Financial Review of Hanoi Power Corporation and Ho Chi Minh City Power Corporation

December 2013

Viet Nam: Ha Noi and Ho Chi Minh City Power Grid Development Sector Project

Prepared by Economic Consulting Associates for the Asian Development Bank.

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Financial Review

Hanoi Power Corporation

Abbreviations and acronyms

ADB	Asian Development Bank
BOT	Build-Operate-Transfer
CGM	Competitive Generation Market
CPI	Consumer Price Index
DEP	Distribution Efficiency Project financed by the World Bank
ECA	Economic Consulting Associates
EPTC	Electric Power Trading Corporation
ERAV	Electricity Regulatory Authority of Vietnam
EVN	Electricity Vietnam
EVN HANOI	Hanoi Power Corporation
EVN HCMC	Ho Chi Minh City Power Corporation
FMA	Financial Management Assessment
HCMC	Ho Chi Minh City
MOF	Ministry of Finance
MOIT	Ministry of Industry and Trade
NPTC	National Power Transmission Corporation
PAM	Project Administration Manual
PC	Power Corporation
PPA	Power Purchase Agreement
PVN	Petro Vietnam
RRP	Report and Recommendations of the President
Vinacomin	Vietnam Coal and Minerals Corporation
VND	Vietnamese Dong

Exchange rate as at 5 September 2013 (State Bank of Vietnam)

1 US$: 21,036 VND

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I Introduction

1. This report has been prepared as part of the due diligence process for a proposed project to be financed by the Asian Development Bank (ADB). The project would support the development and rehabilitation of the 220 kV and 110 kV transmission and distribution networks owned and operated by the Power Corporations (PCs) for Hanoi and Ho Chi Minh City (HCMC). The two PCs are one-member companies wholly-owned by Electricity of Vietnam (EVN).

2. The report contains the financial analysis of EVN Hanoi (EVN HANOI), the PC serving Hanoi. Separate reports contain a similar due diligence of EVN HCMC and an assessment of the current financial position of EVN, the parent group of the two PCs[1].

3. This report is structured as follows:

(i) Section II describes the regulatory framework for the PCs.
(ii) Section III reviews the historic performance of EVN HANOI.
(iii) Section IV reviews the financial projections for EVN HANOI.
(iv) Section V provides conclusions and recommendations on financial covenants and conditions to be included in the ADB loan emerging from the review.

II Market and regulatory framework

A Vietnam's electricity market

4. There are multiple entities involved in electricity generation in Vietnam. These include EVN through its own directly-owned generators and through three newly-established generation companies (GENCOs), other state-owned enterprises including Petro Vietnam (PVN) and the Vietnam Coal and Mineral Industries Group (Vinacomin) and foreign-invested generators (developed as Build-Operate-Transfer projects or BOTs).

5. In 2011, Vietnam introduced its Competitive Generation Market (CGM) in pilot form, which moved to full operation in 2012. Under the CGM, generators compete in an hourly spot market to sell power to a single buyer, the Electric Power Trading Corporation (EPTC) which is a dependent unit within EVN[2]. Foreign-invested BOTs are not required to participate in the CGM and instead sell directly to EPTC under long-term Power Purchase Agreements (PPAs).

6. Transmission is undertaken by the National Power Transmission Corporation (NPTC), a wholly-owned subsidiary of EVN. Its costs are recovered through a transmission charge.

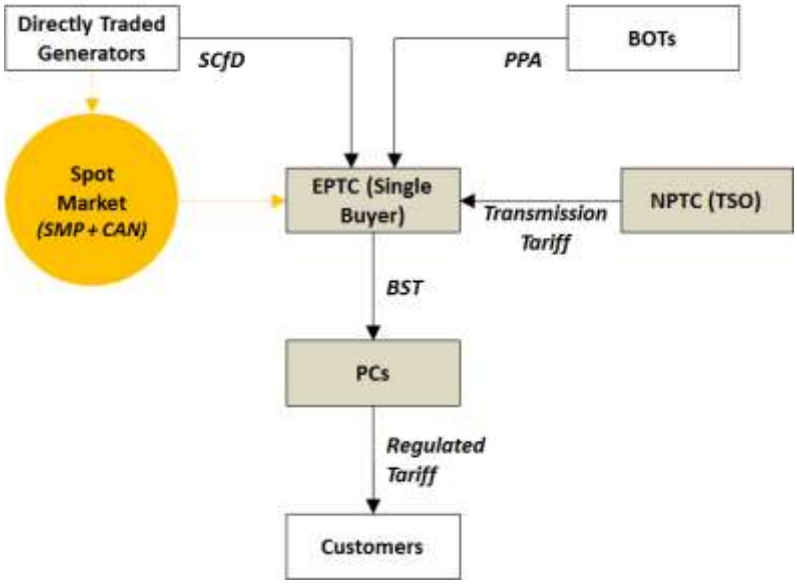
7. Distribution is largely undertaken by five PCs, each of which is wholly-owned by EVN[3]. Two of these serve Hanoi and HCMC. The remaining three serve the northern, central and southern regions of Vietnam excluding Hanoi and HCMC. The PCs purchase power from EPTC

[1] In this report, references to "EVN" alone refer to the parent group including EVN's headquarters, power purchase and other central functions. References to "EVN HCMC", "EVN HANOI" and similar refer to subsidiaries of EVN.
[2] A dependent unit can be considered to be broadly equivalent to a cost centre, although with limited management and financial autonomy.
[3] There are a number of small rural electricity distributors established as part of the rural electrification programme, which purchase bulk power supplies from EVN. These are gradually being consolidated into the PCs.

at a bulk supply tariff (BST) which recovers EVN's costs of generation and power purchases and NPTC's transmission charge. The BST also recovers EVN's central costs.

8. Currently, PCs hold a monopoly over sales to all electricity customers in their service areas. Under the power sector reform roadmap approved by the Prime Minister (26/2006/QD-TTg dated 26 January 2006), large customers will be allowed to purchase directly from generators from 2015 onwards. From 2022, with the start of full retail competition, all customers will be allowed to choose their electricity supplier and PCs will no longer hold a monopoly over electricity sales. They will continue to be the monopoly owner and operator of the distribution network in their service areas and will charge a fee for use of this network by other suppliers. The market structure is shown in Figure 1, below.

Figure 1 Vietnam's electricity market



B Regulatory framework

Retail tariffs

9. Regulation of the power sector falls under the Electricity Regulatory Authority of Vietnam (ERAV) which is a unit under the Ministry of Industry and Trade (MOIT). Major responsibilities of ERAV include issuing licences for power sector entities, overseeing the CGM and reviewing and making recommendations on proposed changes to retail electricity tariffs and the transmission charge applied by NPTC.

10. Historically, tariff adjustments have tended to lag behind increases in costs due, in large part, to concerns over the potential inflationary impacts of increased electricity tariffs. To address this, Vietnam has moved since 2009 to a semi-automatic adjustment process ("market-based tariffs"). Until November 2013, this provided that EVN can propose changes to retail electricity tariffs at intervals of three or more months. The process for review and approval of these proposals is as follows:

(i) When input costs increase by an amount requiring an average tariff increase within a range from 2% to 5%, EVN can increase retail tariffs by a corresponding amount following approval by MOIT (via ERAV).

(ii) When the average tariff required to recover input costs increases by more than 5% EVN can propose an increase in excess of 5%. This is reviewed by MOIT and the Ministry of Finance (MOF) before submission by MOIT to the Prime Minister for approval. If this approval is not received within 15 working days of submission, then EVN can increase average retail tariffs by 5%.

(iii) When falling input costs result in an average tariff reduction of more than 5%, EVN can cut tariffs accordingly following review by MOIT and MOF.

11. In November 2013, this was amended (MOIT Decision 9/2013/QD-TTg, dated 19th November 2013) so that EVN is now permitted to increase retail tariffs within a range from 7% to 10% without the need for approval from the Prime Minister, but that the frequency of adjustments is reduced to six-monthly intervals.

12. Within the overall limit on changes in average tariffs, EVN can propose different rates of increase for different tariff categories. Most recently, EVN has proposed creating a new tariff category for steel and cement firms which could see their tariffs rising by up to 16%.

13. While, in principle, this mechanism should allow for full pass-through of all changes in costs, this has not necessarily been the case in practice. There appears to be an informal understanding that tariff adjustments will be proposed semi-annually and that the requested average increase in retail tariffs will be limited to 5% in each proposal as is suggested by the history of increases since 2011 (see Figure 2, below, which shows the average retail tariff as approved by the Prime Minister). Adjustments appear to be subject to considerable external review before approval. An increase initially proposed for 1 July 2013 was only implemented on 1 August 2013 following what appears to have been an extended review period, despite the increase falling within the 5% limit.

14. The likelihood that increases have not kept pace with changing costs can be seen by looking at tariffs in US$-terms. Many of EVN's costs are foreign currency-denominated or driven by changes in exchange rates. However, as can be seen, depreciation of the Dong means that a 79% increase in tariffs in VND-terms converts to only a 36% increase in US$-terms. The current tariff at 7.15 USc/kWh remains significantly below estimates of the long-run marginal cost of electricity of from 8 to 9 USc/kWh[4].

[4] As reported in PM Decision 1208/QD-TTg, dated 21 July 2011, on the *Approval of the National Master Plan for Power Development for the 2011-2020 Period with Vision to 2030* (http://www.nti.org/media/pdfs/VietnamPowerDevelopmentPlan2030.pdf?_=1333146022)

Figure 2 Approved average electricity retail tariff (2007-13)

15. There is also provision for an annual adjustment to tariffs to "true-up" for any difference between actual revenues and costs (as determined from audited financial statements) in the preceding year. However, no regulations have been issued clarifying how this true-up would be applied.

Bulk supply tariff

16. While retail tariffs are subject to external review and approval, the BST charged from EPTC to PCs is currently set by EVN alone. For the last four years, ERAV has been working on the development of regulations governing the BST. However, to date, no consensus has been achieved around these and they have not, therefore, been implemented.

17. EVN uses the BST to equalise expected returns across the individual PCs. Those PCs serving urban areas (with a greater share of sales to higher-income households and commercial customers) are charged a higher BST and those serving rural areas a lower BST. This compensates for the different average revenues expected across these areas. The BST is often adjusted by EVN retroactively after the close of each financial year in order to reallocate profits between the PCs or between other EVN business units.

18. The need for such transfers is likely to be increasing as, despite a rise in average tariffs, the lowest tariff band for household customers has remained constant since March 2011. The divergence in revenues between those PCs serving poorer areas and those serving richer areas can, therefore, be expected to be widening.

19. EVN has discretion, when setting the BST, as to how to allocate any shortfalls between its total costs and total revenues under the approved retail electricity tariffs. In 2011, for example, revenues failed to cover costs. EVN in this case set the BST at a level that allowed it to largely meet its power purchase obligations but which meant that PCs made a loss (as is discussed in Section III).

III Historic analysis – EVN HANOI

A Basis for review

20. The review of EVN HANOI's historic financial performance uses audited financial statements from 2007 to 2012. The statements for 2007 to 2010 inclusive have been prepared in accordance with Vietnamese Accounting Standards (VAS). Those for 2011 and 2012 have been prepared in accordance with International Financial Reporting Standards (IFRS). The statements for 2010 onwards are available in the English language while those for earlier years are only available in Vietnamese language.

21. VAS has been established by the Accounting and Auditing Policy Department of the Ministry of Finance (MOF). Over the past decade, changes to VAS have been introduced that have made it more consistent with IFRS. However, important differences continue to exist. For example, under VAS, the unrealized portion of foreign exchange losses can be deferred for a period of up to five years in order to avoid a net loss. Under IFRS, no such deferral is allowed. However, because EVN HANOI's foreign currency borrowings have to date been limited, this has not led to significant differences in reported profitability under VAS and IFRS. The categorisation of items under financial statements prepared following VAS also differs from that of statements prepared following IFRS meaning comparisons of individual items across the two sets of statements are unreliable.

22. The 2011 audited financial statements follow IFRS with two exceptions identified by the auditors. The first is that financial assets and liabilities are carried at cost rather than fair or market value. The second is that the revaluation of fixed assets, included in the statements, was undertaken for selected assets rather than, as required by IFRS, for each class of assets as a whole.

23. The review looks at the profitability, debt service capability and liquidity of EVN HANOI over this period. It also discusses trends in EVN HANOI's costs and the implications of these. What is clear is the sensitivity of EVN HANOI's financial performance to changes in regulated retail tariffs and the BST—unsurprisingly given that these represent 99% of revenues and 85% of costs respectively.

24. Summary statements of EVN HANOI's income, financial position and cash flows obtained from the audited statements are shown in the annexes to this report.

B Profitability

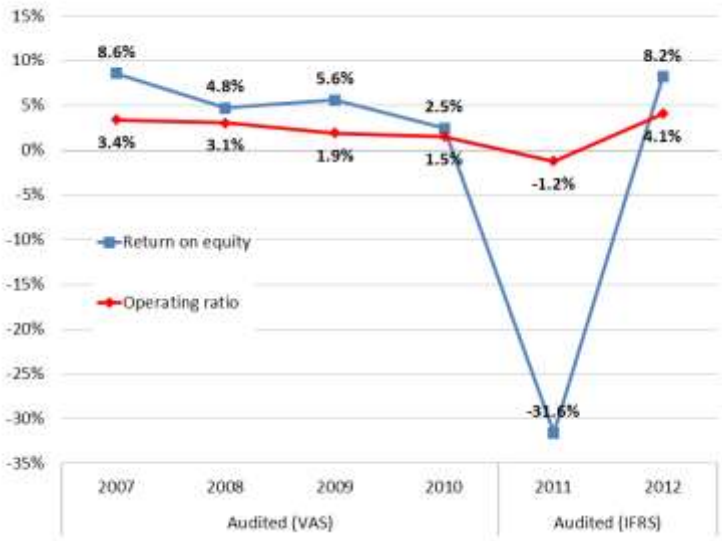
25. From 2007 to 2010, EVN HANOI was consistently in profit, although declining over the period. The return on equity (measured as net income before taxes over equity) fell 8.6% in 2007 to 2.5% in 2010. For comparison, existing regulations tariff require a return of 7% on state-owned capital. The operating ratio (measured as net income before taxes and interest over revenues) fell from 3.4% to 1.5% over the same period (see Figure 3).

26. The declines in profitability in 2009 and 2010 can be attributed to increases in the BST charged to EVN HANOI exceeding the rate of increase in retail tariffs. The distribution margin between revenues and power purchase costs, which represents the amount available to cover EVN HANOI's distribution costs other than power purchases, peaked in 2008 at 22.2% and subsequently fell to 18.5% in 2010. Given that most of EVN HANOI's costs are relatively

inflexible and cannot be quickly reduced, any decline in this margin will show up in falling profitability.

27. In 2011, EVN HANOI made a large loss of VND 400 billion, equivalent to a return on equity of -31.6%. The loss exceeded total profits over the preceding four-year period. This loss can be attributed to the decision by EVN to allocate the large shortfall between revenues and costs in that year to the PCs in order to protect its ability to fund power and fuel purchases. Consequently, EVN HANOI saw its average revenue increase by 14.1% but the BST charged to it rise by 18.0%. Its distribution margin consequently fell from 18.5% to 15.5%. The impacts of the fall in the margin were exacerbated by large jumps in depreciation charges and financing costs (totalling VND 408 billion) due to increased levels of investment.

