,617	153,617	153,617	153,617	563,000	563,000	563,000	563,000	563,000	563,000	563,000
Current fiancial investments	130,680	105,600	193,500	153,000	153,000	153,000	133,000	133,000	133,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000
Cash and cash equivalents	5,228	47,995	42,392	16,395	26,118	362,575	526,697	899,917	1,367,709	1,403,461	1,554,566	1,556,190	1,612,739	1,622,824	1,744,228	1,945,592
Total current assets	**324,366**	**1,318,532**	**426,416**	**343,629**	**358,352**	**694,809**	**838,931**	**1,212,151**	**1,679,943**	**2,102,078**	**2,253,441**	**2,255,468**	**2,311,356**	**2,321,441**	**2,443,706**	**2,644,498**
Total assets	**10,633,451**	**10,279,082**	**10,115,411**	**9,474,734**	**9,731,705**	**11,035,729**	**12,854,324**	**15,597,651**	**12,750,632**	**12,195,570**	**11,568,928**	**11,110,908**	**10,103,370**	**9,696,316**	**9,287,581**	**8,909,170**
Equity and liabilities																
Equity																
Share capital	3,030,471	2,665,271	1,883,701	1,883,701	1,883,701	1,883,701	1,883,701	1,883,701	1,883,701	1,883,701	1,883,701	1,883,701	1,883,701	1,883,701	1,883,701	1,883,701
Capital reserve	592,164	597,887	597,887	509,887	486,900	485,887	443,000	420,000	397,000	378,000	355,000	332,000	309,000	286,000	263,000	240,000
Retained earnings	2,244,416	1,922,958	2,704,993	2,712,599	2,725,648	2,743,179	2,765,193	2,800,489	2,946,714	2,998,729	3,051,227	3,104,207	3,157,669	3,211,614	3,265,881	3,320,469
Total equity	**5,867,051**	**5,186,116**	**5,186,581**	**5,106,187**	**5,096,249**	**5,112,767**	**5,091,894**	**5,104,190**	**5,227,415**	**5,260,430**	**5,289,928**	**5,319,908**	**5,350,370**	**5,381,315**	**5,412,582**	**5,444,170**
Non-current liabilities																
Loans and borrowings	3,334,189	3,456,091	2,710,196	2,084,085	2,278,819	3,419,425	5,587,789	8,274,369	5,448,980	5,850,000	5,440,000	5,030,000	4,620,000	4,210,000	3,800,000	3,390,000
Deferred tax liabilities	837,475	840,778	750,280	794,251	700,280	750,280	750,280	750,280	750,280	700,000	650,000	600,000	0	0	0	0
Grants related to assets	67,979	78,186	370,130	337,030	303,930	300,830	237,730	204,630	171,530	142,000	114,000	86,000	58,000	30,000	0	0
Total non-current liabilities	**4,239,643**	**4,375,055**	**3,830,606**	**3,215,366**	**3,283,029**	**4,470,535**	**6,575,799**	**9,229,279**	**6,370,790**	**6,692,000**	**6,204,000**	**5,716,000**	**4,678,000**	**4,240,000**	**3,800,000**	**3,390,000**
Current liabilities																
Loans and borrowings	362,308	636,787	1,021,744	1,078,055	1,278,055	1,378,055	1,112,259	1,189,810	1,078,055	168,139	0	0	0	0	0	0
Trade and other payables	97,297	81,124	76,480	75,126	74,372	74,372	74,372	74,372	74,372	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Total current liabilities	**459,605**	**717,911**	**1,098,224**	**1,153,181**	**1,352,427**	**1,452,427**	**1,186,631**	**1,264,182**	**1,152,427**	**243,139**	**75,000**	**75,000**	**75,000**	**75,000**	**75,000**	**75,000**
Total equity and liabilities	**10,566,299**	**10,279,082**	**10,115,411**	**9,474,734**	**9,731,705**	**11,035,729**	**12,854,324**	**15,597,651**	**12,750,632**	**12,195,569**	**11,568,928**	**11,110,908**	**10,103,370**	**9,696,315**	**9,287,582**	**8,909,170**
Financial Indicators																
Return on Net Assets	*1.3%*	*0.4%*	*1.0%*	*0.2%*	*0.2%*	*0.3%*	*0.3%*	*0.3%*	*1.2%*	*1.5%*	*1.6%*	*1.6%*	*1.7%*	*1.7%*	*1.7%*	*1.7%*
Return on Equity	*2.6%*	*0.9%*	*2.2%*	*0.4%*	*0.5%*	*0.6%*	*0.7%*	*1.0%*	*3.3%*	*3.8%*	*3.7%*	*3.5%*	*3.3%*	*3.2%*	*3.0%*	*2.9%*
Debt to Assets Ratio	*0.44*	*0.50*	*0.49*	*0.46*	*0.48*	*0.54*	*0.60*	*0.67*	*0.59*	*0.57*	*0.54*	*0.52*	*0.47*	*0.45*	*0.42*	*0.39*
Debt to Equity Ratio	*0.80*	*0.98*	*0.95*	*0.86*	*0.91*	*1.16*	*1.52*	*2.06*	*1.44*	*1.32*	*1.19*	*1.09*	*0.89*	*0.80*	*0.72*	*0.64*
Debt Service Ratio	*0.64*	*0.75*	*0.86*	*1.02*	*1.30*	*1.23*	*1.12*	*1.14*	*1.22*	*0.66*	*1.13*	*1.15*	*1.16*	*1.17*	*1.22*	*1.24*
Curent Ratio	*0.71*	*1.84*	*0.39*	*0.30*	*0.26*	*0.48*	*0.71*	*0.96*	*1.46*	*8.65*	*30.05*	*30.07*	*30.82*	*30.95*	*32.58*	*35.26*
Self-financing ratio	*0.03*	*-*	*0.52*	*-*	*2.72*	*1.21*	*0.37*	*0.24*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*