Figure 3 EVN HANOI profitability indicators (2007-12)



Operating ratio	Net income before interest and taxes / revenues
Return on equity	Net income after interest and before taxes / equity

28. The underlying cause of the losses in 2011 was the failure of tariffs to cover the full costs of EVN in full, leading to a need to allocate the losses within the group. EVN can do this by allowing payables to other state-owned enterprises for fuel supplies and power purchases to accumulate or by pushing the losses on to the PCs. Although retail tariffs have risen very substantially, this has been offset by depreciation of the Dong and high levels of domestic inflation. Between 2007 and 2011, EVN HANOI's average tariff rose by 34%[5]. However, the increase in US$ terms over this period was only 4%. During the same period, the Vietnamese Consumer Price Index (CPI) rose by 90% implying a large fall in real tariffs in VND-terms[6].

29. During meetings with EVN HANOI, it was explained that EVN had committed at the time to compensate for this loss during 2012, following expected further increases in retail tariffs.

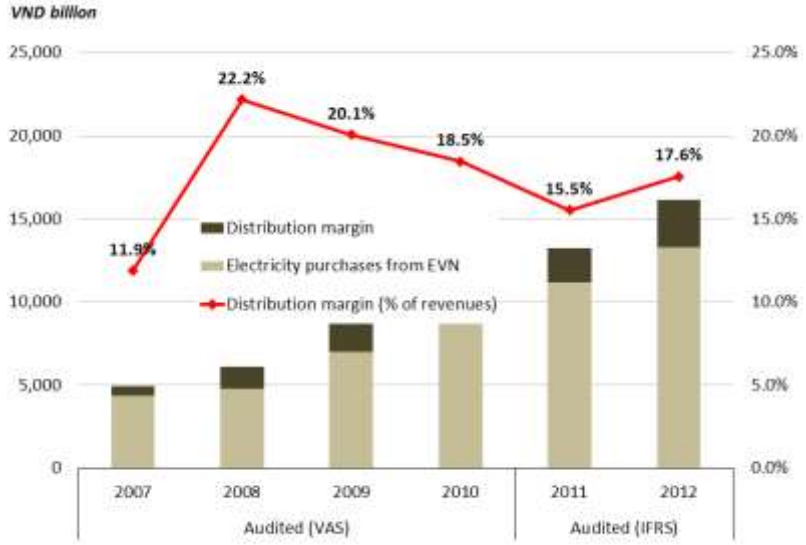
[5] This differs from the increase in the approved average tariff over the same period (see) as the rates of increase in tariffs for individual customer groups may be higher or lower than the approved average. Depending on the customer mix served, this can lead to the average revenues received by a PC being higher or lower than the approved average.

[6] Change in CPI from December 2006 to December 2011 (source: IMF).

This appears to have been the case. Average revenues rose in 2012 by 11.1% while the average BST rose by 8.4%. EVN HANOI moved from the previous year's loss to a profit of VND 410 million. Meanwhile, the growth in costs other than power purchases was contained with little change in depreciation charges, net financing costs and other expenses. As a result, the operating ratio reached 4.1% and the return on equity recovered to 8.2%.

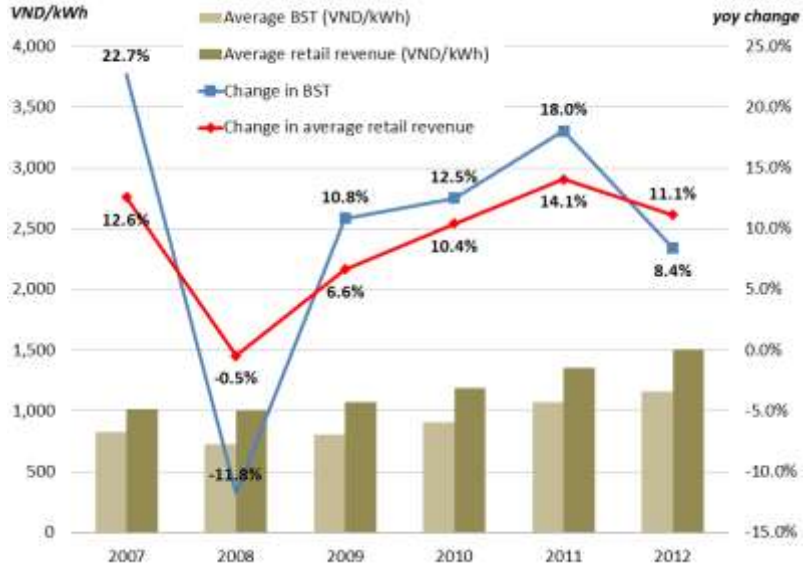
30. The changes in revenues, power purchase costs and the distribution margin over the period from 2007 to 2012 are shown in Figure 4 and Figure 5, below. The sharp fall in average revenues and the BST in 2008 is attributable to the take-over by EVN HANOI of a large number of networks in rural areas around Hanoi in that year following the increase in the city's administrative boundary[7]. These networks generally have larger numbers of smaller customers and a higher share of residential customers, groups who pay lower tariffs, compared to those within the earlier boundaries.

Figure 4 EVN HANOI revenues, power purchase costs and distribution margin (2007-12)



[7] The expansion increased the administrative area of the city by 3.6 times from 921 km^2 to 3,345 km^2.

Figure 5 EVN HANOI average revenues and average BST (2007-12)



C Debt service capability

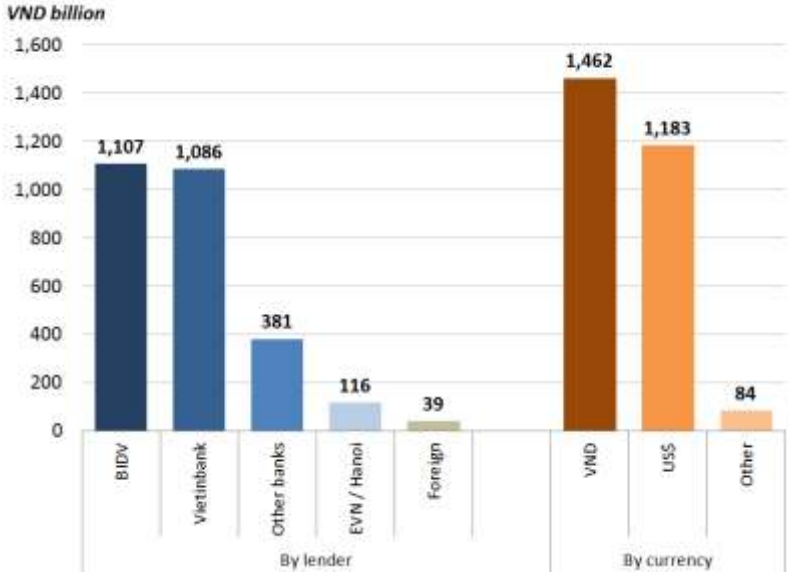
31. EVN HANOI's borrowing is heavily concentrated. Over 99% of borrowing is from domestic sources, 94% is from Vietnamese commercial banks and two banks alone, Vietinbank and BIDV, account for 80% of loans and for over 95% of new loans entered into in 2011. The large share of BIDV is almost entirely due to a single US$-denominated loan entered into in 2011, for the equivalent of VND 1 trillion, which by itself represents almost 40% of EVN HANOI's outstanding loans at the end of 2012. Borrowing from Vietinbank is spread over a much larger number of smaller loans. The heavy reliance on borrowing from Vietnamese commercial banks, many of which are themselves state-owned[8], is common across state-owned enterprises in the country. The large level of exposure of banks to a small number of state enterprises has become a growing concern in Vietnam and there is pressure from government to address this[9].

32. Although borrowing is almost entirely from domestic sources, approaching half of the outstanding stock of debt is denominated in foreign currencies. This inevitably leaves EVN HANOI exposed to exchange rate fluctuations.

[8] Both BIDV and Vietinbank are listed public companies. The State Bank of Vietnam hold 78% of the shares of BIDV and 64% of Vietinbank.

[9] See, for example: "Vietnam gets tough on state firms in economic growth push", *Bloomberg News*, 25 July 2013 (http://www.bloomberg.com/news/2013-07-24/vietnam-gets-tough-on-state-firms-in-economic-growth-push.html)

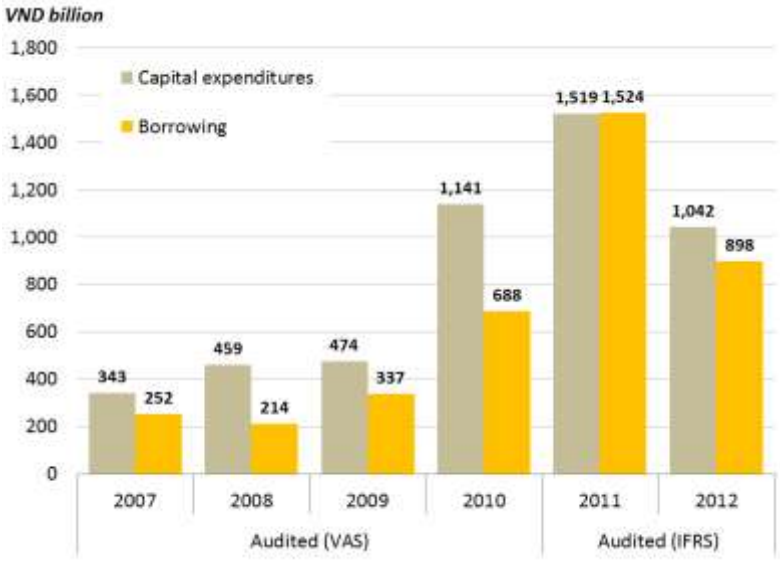
Figure 6 EVN HANOI's long-term debt (31 December 2011)



33. The assessment of debt service capability is based on the extent to which EVN HANOI is able to generate sufficient free cash flows to meet interest and principal payments and the strength of its balance sheet, measured as the debt to equity ratio.

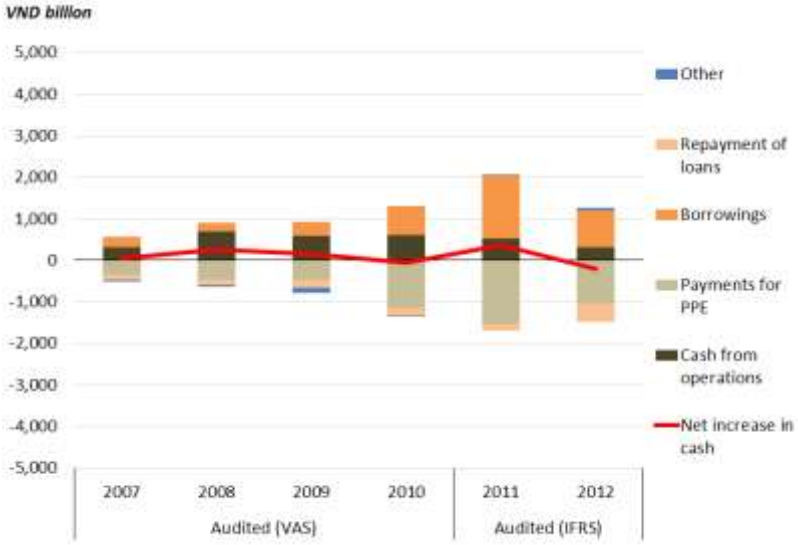
34. EVN HANOI's capital expenditures have been growing rapidly as demand expands. From VND 343 billion in 2007, they reached VND 1,519 billion in 2011 before falling to VND 1,042 billion in 2012. Throughout the period, EVN HANOI has been heavily dependent on borrowing to fund its investment programme. Loans as a share of capital expenditures have averaged 73% over the period rising to 100% coverage in 2011.

Figure 7 EVN HANOI's capital expenditures and borrowing (2007-12)



35. The reliance on borrowing is due to the inadequacy of cash flows to fund EVN HANOI's investment programme. While net cash flows from operations have been positive throughout the period, only in 2008 and 2009 did they exceed capital expenditures. In 2010, cash flows from operations were equivalent to only half of capital expenditures and, in 2011 and 2012, to only one-third.

Figure 8 EVN HANOI cash flows (2007-12)



PPE Property, Plant and Equipment

36. Unsurprisingly given this pattern of large levels of borrowing and low and falling levels of profitability, the debt to equity ratio (measured as debt divided by equity) rose steeply over the period to 2011. From a ratio of 0.57 in 2007, the ratio had reached 2.16 in 2011 (equivalent to a share of debt in the total financing mix of 68%), a period in which borrowing by EVN HANOI rose by seven times.

37. The ratio fell very sharply in 2012 following the revaluation of EVN HANOI's fixed assets in that year[10]. From 2.16 in 2011, the ratio of debt to equity fell to 0.64. Without the revaluation, it is estimated that the ratio would have fallen to 1.73 as a result of reduced borrowing and the return to high levels of profitability in the year.

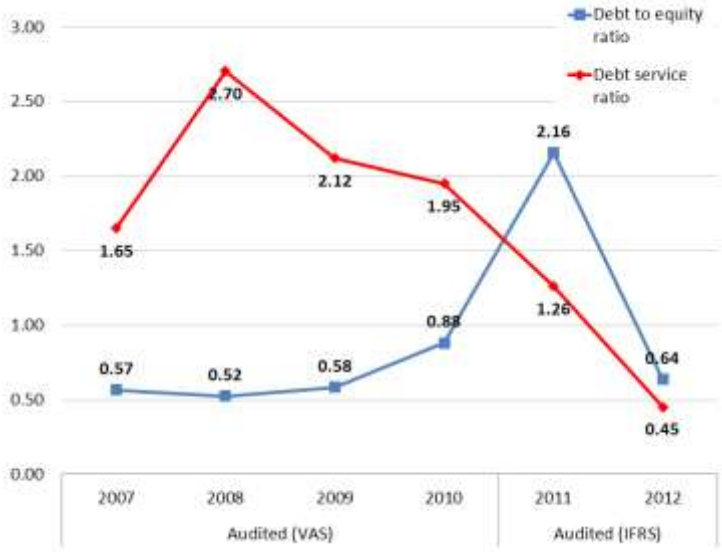
38. Debt service coverage (measured as cash flows from operations divided by the sum of interest and principal payments) rose to 2.70 times in 2007 but, with rising debt levels and a large fall in cash flows from operations in 2012, fell to only 0.45 times in 2012.

39. This may be a one-off event due to the allocation by EVN HANOI of a large part of cash flows in 2012 to reducing trade and other payables[11]. However, if sustained, it would clearly place the ability of EVN HANOI to service its debts into question.

[10] The revaluation was approved by the Prime Minister in Official Letter 15/TTg-KTTH dated 5th January 2013 to take effect from 31 December 2012. The original cost of EVN HANOI's tangible fixed assets was increased by VND 9.0 trillion and accumulated depreciation by VND 5.9 trillion.

[11] Net cash flows from changes in working capital were VND 203 billion in 2011 and VND -804 billion in 2012.

Figure 9 EVN HANOI debt management indicators (2007-12)



Debt to equity ratio	Total debt / equity
Debt service ratio	Net cash flows from operations / (interest + principal repayments due)

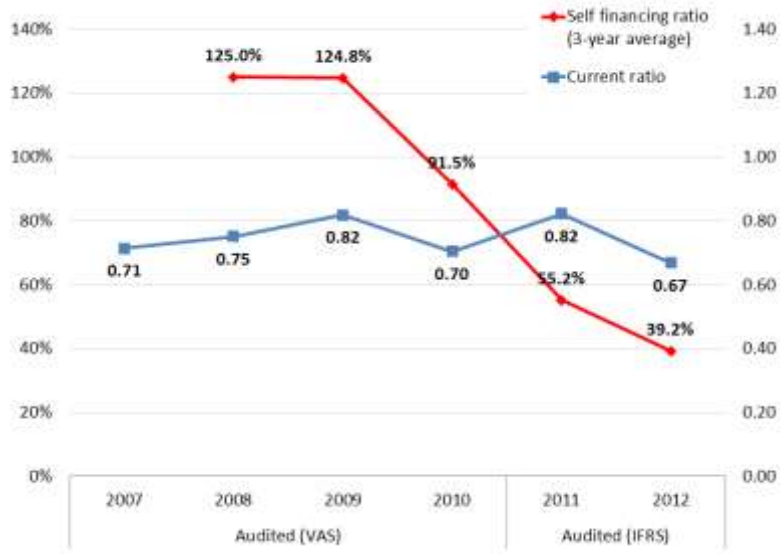
D Liquidity

40. Liquidity has been assessed by looking at the ability of EVN HANOI to self-finance its investment programme (measured as net cash flows from operations over capital expenditures) and the current ratio (current assets over current liabilities) which provides a measure of whether EVN HANOI could meet all current obligations if required.

41. As discussed above, EVN HANOI has become increasingly reliant on borrowing to fund its growing capital expenditures. The result has been a decline in its average self-financing ratio, representing its ability to finance capital expenditures from internal cash flows if it wished to, to under 40% in 2012. While this figure may be depressed by a combination of the large losses in 2011 and the use of cash flows to reduce payables in 2012, the large declines over the period do not suggest that the reliance on debt to fund investments will be reduced any time soon. In turn, this implies continuing increases in the share of debt in total financing and potential difficulties in funding debt service going forward.

42. EVN HANOI's current ratio has been below one, the level at which current assets are sufficient to fully cover current liabilities, throughout the period reviewed. While it is unlikely that EVN HANOI would be expected to pay all current liabilities at one time, this does indicate potential liquidity problems. In discussions, EVN HANOI management have indicated that, in such an instance, they still expect to be able to access short-term financing to meet their obligations due to the guarantee provided by EVN's ownership.

EVN HANOI liquidity indicators (2007-12)

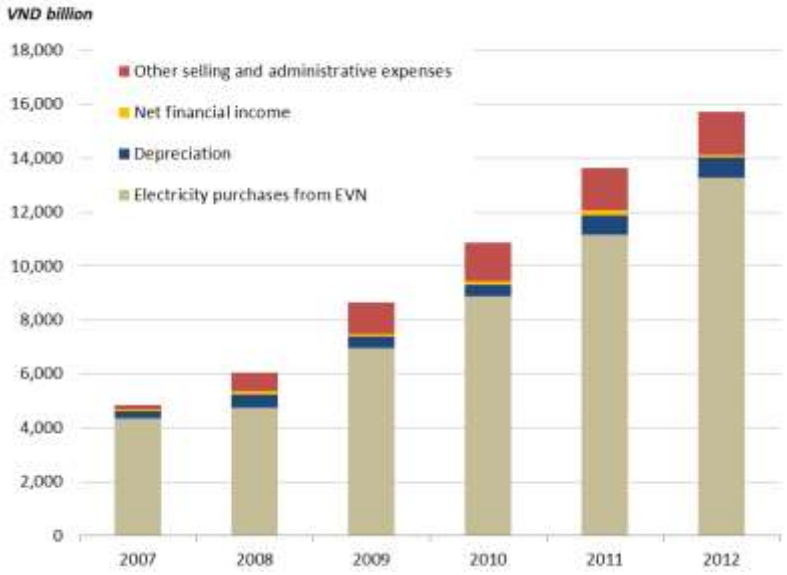


Self-financing ratio	Net cash flows from operations / purchase of PPE (three-year rolling average)
Current ratio	Current assets / current liabilities

E Cost trends

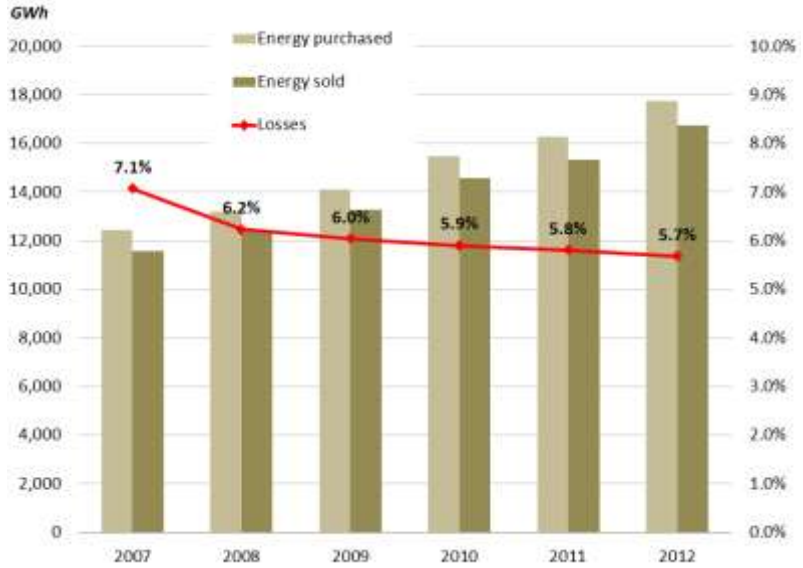
43. EVN HANOI's costs, including financing costs, have more than tripled between 2007 and 2012, rising from VND 4.9 trillion to VND 15.7 trillion at an annual average rate of increase of 27%. By far the largest part of costs is represented by power purchases from EVN, which were 85% of total costs in 2012. However, the share of non-power purchase costs has been growing with annual increases in these costs outstripping the growth in total costs.

Figure 10 EVN HANOI total costs (2007-12)



44. EVN HANOI has effectively no ability to control either the volumes of electricity sales (at least in the short-run) or the price paid for power purchases (the BST as determined by EVN). However, it can exert some limited control over its power purchase costs through reductions in distribution losses which reduce the volumes it needs to purchase to meet a given demand. These losses were relatively constant between 2007 and 2011 at around 9% of purchased energy before falling sharply in 2012 to 7.7%. It is too early to say whether this represents a sustained reduction or is a one-off event. While EVN HANOI's losses are not especially high by international standards, they are noticeably higher than the nearest comparator within Vietnam EVN HCMC, whose losses have fallen from around 7% to under 6% over the period.

Figure 11 EVN HCMC energy purchases, sales and losses (2007-12)



45. EVN HANOI's financial statements do not provide a detailed break-down of its selling and administrative expenses other than for 2010 and 2011. According to these statements, the single largest cost component after power purchases was salaries and social insurance costs. In 2010 these totalled VND 659 billion or 43% of total costs excluding power purchases and, in 2011, VND 710 billion or 29% of non-power purchase costs. The fall in the share of salaries in total costs was due to a large increase between the two years in the costs of materials, which rose from VND 177 billion to VND 390 billion.

46. Foreign exchange losses over the period were relatively small, with a maximum loss of VND 47 billion in 2011 or 2% of non-power purchase costs. However, it is only in 2011 that EVN HANOI entered into large-scale borrowing in foreign currencies with a large US$-denominated loan from BIDV in that year, which by itself represents 80% of all foreign currency borrowing up to the end of 2011. Therefore, this low level of losses to date should not be taken as a guide to future exposure to currency movements.

IV Projected performance – EVN HANOI

A Basis for review

47. Projections of the financial performance of EVN HANOI between 2013 and 2015 have been prepared using the following materials provided by EVN HANOI:

(i) Business plan for the period 2011-15. This contains projected power purchases and sales, operating expenses and interest costs. Actual values are provided for 2011, estimated values for 2012 and planned values for 2013-15. The plan values have been updated with actual values for 2012 where available.

(ii) Capital investment plan for the period 2013-15. This is an updated on the approved capital investment plan for 2011-15 previously analyzed. Planned capital investments have been adjusted for delays compared to the previous plan. The plan contains a summary of planned capital expenditures and proposed financing arrangements broken down by source as well as projected principal repayment and interest payments on debt[12].

(iii) Balance sheet for the period 2011-15. This contains projections of the balance sheet including changes in current assets and liabilities.

(iv) Repayment schedule for existing loans for the period 2012-20. This details principal payments on each existing loan.

48. Summaries of EVN HANOI's projected income, financial position and cash flow statements are shown in the annexes to this report.

49. As the capital investment plan made available only runs to 2015, the projections provided in this report also only run to 2015. This is a relatively short period but information limitations preclude extending the projections further.

B Comments on the projections

Tariff projections

50. In preparing its projections, EVN HANOI projects costs of power purchases, its own distribution costs[13] and financial and other revenues. It then adds an allowance for profit calculated as a return of 7% on state funds (defined as the sum of owner's capital and contributed funds) to obtain the total amount to be recovered from retail tariffs. The resulting retail tariff is then calculated as this amount divided by projected sales. It should be noted that this approach differs significantly from that of EVN HCMC, which projects the level of retail tariffs required to cover costs alone with no apparent provision for profit or a return on equity.

51. The projected average BST falls by 2.8% in 2013 and then rises by 5.4% and 6.1% in the succeeding two years. For comparison, EVN HCMC projects increases from 7% to 10% annually over this period. The assumptions provided by EVN HANOI appear somewhat unlikely in this context, even assuming that increases for EVN HANOI are lower due to the inter-PC cross-subsidy mechanism embedded in the BST.

52. The resulting projected increases in the average retail tariff are 4.9%, 5.6% and 5.5% (after adjustments for the apparent omission of customer development costs and for the costs of additional borrowing, as described elsewhere in this subsection[14]). This is somewhat lower than

[12] EVN HCMC has advised that these projections assume a grace period of 10 years and repayment period of 10 years with an interest rate of 2% for loans received from development banks and a grace period of 1 year and repayment period of 7 years with an interest rate of 13% for loans received from Vietnamese sources.

[13] There is an anomaly in that costs identified as being for customer development are included in distribution costs in the first two years of the projections (2011-12) but not in subsequent years. This is assumed to be an error and these costs have included in the projections used for this report.

[14] Without these adjustments, the projected increase would be 5% annually.

the allowed increase in recent years, of two 5% increases at six-month intervals in each year or an annual increase of 7.6%.

Demand projections

53. In its projections, EVN HANOI assumes that energy sales will increase by 11.1% in 2013 and by 12.5% in each of 2014 and 2015. EVN's historic sales growth patterns are distorted by the take-over of rural grids in 2008 and 2009 following the expansion of the Hanoi administrative area. However, these projections would seem to be broadly in line with historic trends. They are also consistent with the most recent planning projections from the Institute of Energy, which are for annual sales growth in the northern region of 12.8% in 2014 and 12.7% in 2015.

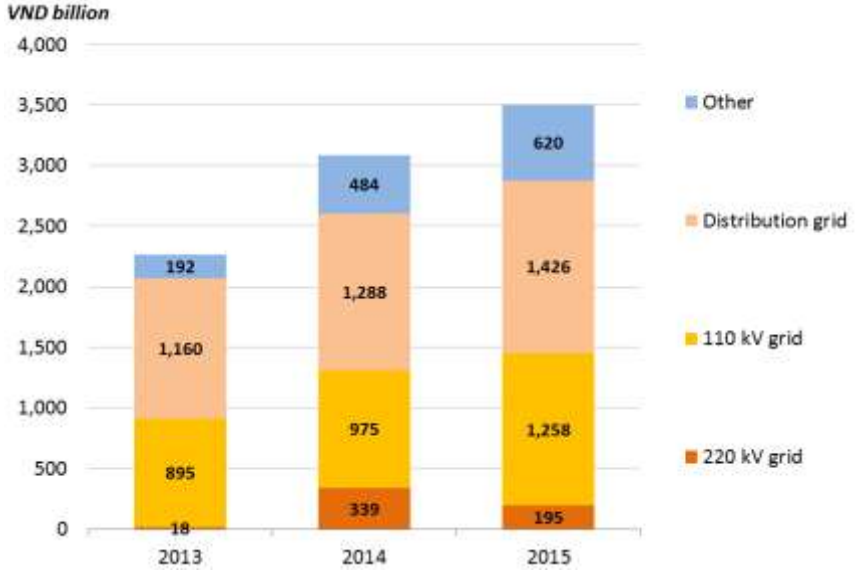
Figure 12 EVN HANOI power purchases and sales (2007-15)

Capital expenditures and financing

54. EVN HANOI is projecting a very large increase in capital expenditures from current levels, which are themselves a large rise on pre-2010 levels[15]. Expenditures are projected to double between 2012 and 2013, from their actual level of VND 1 trillion in 2012 to VND 2.3 trillion and to increase again in 2014 to VND 3.1 trillion. The largest component is expenditures on the distribution grid (VND 1.4 trillion in 2014).

[15] There are some small discrepancies between the totals provided and the sums of the expenditures for individual projects. In these cases, the summed values have been used. The differences are not significant enough to change the conclusions reached.

Figure 13 Composition of projected EVN HANOI capital expenditures (2013-15)

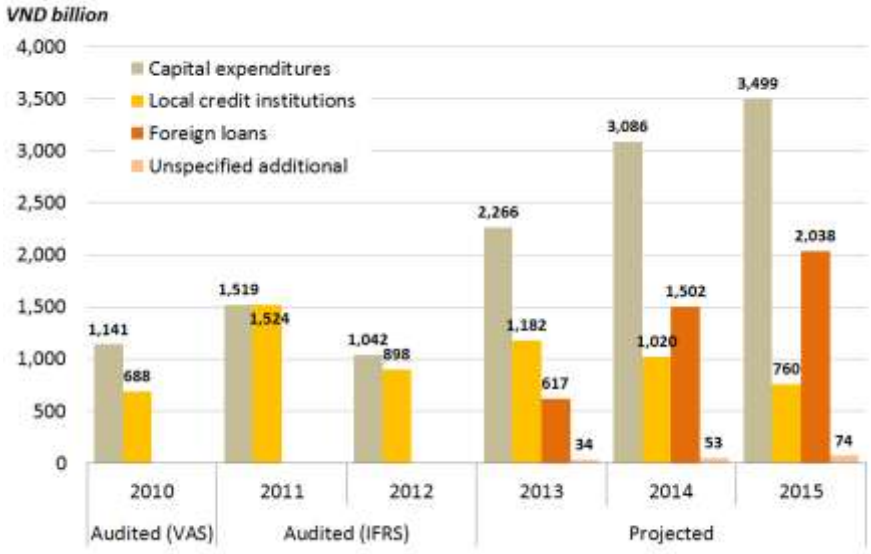


55. The financial projections show a moderate shortfall between planned capital expenditures and committed or planned financing from foreign and local sources between 2013 and 2015. The expectation appears to be that most of this will be met from internal cash generation.