Source: EPSO company data and ADB consultant estimates.

Appendix 3: Historical and Projected Cash Flow Statements

HVEN

Year	Thousand AMD	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Balance cash year beginning		**55,245**	**184,831**	**445,534**	**262,486**	**448,068**	**1,027,427**	**2,415,624**	**3,427,435**	**4,751,490**	**6,285,246**	**7,534,570**	**6,819,310**	**6,863,844**	**7,305,498**	**7,463,858**	**7,692,640**
Net cash from operating activities		2,782,786	1,977,611	-3,348,052	745,930	1,559,750	1,536,572	1,560,077	1,531,071	1,718,562	2,116,550	2,374,692	2,545,095	2,649,702	2,607,462	2,654,953	2,629,500
Net cash from investing activities		1,877,638	-957,109	-948,480	-198,009	152,755	-1,154,581	-3,924,209	-5,586,634	-6,279,348	-5,943,253	-1,398,053	-818,687	-536,202	-805,931	-793,028	-602,872
Net cash from financing actvities		-4,530,838	-759,799	4,113,484	-362,339	-1,133,146	1,006,207	3,375,943	5,379,618	6,094,542	5,076,026	-1,691,900	-1,681,873	-1,671,847	-1,643,169	-1,633,143	-1,623,116
Total net cash flow		129,586	260,703	-183,048	185,582	579,359	1,388,197	1,011,811	1,324,055	1,533,756	1,249,324	-715,260	44,535	441,653	158,361	228,782	403,512
Balance cash year end		**184,831**	**445,534**	**262,486**	**448,068**	**1,027,427**	**2,415,624**	**3,427,435**	**4,751,490**	**6,285,246**	**7,534,570**	**6,819,310**	**6,863,844**	**7,305,498**	**7,463,858**	**7,692,640**	**8,096,152**

Source: HVEN company data and ADB consultant estimates.

EPSO

Year	Thousand AMD	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Balance cash year beginning		**2,596**	**5,228**	**47,995**	**42,392**	**16,395**	**26,118**	**362,575**	**526,697**	**899,917**	**1,367,709**	**1,403,461**	**1,554,566**	**1,556,190**	**1,612,739**	**1,622,824**	**1,744,228**
Net cash from operating activities		286,450	548,203	632,740	645,395	658,303	671,469	610,000	612,000	656,579	633,394	632,954	632,514	632,073	631,633	631,193	630,753
Net cash from investing activities		-160,212	-26,905	-101,050	-131,892	-142,979	-584,183	-2,366,405	-2,891,243	-150,490	-132,790	-23,579	-179,203	-130,420	-183,028	-93,782	-19,805
Net cash from financing actvities		-123,606	-478,531	-537,293	-539,500	-505,601	249,171	1,920,526	2,652,464	-38,297	-464,853	-458,270	-451,687	-445,104	-438,521	-416,006	-409,584
Total net cash flow		2,632	42,767	-5,603	-25,997	9,723	336,457	164,122	373,221	467,792	35,751	151,105	1,624	56,550	10,084	121,405	201,364
Balance cash year end		**5,228**	**47,995**	**42,392**	**16,395**	**26,118**	**362,575**	**526,697**	**899,917**	**1,367,709**	**1,403,461**	**1,554,566**	**1,556,190**	**1,612,739**	**1,622,824**	**1,744,228**	**1,945,592**

Source: EPSO company data and ADB consultant estimates.