56. In line with recent government decisions, EVN HANOI also plans to divest itself of noncore businesses over the period to 2015 which provides a further potential source of capital. The estimated value of EVN HANOI's holdings in the businesses to be divested is VND 193 billion of which VND 126 billion is represented by its 36% shareholding in Hanoi Electricity Investment JSC. However, the timing and price that will be realised by these investments is uncertain given current market conditions. This is particularly so for Hanoi Electricity Investment which is primarily engaged in real estate activities, which are currently suffering from over-supply.

57. Of planned and committed loans, EVN HANOI expects to see a shift from being largely dependent on borrowing from commercial banks to borrowing from foreign sources. This assumption is likely to be is partly due to force of circumstances. As noted earlier, Vietnamese commercial banks are expected to reduce their exposure to state enterprises given concerns over the risks this imposes on them.

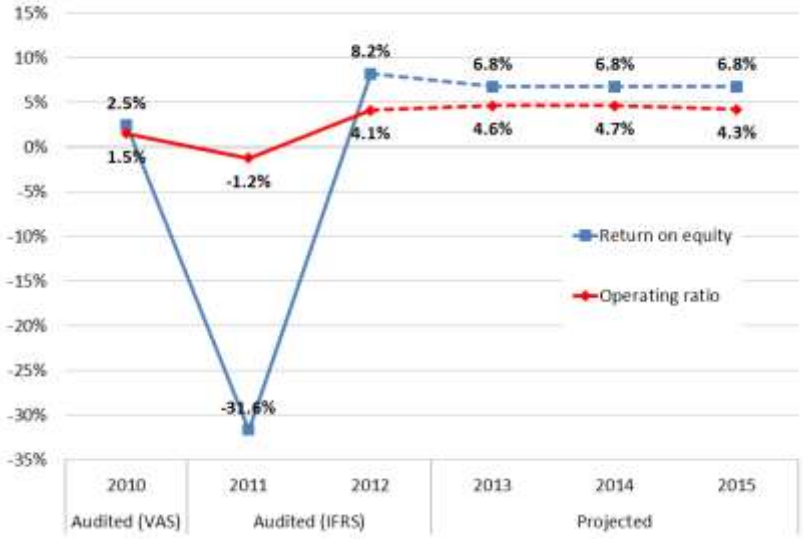
Figure 14 Projected EVN HANOI capital expenditures and borrowing (2010-15)



C Projected financial performance

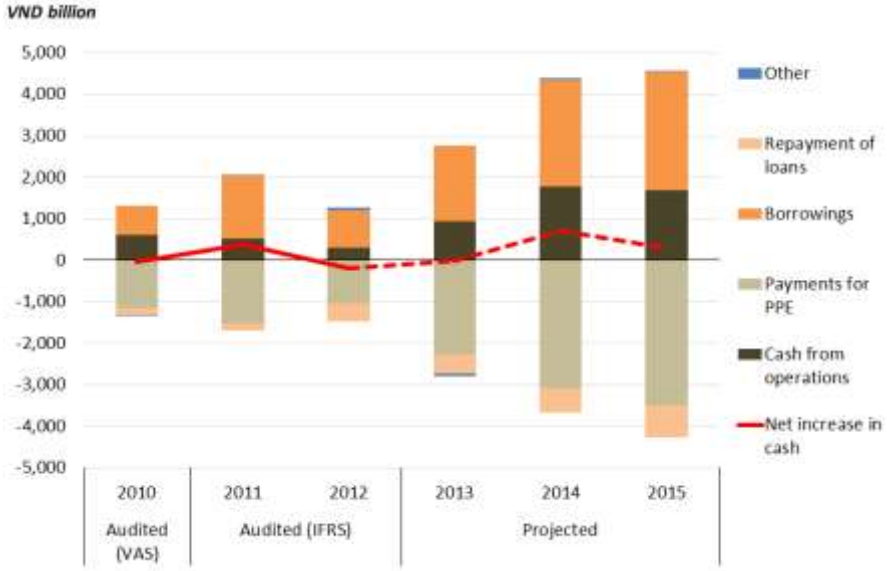
58. As a consequence of the assumption in the projections that retail tariffs are set to allow a return of 7% on state capital, EVN HANOI expects to make a return on equity of close to 7% throughout the period from 2013 to 2015. The projected operating margin is correspondingly positive.

Figure 15 Projected EVN HANOI profitability indicators (2010-15)



59. As discussed above, the doubling in planned capital expenditures requires very large increases in projected borrowing. Assuming this borrowing is realised, the projected capital expenditure programme leads to a small negative cash flow in 2013 but positive cash flows are seen in 2014 and 2015. Existing cash balances are expected to be sufficient to cover the negative cash flows.

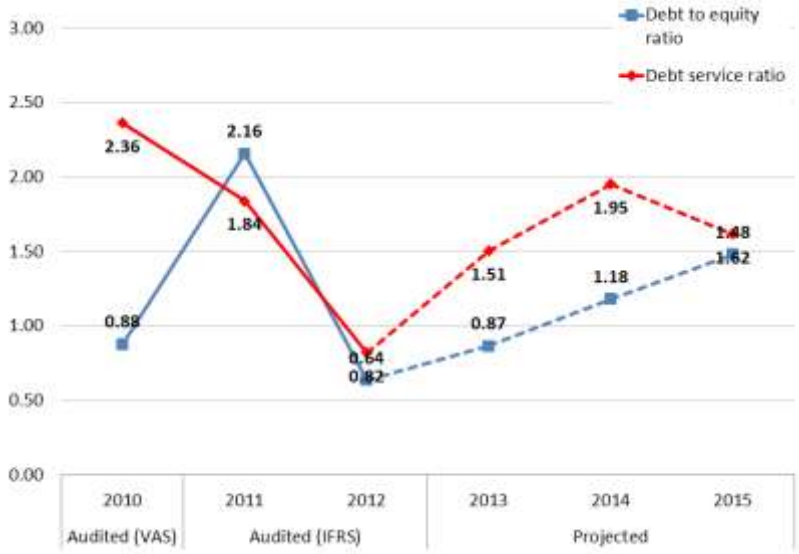
Figure 16 Projected EVN HANOI cash flows (2010-15)



60. The high levels of borrowing associated with EVN HANOI's planned capital expenditures lead to the ratio of debt to equity rising from a post-asset revaluation level of 0.64 at the end of 2012 to 1.62 by the end of 2015. This trend does not appear to be sustainable in the longer-term.

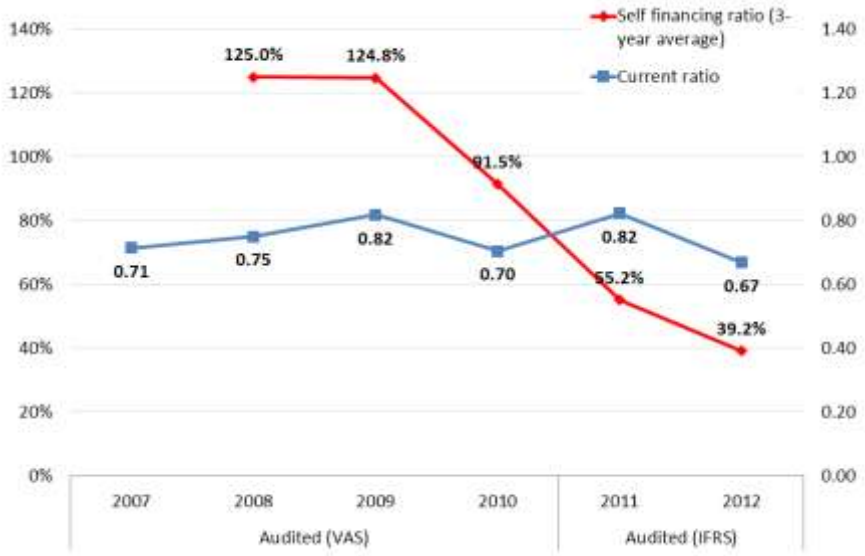
61. EVN HANOI is projected to maintain debt service ratios in excess of unity throughout the period to 2015. Debt service requirements will increase post-2015 as the grace period of loans incurred between 2013 and 2015 ends and repayments of principal starts. However, assuming capital expenditure needs do not increase significantly post-2015, available cash flows to service these debts should also increase as revenues grow.

Figure 17 Projected EVN HANOI debt management indicators (2010-15)



62. The self-financing ratio is expected to fall to around 40% by 2015. The current ratio remains well below one throughout the period to 2015 implying possible liquidity difficulties if EVN HANOI's access to short-term borrowing was to end.

Figure 18 Projected EVN HANOI liquidity indicators (2010-15)



D Sensitivity analysis

63. The financial performance of EVN HANOI is largely determined by two factors:

(i) The margin between the BST and retail tariff, which covers EVN HANOI's own costs. As demonstrated during 2011, a failure to match changes in the BST to those in retail tariffs can rapidly transform a PC's financial position from profit to loss.

(ii) The volume of sales. The costs of EVN HANOI are largely fixed, but its revenues (in the absence of fixed customer charges) are dependent on sales volumes. Slower-than-expected demand growth creates a risk for PCs that they will move into losses and negative cash flows unless it is possible to reduce expenditures by, for example, delaying investment projects.

64. Both of these variables are uncertain. The costs of power purchases, and hence the required BST, is likely to become more volatile in future with the expansion of the competitive power market and with the growing share of power generation linked to international fuel prices[16]. However, there still appears to be reluctance to fully pass through such cost changes into tariffs despite the introduction of a market-based pricing system.

65. EVN HANOI does appear to be projecting lower increases in average retail tariffs than would be suggested by recent regulatory decisions. However, it is also projecting lower increases in the average BST than in average retail tariffs. This seems unlikely given the need

[16] In 2001, coal, oil and gas-fired power plants represented 47% of total installed capacity. By 2011, this had risen to 53.5% and, by 2020, it is planned to increase to 65%. While not all this capacity is supplied at prices linked to international markets, a significant part is and this will increase over time with growing use of imported coal in southern Vietnam and the expected start of LNG imports.

for continuing generation and transmission investment, the growing share of thermal power in the generation mix and the likelihood that tariffs are currently below full cost-recovery levels.

66. While EVN HANOI is projecting very rapid growth in sales, these do appear to be broadly in line with its recent historical experience and projections by the Institute of Energy. However, they do appear high given the overall slow-down in Vietnam's economy in recent years. According to World Bank estimates, Vietnam's real GDP grew by 5.25% in 2012 and is projected to expand by 5.3% in 2013 and 5.4% in 2014[17].

67. To capture the uncertainty around the assumptions on tariffs, in particular, the sensitivity of the projected financial performance of EVN HANOI to plausible changes in the assumptions made as regards tariff increases has been assessed. For this sensitivity analysis, the projected increase in average revenues in 2013 has been adjusted to match the approved increase in average retail tariffs. For 2014 and 2015, the pattern in recent years of two increases within each year in retail tariffs of 5% each time is assumed to continue. This means a higher rate of growth in average revenues than projected by EVN HANOI—in 2015, projected average revenues are 1,865 VND/kWh compared to 1,754 VND/kWh as projected by EVN HANOI, or some 6% higher.

68. The average BST is assumed to adjust at the same rate as the change in the average retail tariff. This implies that the BST, by 2015 is 14% higher than in EVN HANOI's assumptions.

69. All other assumptions, including volumes of sales and power purchases, capital expenditures and non-power purchase costs, are assumed to remain unchanged.

70. The higher costs from increases in the BST assumed under this sensitivity analysis more than offset the increase in revenues assumed from higher increases in average retail tariffs, as might be expected given the differences in the magnitude of changes from those assumed by EVN HANOI. As a result, EVN HANOI is projected to make large losses in all years from 2013 to 2015. In turn, this leads to large negative cash flows and a likely inability to service its debts in full without external support.

[17] An Update on Vietnam's Recent Economic Development, World Bank, July 2013 (http://documents.worldbank.org/curated/en/2013/07/18042915/taking-stock-update-vietnams-recent-economic-developments)

Figure 19 EVN HANOI return on equity - sensitivity analysis (2010-15)

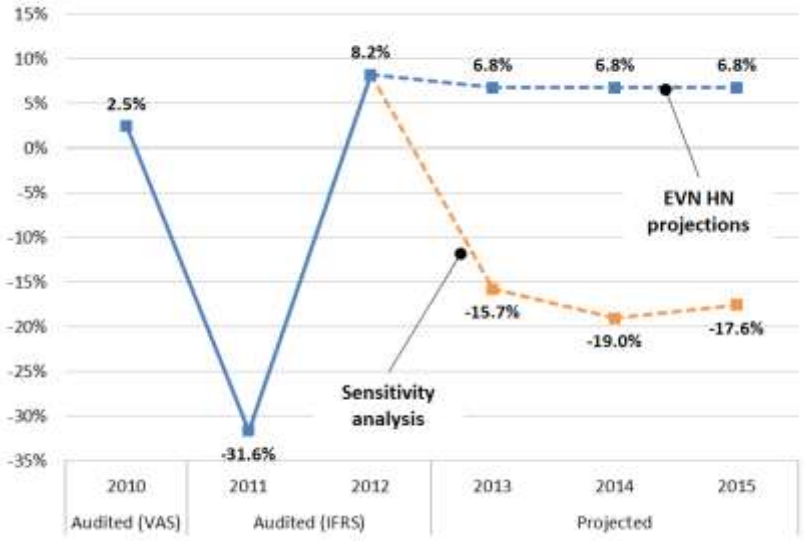
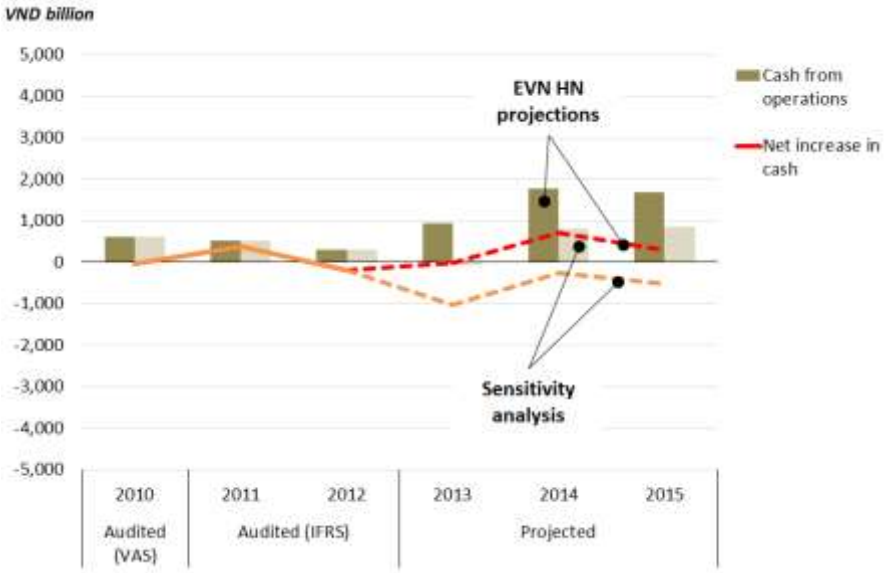


Figure 20 EVN HANOI net cashflows - sensitivity analysis (2010-15)



71. In practice, we assume that EVN HANOI would reduce its capital expenditure programme in such a situation, bringing this and borrowing down to levels that can be sustained given the margin it earns between retail tariffs and the BST. While this would help address the financial difficulties that would otherwise exist, it would also lead to deteriorating service quality.

72. Given the build-up of foreign borrowing, we have also looked at EVN HANOI's exposure to exchange rate movements. Existing foreign currency-denominated debt as at December 2012 was dominated by borrowing in US$ which represented 43% of all long-term borrowings and 93% of foreign currency-denominated borrowing. We have, therefore, for simplicity, assumed all existing and new foreign currency borrowings are in US$. Projected annual foreign exchange losses are calculated assuming that exchange rates move to maintain constant

purchasing power parity. This would imply a depreciation of around 10% of the VND against the US$ between 2013 and 2017.

73.

74. The resulting projected foreign exchange losses would reach VND 257 billion in 2015. By comparison, EVN HANOI's own projections appear to assume no foreign exchange losses. The projected loss would be equivalent to around 1.0% of EVN HANOI's turnover or 4.5% of its distribution margin (the difference between revenues and bulk power purchase costs in that year). EVN HANOI would still be expected to remain profitable after allowing for these foreign exchange losses. The impacts are, therefore, relatively small.

V Conclusions and recommendations

A Conclusions

75. The main conclusions from the financial review are that:

(i) Historically, EVN HANOI has been profitable and able to meet its commitments in full. However, the most recent years, particularly 2012, suggest increasing challenges in financing its borrowings given the rapid increase in these alongside a major capital expenditure programme. Notably, the debt service coverage ratio has declined significantly.

(ii) EVN HANOI is planning to double capital expenditures relative to 2012 levels, with much of this financed by foreign borrowing. Despite this large increase, the projections suggest that cash generation is sufficient to fund this investment programme and to make debt service commitments up to 2015.

(iii) While these projections assume lower increases in retail tariffs than has been the case in recent years and lower than those permitted under regulations, they also assume very low increases in the BST relative to retail tariff increases. This seems unlikely. Adjusting for this would worsen projected financial performance and potentially put at risk EVN HANOI's ability to service its debts in future.

(iv) EVN HANOI's management has recognized these concerns, but do not expect to face serious liquidity or solvency difficulties. EVN HANOI provides a vital service and benefits from an effective government guarantee by virtue of its ownership by EVN. Therefore, management expects that, if financial difficulties do arise, EVN HANOI will be provided with the necessary funds to restore it to viability.

(v) Other than capital expenditures, EVN HANOI's financial performance is to a large extent outside its control. Revenues are determined by the margin between allowed retail tariffs (approved by MOIT or the Prime Minister depending on the magnitude of the increase) and the BST (set by EVN) multiplied by the volumes of sales. Costs are largely fixed in the short-term.

(vi) The resulting risks to EVN HANOI were demonstrated in 2011 where a decision by EVN to increase the BST by significantly more than the increase in allowed retail tariffs drove EVN HANOI into making a loss.

(vii) Although EVN committed to compensate EVN HANOI for the 2011 loss by adjusting the BST by less than retail tariffs in future years, and appears to have done so in 2012, there is no formal obligation on it to do so.

(viii) A long-term risk is that the introduction of wholesale followed by retail competition will undermine EVN HANOI's viability, where this is dependent on cross-subsidies between customers. Competition will allow those customers funding these cross-subsidies (and

whose prices are, therefore, above their costs of service) to switch to other suppliers leaving EVN HANOI with those customers dependent on cross-subsidies but without the means to fund these.

B Recommendations

76. To ensure that EVN HANOI is able to service its debts in future years, it is necessary to address the risks posed by the potential for retail tariffs and the BST to move away from the levels required for it to recover its costs in full.

77. In principle, the regulated retail tariff is already adjusted to match changes in costs. However, in practice, adjustments to the tariff do not seem to fully track changing costs. Ideally, this should be addressed through commitments from the government agencies concerned (MOIT and the Prime Minister's Office) to fully implement the adjustment mechanism including permitting regular increases in excess of 10% (under the November 2013 decision) where changes in costs justify this. However, given the wider socio-economic impacts of large changes in electricity tariffs, such commitments may be difficult to obtain or enforce.

78. It may be more practical, therefore, to ensure that the BST is adjusted so as to maintain an adequate distribution margin for EVN HANOI as its costs and retail tariffs change. The most effective way to achieve this would be to take responsibility for setting the BST away from EVN and allocate it to ERAV, as the power sector regulatory agency. This will remove EVN's discretionary powers to use the BST to allocate profits and losses across the EVN group of companies. As with other regulated tariffs and charges, ERAV will need to adopt a defined and transparent process for setting the BST which will increase the certainty and predictability of EVN HANOI's revenues in future.

79. This would leave EVN bearing any shortfall between revenues from regulated retail tariffs and its costs, without the opportunity to transfer this to PCs. However, this may be preferable to the current situation. EVN's costs are dominated by those of purchases of fuel and power, which are in large part paid to other state enterprises and private investors. Removing the current option of 'hiding' shortfalls by transferring these to PCs will make the mismatch between tariffs and costs more visible as it will show up in rising levels of payables to third parties. This should support measures to address the mismatch through adjustments to tariffs to increase these towards fully cost-recovering levels.

80. A requirement to transfer responsibility for setting the BST to ERAV and for regulations to be issued for this purpose could, therefore, form a covenant under the loan agreement. Alternatively, EVN might enter into commitments to set the BST in a way that is transparent and ensures cost-recovery for the PCs concerned.

81. EVN has argued that it has an obligation to support EVN HANOI (and other PCs) financially where required given their status as wholly-owned one-member companies and that, therefore, further commitments are unnecessary. Under the Law on Enterprises (Law No. 60/2005/QH11, dated 29th November 2005), the owner of a one-member company is obliged to contribute capital in full and on time or, where failing to do so, to be responsible for debts of the company (Article 65(1)). However, this appears to be limited to the charter capital of the one-member company.

ANNEXES

VI Summary financial statements (2007-15)

A Income statement

VND billion	Audited (VAS)				Audited (IFRS)		Projected		
	2007	2008	2009	2010	2011	2012	2013	2014	2015
Revenues									
Sales of electricity	4,877	6,025	8,458	10,560	12,862	15,905	18,483	21,840	25,806
Other revenues	72	88	275	347	368	223	7	7	7
Total revenues	4,949	6,113	8,733	10,907	13,231	16,128	18,490	21,847	25,813
Costs									
Electricity purchases from EVN	(4,361)	(4,758)	(6,980)	(8,894)	(11,175)	(13,297)	(14,414)	(17,031)	(20,250)
Depreciation (from Cash Flow Statement)	(259)	(483)	(417)	(414)	(713)	(734)	(1,365)	(1,654)	(1,905)
Financial revenue	9	11	24	16	35	58	21	22	23
Financing costs	(74)	(123)	(87)	(131)	(240)	(254)	(500)	(644)	(702)
Net foreign exchange losses	(1)	(19)	(22)	(17)	(47)	(6)	0	0	0
Other gains and losses	8	(1)	1	16	77	89	8	8	9
Other selling and administrative expenses	(178)	(678)	(1,172)	(1,444)	(1,567)	(1,574)	(1,883)	(2,172)	(2,593)
Profit before tax	**94**	**63**	**81**	**38**	**(400)**	**410**	**357**	**376**	**396**
Corporate income tax	(27)	(16)	(22)	(9)	(7)	(0)	(89)	(94)	(99)
Profit / (loss) after tax	**67**	**48**	**58**	**29**	**(407)**	**410**	**268**	**282**	**297**
Revaluation	-	-	-	-	0	3,155	-	-	-
Total income	**67**	**48**	**58**	**29**	**(407)**	**3,565**	**268**	**282**	**297**

B Statement of financial position (balance sheet)

VND billion	Audited (VAS)			Audited (IFRS)			Projected		
	2007	2008	2009	2010	2011	2012	2013	2014	2015
ASSETS									
Non-current assets									
Property, plant and equipment	1,839	2,066	2,233	3,233	3,566	7,984	8,884	10,315	11,909
Investments in associates	95	107	67	109	172	155	155	108	93
Other	132	208	330	459	635	557	621	619	614
Current assets									
Trade and other receivables	721	755	949	1,195	1,369	633	746	761	916
Cash and bank balances	228	495	649	606	980	782	771	1,485	1,786
Other	227	328	654	730	296	321	413	336	356
Total assets	**3,242**	**3,961**	**4,882**	**6,332**	**7,017**	**10,431**	**11,590**	**13,625**	**15,675**
EQUITY AND LIABILITIES									
Equity									
Capital (inc. non-controlling equity)	950	1,220	1,352	1,451	1,613	1,789	1,789	1,789	1,789
Other	138	111	91	85	(347)	3,202	3,470	3,752	4,049
Non-currrent liabilities									
Long-term borrowings	498	510	669	1,179	2,510	2,846	4,089	5,892	7,985
Other	11	15	19	23	28	-	-	-	-
Current liabilities									
EVN payables	228	243	503	831	903	255	276	326	388
Other payables	1,301	1,649	2,039	1,441	2,052	1,941	1,342	1,056	643
Borrowings	117	188	175	173	220	338	474	655	662
Other	0	25	36	1,150	37	61	150	155	160
Total equity and liabilities	**3,242**	**3,961**	**4,882**	**6,332**	**7,017**	**10,431**	**11,590**	**13,625**	**15,675**

C Cash flow statement

VND billion	Audited (VAS)			Audited (IFRS)			Projected		
	2007	2008	2009	2010	2011	2012	2013	2014	2015
Profit / (loss) for the year	67	48	58	29	(407)	410	268	282	297
Depreciation and amortisation of non-current assets	259	483	417	414	713	734	1,365	1,654	1,905
Movements in working capital	29	117	138	192	203	(804)	(783)	(174)	(526)
Other adjustments	(40)	40	(23)	(17)	13	(30)	89	5	5
Net cash from operating activities	**314**	**688**	**590**	**618**	**521**	**310**	**939**	**1,768**	**1,681**
Payments for PPE	(343)	(459)	(474)	(1,141)	(1,519)	(1,042)	(2,266)	(3,086)	(3,499)
Other investing activities	(46)	(45)	(107)	(23)	21	69	(64)	49	20
Net cash used in investing activities	**(389)**	**(503)**	**(582)**	**(1,164)**	**(1,498)**	**(973)**	**(2,329)**	**(3,037)**	**(3,479)**
Proceeds from borrowings	252	214	337	688	1,524	898	1,834	2,575	2,872
Repayments of borrowings	(116)	(131)	(191)	(186)	(173)	(433)	(455)	(591)	(772)
Net capital injected	-	-	-	-	-	-	-	-	-
Net cash used in financing activities	**135**	**83**	**146**	**502**	**1,350**	**464**	**1,379**	**1,984**	**2,099**
Net increase in cash and cash equivalents	**61**	**267**	**154**	**(43)**	**373**	**(198)**	**(11)**	**715**	**301**
Cash at beginning of the year	167	228	495	649	606	980	782	771	1,485
	-	-	-	-	-	-	-	-	-
Cash at end of the year	**228**	**495**	**649**	**606**	**980**	**782**	**771**	**1,485**	**1,786**

VII Summary financial indicators (2007-15)

Unit	2007	2008	2009	2010	2011	2012	2013	2014	2015
Profitability indicators									
Operating ratio	3.4%	3.1%	1.9%	1.5%	-1.2%	4.1%	4.6%	4.7%	4.3%
Net income before interest and taxes / revenues									
Net profit margin	1.4%	0.8%	0.7%	0.3%	-3.1%	2.5%	1.4%	1.3%	1.2%
Net income after interest and taxes / revenues									
Return on assets	5.2%	4.7%	3.4%	2.7%	-2.3%	6.4%	7.4%	7.5%	7.0%
Net income before interest and taxes / average total assets									
Return on equity	15.4%	14.0%	11.7%	11.0%	-12.7%	13.3%	16.3%	18.4%	18.8%
Net income before interest and taxes / equity									
Return on equity (for tariff-setting)	8.6%	4.8%	5.6%	2.5%	-31.6%	8.2%	6.8%	6.8%	6.8%
Net income before taxes / equity									
Debt management indicators									
Debt to assets ratio	0.19	0.18	0.17	0.21	0.39	0.31	0.39	0.48	0.55
Total debt / total assets									
Debt to equity ratio	0.57	0.52	0.58	0.88	2.16	0.64	0.87	1.18	1.48
Total debt / equity									
Gearing	0.36	0.34	0.37	0.47	0.68	0.39	0.46	0.54	0.60
Total debt / (total debt + equity)									
Debt service ratio	2.04	3.19	2.44	2.36	1.84	0.82	1.51	1.95	1.62
Cash flow from operations / (interest + principal)									
Liquidity indicators									
Current ratio	0.71	0.75	0.82	0.70	0.82	0.67	0.86	1.18	1.65
Current assets / current liabilities									
Self financing ratio	91.5%	150.0%	124.4%	54.2%	34.3%	29.8%	41.4%	57.3%	48.0%
Net cash flow from operations / capex									
Self financing ratio (3-year average)		125.0%	124.8%	91.5%	55.2%	39.2%	36.7%	47.2%	49.6%
Asset management indicators									
Days sales in receivables	52.4	44.5	39.1	39.5	37.3	14.1			
*Accounts receivable / annual revenues * 360 days*									
Days purchases from EVN in payables	18.8	18.4	25.9	33.6	29.1	6.9			
*Accounts receivable / annual revenues * 360 days*									

VIII Summary physical indicators (2007-15)

		----------	Actual	----------			-----	Projected	-----
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Energy purchased (GWh)	5,290	6,546	8,665	9,814	10,448	*11,469*	12,795	14,341	16,075
Energy sold (GWh)	4,822	5,985	7,879	8,909	9,514	10,588	11,760	13,230	14,884
yoy change	8.6%	24.1%	31.6%	13.1%	6.8%	11.3%	11.1%	12.5%	12.5%
Distribution losses	8.8%	8.6%	9.1%	9.2%	8.9%	7.7%	8.1%	7.7%	7.4%
Average BST (VND/kWh)	824	727	806	906	1,070	1,159	1,127	1,188	1,260
yoy change	22.7%	-11.8%	10.8%	12.5%	18.0%	8.4%	-2.8%	5.4%	6.1%
Average retail revenue (VND/kWh)	1,011	1,007	1,073	1,185	1,352	1,502	1,575	1,663	1,754
yoy change	12.6%	-0.5%	6.6%	10.4%	14.1%	11.1%	4.9%	5.6%	5.5%

Financial Review

Ho Chi Minh City Power Corporation

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Abbreviations and acronyms

ADB	Asian Development Bank
BOT	Build-Operate-Transfer
CGM	Competitive Generation Market
CPI	Consumer Price Index
DEP	Distribution Efficiency Project financed by the World Bank
ECA	Economic Consulting Associates
EPTC	Electric Power Trading Corporation
ERAV	Electricity Regulatory Authority of Vietnam
EVN	Electricity Vietnam
EVN HANOI	Hanoi Power Corporation
EVN HCMC	Ho Chi Minh City Power Corporation
FMA	Financial Management Assessment
HCMC	Ho Chi Minh City
MOF	Ministry of Finance
MOIT	Ministry of Industry and Trade
NPTC	National Power Transmission Corporation
PAM	Project Administration Manual
PC	Power Corporation
PPA	Power Purchase Agreement
PVN	Petro Vietnam
RRP	Report and Recommendations of the President
Vinacomin	Vietnam Coal and Minerals Corporation
VND	Vietnamese Dong

Exchange rate as at 5 September 2013 (State Bank of Vietnam)

1 US$: 21,036 VND

I Introduction

1. This report has been prepared as part of the due diligence process for a proposed project to be financed by the Asian Development Bank (ADB). The project would support the development and rehabilitation of the 220 kV and 110 kV transmission and distribution networks owned and operated by the Power Corporations (PCs) for Hanoi and Ho Chi Minh City (HCMC). The two PCs are one-member companies wholly-owned by Electricity of Vietnam (EVN).

2. The report contains the financial analysis of EVN HCMC, the PC serving HCMC. Separate reports contain a similar due diligence of EVN Hanoi (EVN HANOI) and an assessment of the current financial position of EVN, the parent group of the two PCs[18].

3. This report is structured as follows:

(i) Section II describes the regulatory framework for the PCs.
(ii) Section III reviews the historic performance of EVN HCMC.
(iii) Section IV reviews the financial projections for EVN HCMC.
(iv) Section V provides conclusions and recommendations on financial covenants and conditions to be included in the ADB loan emerging from the review.

II Market and regulatory framework

A Vietnam's electricity market

4. There are multiple entities involved in electricity generation in Vietnam. These include EVN through its own directly-owned generators and through three newly-established generation companies (GENCOs), other state-owned enterprises including Petro Vietnam (PVN) and the Vietnam Coal and Mineral Industries Group (Vinacomin) and foreign-invested generators (developed as Build-Operate-Transfer projects or BOTs).

5. In 2011, Vietnam introduced its Competitive Generation Market (CGM) in pilot form, which moved to full operation in 2012. Under the CGM, generators compete in an hourly spot market to sell power to a single buyer, the Electric Power Trading Corporation (EPTC) which is a dependent unit within EVN[19]. Foreign-invested BOTs are not required to participate in the CGM and instead sell directly to EPTC under long-term Power Purchase Agreements (PPAs).

6. Transmission is undertaken by the National Power Transmission Corporation (NPTC), a wholly-owned subsidiary of EVN. Its costs are recovered through a transmission charge.

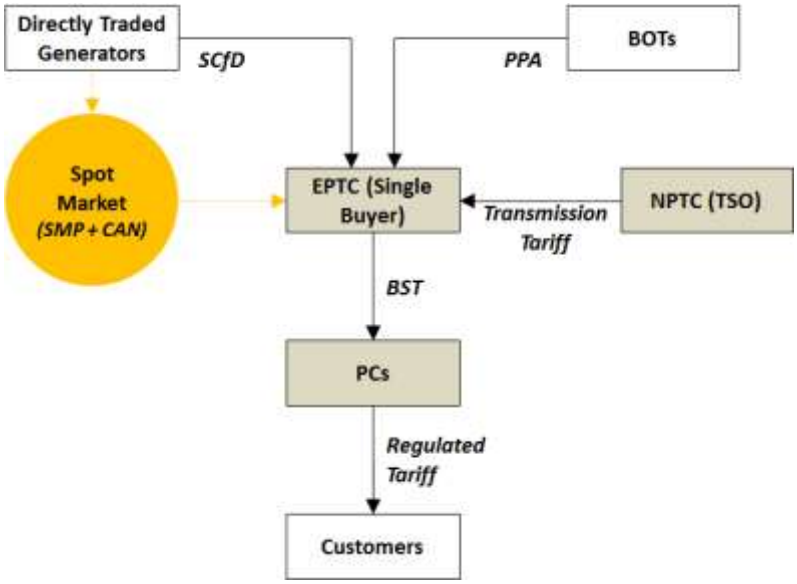
7. Distribution is largely undertaken by five PCs, each of which is wholly-owned by EVN[20]. Two of these serve Hanoi and HCMC. The remaining three serve the northern, central and southern regions of Vietnam excluding Hanoi and HCMC. The PCs purchase power from EPTC

[18] In this report, references to "EVN" alone refer to the parent group including EVN's headquarters, power purchase and other central functions. References to "EVN HCMC", "EVN HANOI" and similar refer to subsidiaries of EVN.
[19] A dependent unit can be considered to be broadly equivalent to a cost centre, although with limited management and financial autonomy.
[20] There are a number of small rural electricity distributors established as part of the rural electrification programme, which purchase bulk power supplies from EVN. These are gradually being consolidated into the PCs.

at a bulk supply tariff (BST) which recovers EVN's costs of generation and power purchases and NPTC's transmission charge. The BST also recovers EVN's central costs.

8. Currently, PCs hold a monopoly over sales to all electricity customers in their service areas. Under the power sector reform roadmap approved by the Prime Minister (26/2006/QD-TTg dated 26 January 2006), large customers will be allowed to purchase directly from generators from 2015 onwards. From 2022, with the start of full retail competition, all customers will be allowed to choose their electricity supplier and PCs will no longer hold a monopoly over electricity sales. They will continue to be the monopoly owner and operator of the distribution network in their service areas and will charge a fee for use of this network by other suppliers. The market structure is shown in **Figure 1**, below.

Figure 21 Vietnam's electricity market



B Regulatory framework

Retail tariffs

9. Regulation of the power sector falls under the Electricity Regulatory Authority of Vietnam (ERAV) which is a unit under the Ministry of Industry and Trade (MOIT). Major responsibilities of ERAV include issuing licences for power sector entities, overseeing the CGM and reviewing and making recommendations on proposed changes to retail electricity tariffs and the transmission charge applied by NPTC.

10. Historically, tariff adjustments have tended to lag behind increases in costs due, in large part, to concerns over the potential inflationary impacts of increased electricity tariffs. To address this, Vietnam has moved since 2009 to a semi-automatic adjustment process ("market-based tariffs"). Until November 2013, this provided that EVN can propose changes to retail electricity tariffs at intervals of three or more months. The process for review and approval of these proposals is as follows:

(i) When input costs increase by an amount requiring an average tariff increase within a range from 2% to 5%, EVN can increase retail tariffs by a corresponding amount following approval by MOIT (via ERAV).

(ii) When the average tariff required to recover input costs increases by more than 5% EVN can propose an increase in excess of 5%. This is reviewed by MOIT and the Ministry of Finance (MOF) before submission by MOIT to the Prime Minister for approval. If this approval is not received within 15 working days of submission, then EVN can increase average retail tariffs by 5%.

(iii) When falling input costs result in an average tariff reduction of more than 5%, EVN can cut tariffs accordingly following review by MOIT and MOF.

11. In November 2013, this was amended (MOIT Decision 9/2013/QD-TTg, dated 19th November 2013) so that EVN is now permitted to increase retail tariffs within a range from 7% to 10% without the need for approval from the Prime Minister, but that the frequency of adjustments is reduced to six-monthly intervals.

12. Within the overall limit on changes in average tariffs, EVN can propose different rates of increase for different tariff categories. Most recently, EVN has proposed creating a new tariff category for steel and cement firms which could see their tariffs rising by up to 16%.

13. While, in principle, this mechanism should allow for full pass-through of all changes in costs, this has not necessarily been the case in practice. There appears to be an informal understanding that tariff adjustments will be proposed semi-annually and that the requested average increase in retail tariffs will be limited to 5% in each proposal as is suggested by the history of increases since 2011 (see Figure 2, below, which shows the average retail tariff as approved by the Prime Minister). Adjustments appear to be subject to considerable external review before approval. An increase initially proposed for 1 July 2013 was only implemented on 1 August 2013 following what appears to have been an extended review period, despite the increase falling within the 5% limit.

14. The likelihood that increases have not kept pace with changing costs can be seen by looking at tariffs in US$-terms. Many of EVN's costs are foreign currency-denominated or driven by changes in exchange rates. However, as can be seen, depreciation of the Dong means that a 79% increase in tariffs in VND-terms converts to only a 36% increase in US$-terms. The current tariff at 7.15 USc/kWh remains significantly below estimates of the long-run marginal cost of electricity of from 8 to 9 USc/kWh[21].

[21] As reported in PM Decision 1208/QD-TTg, dated 21 July 2011, on the *Approval of the National Master Plan for Power Development for the 2011-2020 Period with Vision to 2030* (http://www.nti.org/media/pdfs/VietnamPowerDevelopmentPlan2030.pdf?_=1333146022)

Figure 22 Approved average electricity retail tariff (2007-13)

15. There is also provision for an annual adjustment to tariffs to "true-up" for any difference between actual revenues and costs (as determined from audited financial statements) in the preceding year. However, no regulations have been issued clarifying how this true-up would be applied.

Bulk supply tariff

16. While retail tariffs are subject to external review and approval, the BST charged from EPTC to PCs is currently set by EVN alone. For the last four years, ERAV has been working on the development of regulations governing the BST. However, to date, no consensus has been achieved around these and they have not, therefore, been implemented.

17. EVN uses the BST to equalise expected returns across the individual PCs. Those PCs serving urban areas (with a greater share of sales to higher-income households and commercial customers) are charged a higher BST and those serving rural areas a lower BST. This compensates for the different average revenues expected across these areas. The BST is often adjusted by EVN retroactively after the close of each financial year in order to reallocate profits between the PCs or between other EVN business units.

18. The need for such transfers is likely to be increasing as, despite a rise in average tariffs, the lowest tariff band for household customers has remained constant since March 2011. The divergence in revenues between those PCs serving poorer areas and those serving richer areas can, therefore, be expected to be widening.

19. EVN has discretion, when setting the BST, as to how to allocate any shortfalls between its total costs and total revenues under the approved retail electricity tariffs. In 2011, for example, revenues failed to cover costs. EVN in this case set the BST at a level that allowed it to largely meet its power purchase obligations but which meant that PCs made a loss (as is discussed in Section III).

III Historic analysis – EVN HCMC

A Basis for review

20. The review of EVN HCMC's historic financial performance uses audited financial statements from 2007 to 2012. These statements have been prepared in accordance with International Financial Reporting Standards (IFRS) with the significant exception that financial assets and liabilities are carried at cost rather than fair or market value.

21. The review looks at the profitability, debt service capability and liquidity of EVN HCMC over this period. It also discusses trends in EVN HCMC's costs and the implications of these. What is clear is the sensitivity of EVN HCMC's financial performance to changes in regulated retail tariffs and the BST—unsurprisingly given that these represent 99% of revenues and 89% of operating costs respectively.

22. Summary statements of EVN HCMC's income, financial position and cash flows obtained from the audited statements are shown in the annexes to this report.

B Profitability

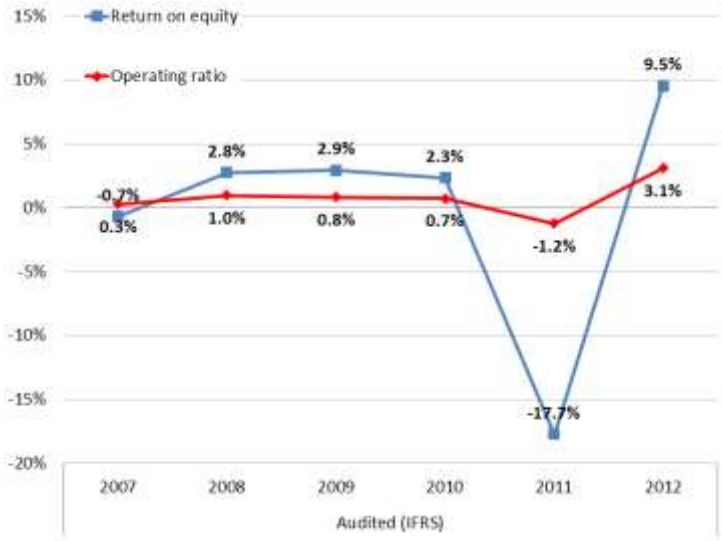
23. In 2007, EVN HCMC made a small loss. From 2008 to 2010 increases in tariffs allowed EVN HCMC to move into profit. Average revenues rose by 11% in 2007 and there were further large increases in 2009 and 2010. However, despite this, margins and returns remained small. The return on equity (measured as net income before taxes over equity) rose from -0.7% in 2007 to 2.8% in 2008 and 2.9% in 2009 before slipping back slightly in 2010. For comparison, existing regulations tariff require a return of 7% on state-owned capital. The operating ratio (measured as net income before taxes and interest over revenues) also rose from 0.3% to 1.0% in 2008 before slipping to 0.7% by 2010 (see Figure 3).

24. The declines in profitability in 2009 and 2010 can be attributed to increases in the BST charged to EVN HCMC exceeding the rate of increase in retail tariffs. The margin between revenues and power purchase costs, which represents the amount available to cover EVN HCMC's distribution costs other than power purchases, declined from 15.4% in 2008 to 13.4% in 2010. Given that most of EVN HCMC's costs are relatively inflexible and cannot be quickly reduced, any decline in this margin is likely to show up in falling profitability.

25. The pattern of gradual erosion of EVN HCMC's margins accelerated in 2011. In that year, EVN HCMC's average revenue rose by 9.5% but the BST rose by almost 14% representing a decision by EVN to allocate the large shortfall between revenues and costs in that year to the PCs in order to protect its ability to fund power and fuel purchases. EVN HCMC's distribution margin consequently fell from 13.4% to 10.5%. This reduction was compounded by significant foreign exchange losses of VND 102 billion as a result of the 8% depreciation in the Dong in the year.

26. The result was to move EVN HCMC from a profit before tax of VND 57 billion in 2010 (equivalent to a return on equity of 0.7%) to a loss of VND 398 billion (a return on equity of -17.7%). The operating ratio (defined as net income before interest and taxes over revenues) turned negative, falling to -1.2% from 0.7% in 2010.

Figure 23 EVN HCMC profitability indicators (2007-12)



Operating ratio	Net income before interest and taxes / revenues
Return on equity	Net income after interest and before taxes / equity

27. The changes in revenues, power purchase costs and the distribution margin are shown in Figure 4 and Figure 5, below.

Figure 24 EVN HCMC revenues, power purchase costs and distribution margin (2007-12)

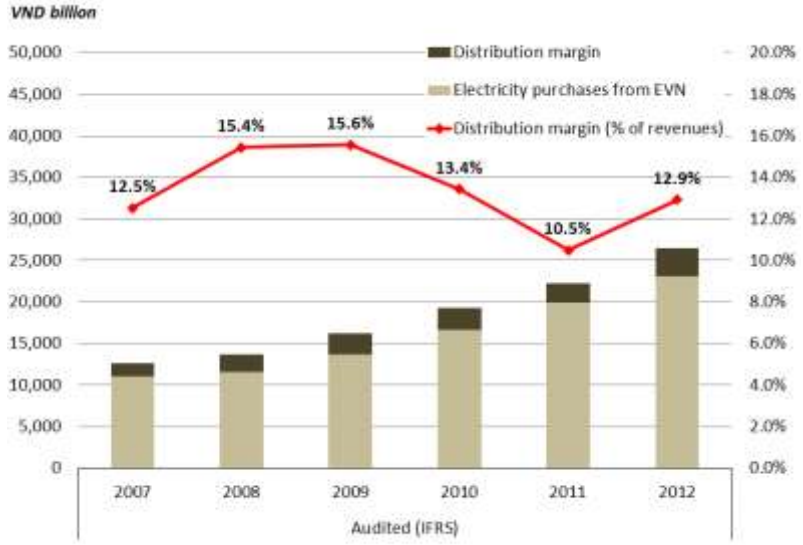
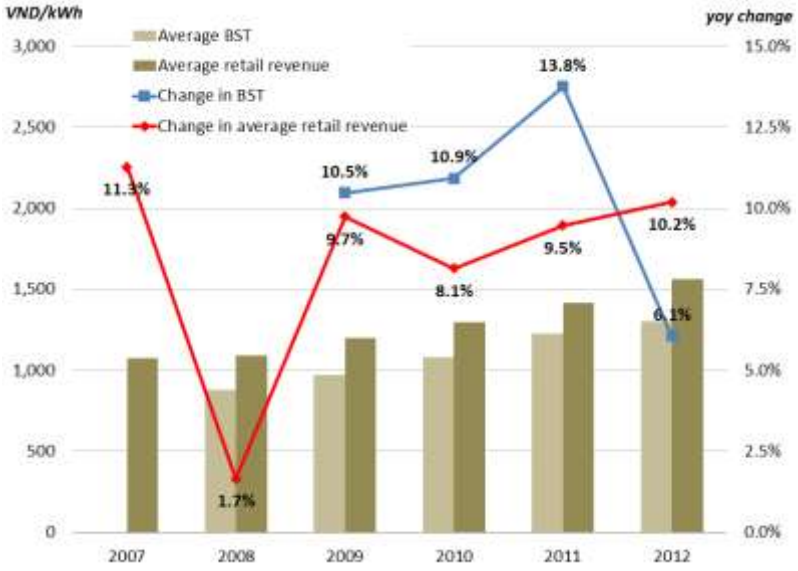


Figure 25 EVN HCMC average revenues and average BST (2007-12)



28. The underlying cause of the losses in 2011 was the failure of tariffs to cover the full costs of EVN in full, leading to a need to allocate the losses within the group. EVN can do this by allowing payables to other state-owned enterprises for fuel supplies and power purchases to accumulate or by pushing the losses on to the PCs. Although retail tariffs have risen very substantially, this has been offset by depreciation of the Dong and high levels of domestic inflation. Between 2007 and 2011, EVN HCMC's average tariff rose by 32%[22]. However, the increase in US$ terms over this period was only 3%. During the same period, the Vietnamese Consumer Price Index (CPI) rose by 90% implying a large fall in real tariffs in VND-terms[23].

29. During meetings with EVN HCMC, it was explained that EVN had committed at the time to compensate for this loss during 2012, following expected further increases in retail tariffs. This appears to have been the case. Average revenues rose in 2012 by 10.2% while the average BST rose by only 6.1% representing a transfer of revenues from EVN to EVN HCMC. As a result, the distribution margin rose to 11.7%, the operating ratio reached 3.1% and the return on equity rose to its highest level over the period of 9.5%.

C Debt service capability

30. The assessment of debt service capability is based on the extent to which EVN HCMC is able to generate sufficient free cash flows to meet interest and principal payments and the strength of its balance sheet, measured as the debt to equity ratio.

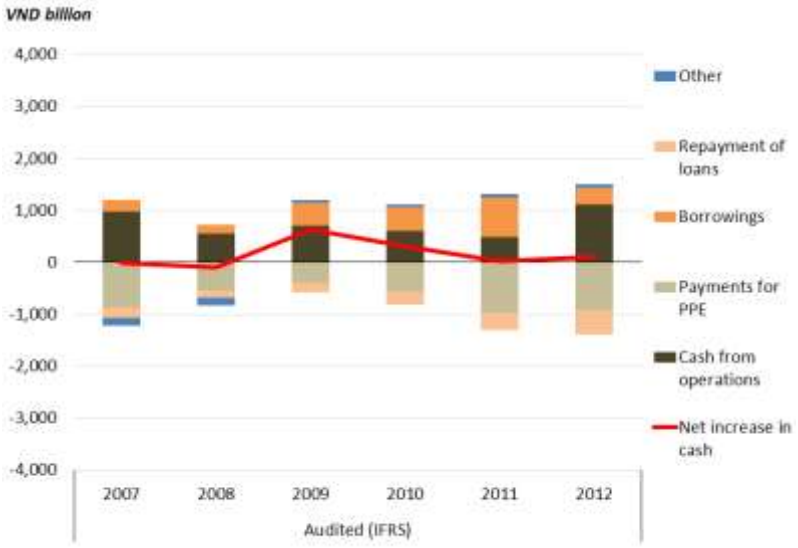
31. In 2007 and 2008, EVN HCMC funded large programmes largely from its own cash flows. Borrowings as a share of capital expenditures were 24% in 2007 and 32% in 2008. As a consequence, net cash flows after investing and financing activities were negative in both years. Volumes of capital expenditures fell between 2008 and 2010 allowing the share of financing

[22] This differs from the increase in the approved average tariff over the same period (see) as the rates of increase in tariffs for individual customer groups may be higher or lower than the approved average. Depending on the customer mix served, this can lead to the average revenues received by a PC being higher or lower than the approved average.

[23] Change in CPI from December 2006 to December 2011 (source: IMF).

from borrowing to rise despite little change in total borrowings. In 2011, capital expenditures rose very sharply but so did borrowing, covering 80% of capital expenditures in that year. This allowed EVN HCMC to deliver positive net cash flows in 2011, when it made a large loss overall, although they fell very substantially from previous years. Cash flows recovered in 2012 but borrowings fell substantially, with repayments exceeding new borrowings, meaning free cash flows recovered by much less than profits in the same year.

Figure 26 EVN HCMC cash flows (2007-12)



PPE Property, Plant and Equipment

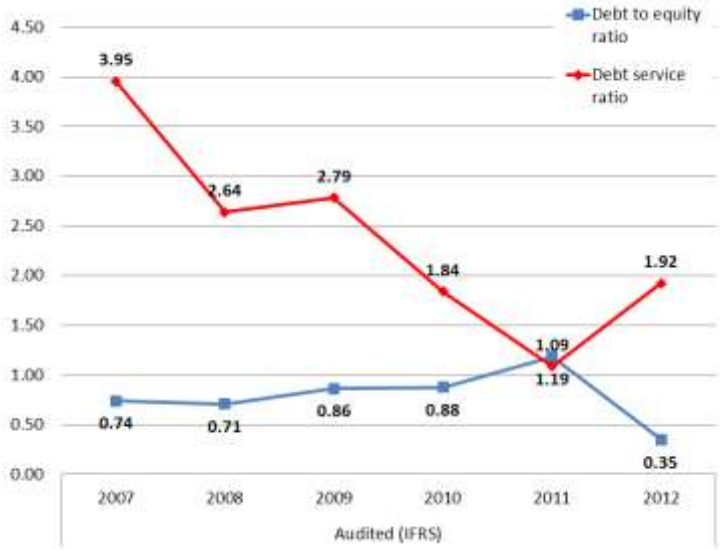
32. Debt service coverage (measured as cash flows from operations divided by the sum of interest and principal payments) has correspondingly fallen from 3.95 times in 2007 to a low level of 1.09 times in 2011 before recovering somewhat to 1.92 times in 2012.

33. The debt to equity ratio (measured as debt divided by equity) was rising until 2011 as a result of ongoing borrowing. By 2011 the ratio had exceeded unity, meaning debt was now the largest part of capital. While this does not indicate immediate financing problems, the rapid rise is a source of concern and continued increases would not be sustainable. However, as at the end of 2012, the ratio has fallen to only 0.35 following the revaluation of EVN HCMC's distribution assets which doubled their carrying value[24] [25].

[24] The revaluation was approved by the Prime Minister in Official Letter 15/TTg-KTTH dated 5th January 2013 to take effect from 31 December 2012. The original cost of EVN HCMC's tangible fixed assets was increased by VND 15.0 trillion and accumulated depreciation by VND 10.5 trillion.

[25] During 2013, MOIT (Document 10542/BCT-TCDN, dated 14th August 2013) and EVN (Decision 637/QD-EVN, dated 11th September 2013) approved an adjustment to the charter capital of corporations which are wholly owned by EVN. This has resulted in an increase in the charter capital of EVN HCMC from VND 2.1 trillion to VND 7.319 trillion.

Figure 27 EVN HCMC debt management indicators (2007-12)



Debt to equity ratio	Total debt / equity
Debt service ratio	Net cash flows from operations / (interest + principal repayments due)

D Liquidity

34. Liquidity has been assessed by looking at the ability of EVN HCMC to self-finance its investment programme (measured as net cash flows from operations over capital expenditures) and the current ratio (current assets over current liabilities) which provides a measure of whether EVN HCMC could meet all current obligations if required.

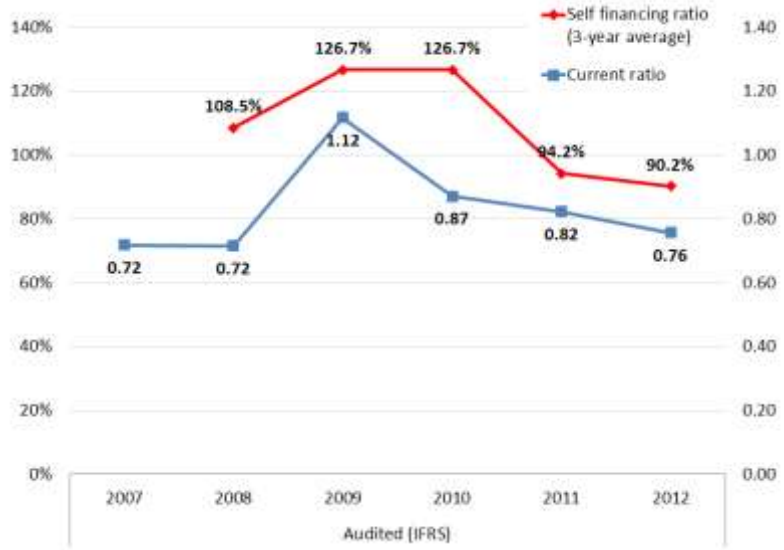
35. EVN HCMC's ability to finance its investments from operating cash flows has fallen over the period under review, from a three-year average of 108% in 2008 to 90% in 2012. However, this is largely due to the impacts of a single year, 2011, in which high levels of capital expenditure combined with a large drop in net cash flows from operations due to the reasons discussed above led to the self-financing ratio for the year falling to 50%. In all other years over the period reviewed, the net cash flows generated in the year have exceeded capital expenditures.

36. EVN HCMC's current ratio has fallen below a value of one, the level at which current assets are sufficient to fully cover current liabilities, in five of the last six years. While this might indicate some concerns over liquidity, these are limited. Of the total of VND 3.6 trillion current liabilities in 2012, VND 1.7 trillion or almost half were payables to the parent group, EVN, for bulk power purchases. It is unlikely that EVN would require immediate payment of these liabilities in full if doing so would push EVN HCMC into financial difficulties. Excluding these, the current ratio in 2012 would have risen from 0.76 to 1.45.

37. EVN HCMC has explained that the current ratio of 0.76 as at end-December 2012 is due to a number of one-off factors. These include receivables in December only being recorded for 15 days of billings due to the meter reading cycle, temporary advances of capital for investment projects pending completion of borrowing procedures for bank loans and the exclusion under IFRS (but not under VAS) of materials and equipment for investment activities from current

assets. EVN HCMC's calculation is that, if adjusted for these factors, the current ratio would have been equal to 1.2, exceeding unity.

EVN HCMC liquidity indicators (2007-12)



Self-financing ratio	Net cash flows from operations / purchase of PPE (three-year rolling average)
Current ratio	Current assets / current liabilities

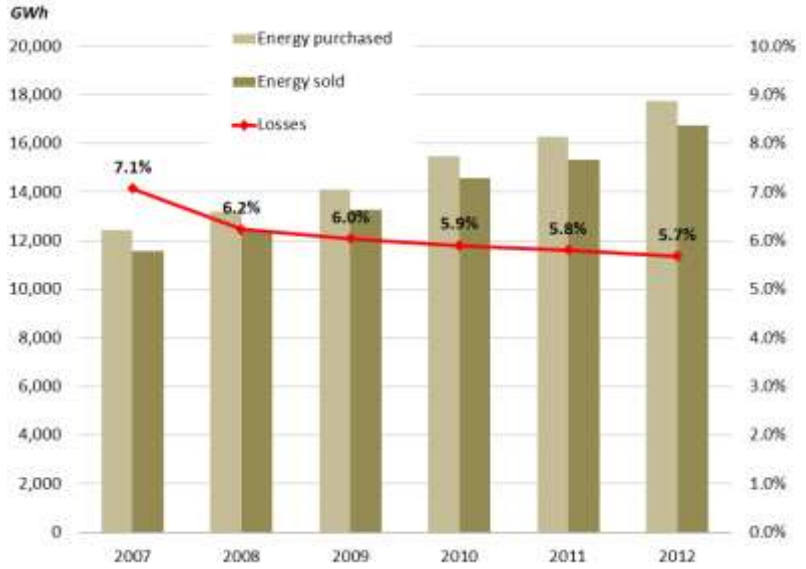
E Cost trends

38. EVN HCMC's costs, including financing costs, have risen from VND 12.6 trillion to VND 25.8 trillion between 2007 and 2012, an annual average rate of increase of 15.4%. By far the largest single cost of EVN HCMC is that of bulk power purchases from EVN, which represents nearly 90% of total costs.

Figure 28 EVN HCMC total costs (2007-12)

39. EVN HCMC has effectively no ability to control either the volumes of electricity sales (at least in the short-run) or the price paid for power purchases (the BST as determined by EVN). However, it can exert some limited control over its power purchase costs through reductions in distribution losses which reduce the volumes it needs to purchase to meet a given demand. These losses appear to be on a declining trend, falling from 7.1% in 2007 to an estimated 5.7% in 2012.

Figure 29 EVN HCMC energy purchases, sales and losses (2007-12)



40. Of the other cost components, salaries and other personnel costs have become the largest individual cost item, overtaking depreciation. These costs grew by 168% between 2007 and 2012, or an annual average of 22%. In part this can be attributed to growing employee numbers as EVN HCMC's sales, customer numbers and network size grow and in part to salary increases to maintain pace with inflation. Nevertheless, even after adjusting for inflation, salary costs rose by an annual average of 8.4% over the period compared to annual average sales growth of 7.7%. Given that employee numbers would be expected to increase more slowly than sales due to the presence of economies of scale, this implies significant increases in costs per employee in real terms over the period.

41. The pattern of foreign exchange losses is inevitably volatile with EVN HCMC recording a large loss in 2011 followed by a gain in 2012. While a small part of total costs (reaching only 0.4% of total costs in 2011), the impacts on financial viability are significant given the small margins on which EVN HCMC is operating. Between 2010 and 2011, foreign exchange losses increased from VND 44 billion to VND 102 billion. In itself, this would have been sufficient to turn the small profit recorded by EVN HCMC in 2010 into a loss in 2011. Given what is likely to be increasing reliance on foreign currency funding, EVN HCMC should be looking to take steps to manage these risks including the use of hedging instruments where these are available.

IV Projected performance – EVN HCMC

A Basis for review

42. Projections of the financial performance of EVN HCMC between 2013 and 2015 have been prepared using the following materials provided by EVN HCMC, which are outputs from EVN HCMC's own planning processes:

(i) Business plan for the period 2011-15. This contains projected power purchases and sales, operating expenses and interest costs. Actual values are provided for 2011, estimated values for 2012 and planned values for 2013-15. The plan values have been updated with actual values for 2012 where available.

(ii) Capital investment plan for the period 2013-20 (approved by EVN Decision 419/QD-EVN, dated 11 June 2013). This contains a summary of planned capital expenditures and proposed financing arrangements broken down by source as well as projected principal repayment and interest payments on debt[26].

(iii) Repayment schedule for existing loans for the period 2012-20. This details principal payments on each existing loan.

43. To allow for the preparation of projections for a five-year period, to 2017, power purchases and sales and operating expenses have been projected forward by the consultant for 2016 and 2017. This has been done by assuming power purchases and sales and operating expenses grow in each year at the same rate as projected by EVN HCMC for 2015. Projected capital expenditures, principal repayments and interest payments are obtained from the approved capital investment plan.

44. Summaries of EVN HCMC's projected income, financial position and cash flow statements are shown in the annexes to this report.

B Comments on the projections

Tariff projections

45. In preparing its projections, EVN HCMC appears to firstly project power purchase and non-power purchase costs and then use these to calculate the required average retail tariff in each year by dividing the total costs by total sales[27]. The projections appear to assume that no profit or loss is made in each year (i.e., total revenues always equal total costs).

46. The projected average BST rises by 7% in 2013 and by 10.3% and 10.7% in the succeeding two years. The resulting projected increases in the average retail tariff are 8.1%, 8.9% and 9.1%. This would be equivalent to two increases each year of around 6%, slightly above the 5% increases seen in recent years.

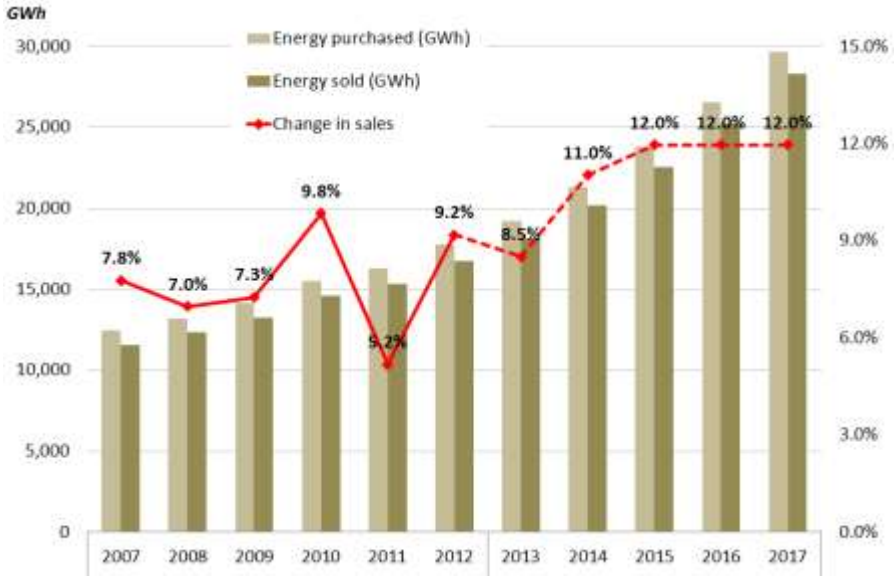
Demand projections

[26] EVN HCMC has advised that these projections assume a grace period of 10 years and repayment period of 10 years with an interest rate of 2% for loans received from development banks and a grace period of 1 year and repayment period of 7 years with an interest rate of 13% for loans received from Vietnamese sources.

[27] Both are entered as hard values in the business plans provided.

47. In its projections, EVN HCMC assumes that energy sales will increase by 8.5% in 2013, by 11% in 2014 and by 12% in 2015. These latter two projections would exceed the actual sales growth seen in any year between 2007 and 2012, as shown below. However, they are in line with most recent planning projections from the Institute of Energy, which are for annual sales growth in the southern region of 12.7% in 2014 and 12.6% in 2015.

Figure 30 EVN HCMC power purchases and sales (2007-17)



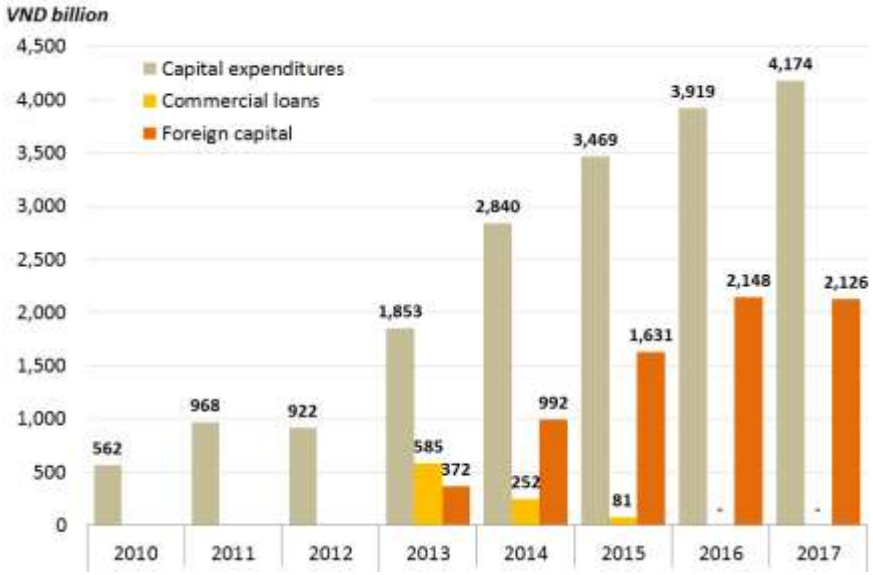
Capital expenditures and financing

48. EVN HCMC is projecting a very large increase in capital expenditures from current levels. Actual expenditures in 2012 were VND 922 billion. These are projected to rise to VND 1,853 billion in 2013 and further to VND 4,174 billion by 2017. These large increases are driven by the start of the implementation of the World Bank-supported Distribution Efficiency Project (DEP), the planned undergrounding of some distribution cables and large levels of investment in 220 kV and 110 kV networks which would be partially financed through the proposed ADB loan.

49. From 2014, EVN HCMC expects to become largely dependent on loans from development banks with borrowing from local institutions declining sharply. This reflects existing and expected new loan agreements with the World Bank, KfW and ADB. It is also partly a force of circumstance as government increases pressure to reduce the exposure of commercial banks to bad debts, many of which are from state-owned enterprises[28].

[28] See, for example: "Vietnam gets tough on state firms in economic growth push", *Bloomberg News*, 25 July 2013 (http://www.bloomberg.com/news/2013-07-24/vietnam-gets-tough-on-state-firms-in-economic-growth-push.html)

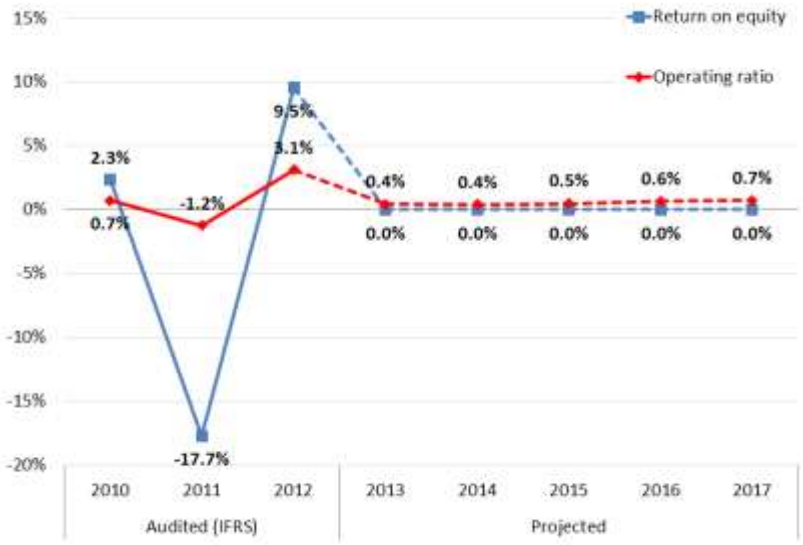
Figure 31 Projected EVN HCMC capital expenditures and borrowing (2010-17)



C Projected financial performance

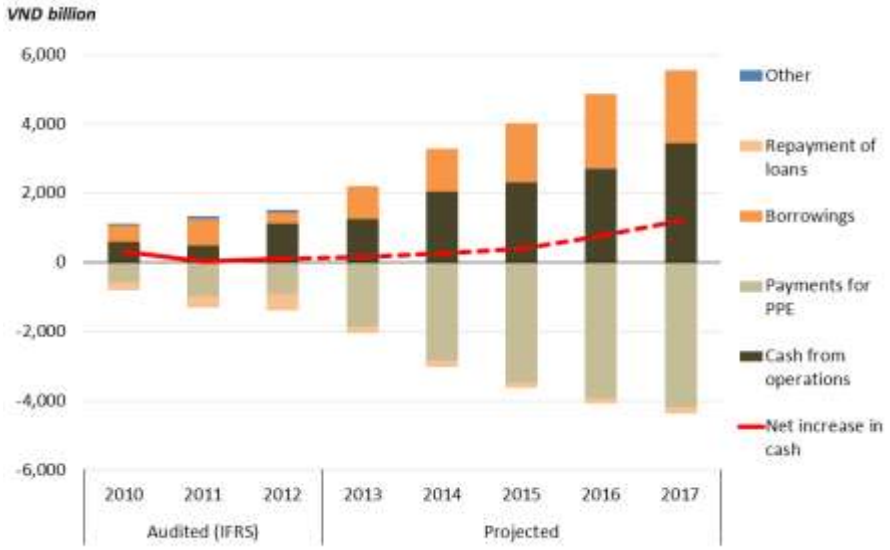
50. As a consequence of the assumption that retail tariff revenues exactly equal the sum of power purchase and other costs, EVN HCMC projects no profits will be made from 2013 to 2017.

Figure 32 Projected EVN HCMC profitability indicators (2010-15)



51. Projections are that EVN HCMC will see positive cash flows during the period to 2017, despite its large investment programme.

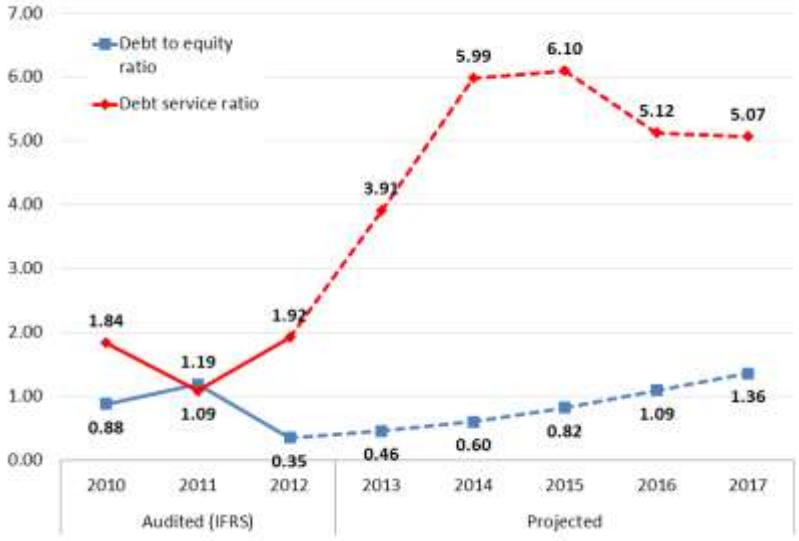
Figure 33 Projected EVN HCMC cash flows (2010-17)



52. The large increases in borrowing lead to the ratio of debt to equity rising from 0.35 at the end of 2012 to 1.36 in 2017. The rapid rate of increase in the ratio is notable. The sustainability of current levels of debt is also flattered by the impacts of the revaluation of EVN HCMC's assets. Without this, the projected debt to equity ratio would reach 3.33 by 2017—a level that would be very concerning.

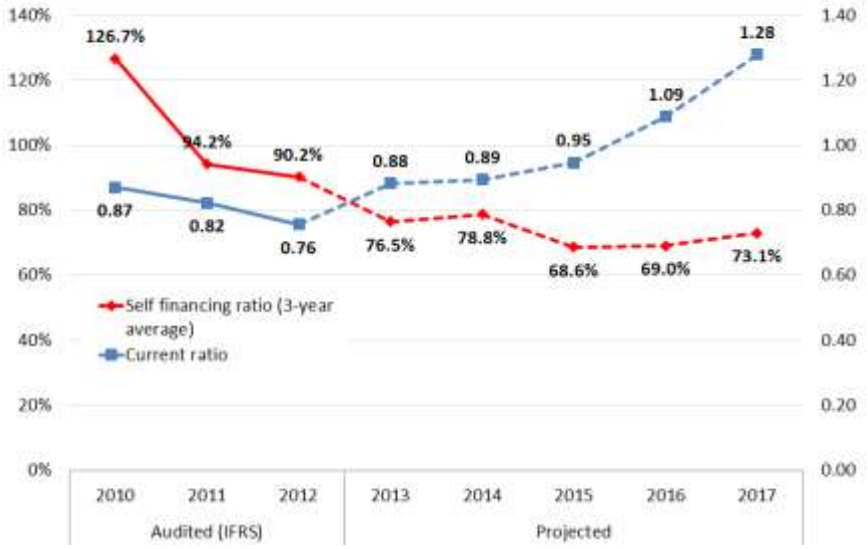
53. Despite this build-up of debt, debt service coverage ratios remain high to 2017. This can be attributed to much of the new debt being projected to be provided from development sources, with longer grace periods than those available from local commercial institutions. Repayment of most new debt incurred from 2013 onwards is not, therefore, expected to begin within the period covered by the projections.

Figure 34 Projected EVN HCMC debt management indicators (2010-17)



54. The large increase in capital expenditures mean that EVN HCMC's self-financing ratio is expected to be around 70% over the period. This is not a particular concern, provided that EVN HCMC is able to continue to borrow or to adjust its investment programme where sufficient loans cannot be obtained without detrimental impacts on its services. However, it does imply continuing increases in the share of debt in total financing.

Figure 35 Projected EVN HCMC liquidity indicators (2010-17)



D Sensitivity analysis

55. The financial performance of EVN HCMC is largely determined by two factors:

(i) The margin between the BST and retail tariff, which covers EVN HCMC's own costs. As demonstrated during 2011, a failure to match changes in the BST to those in retail tariffs can rapidly transform a PC's financial position from profit to loss.

(ii) The volume of sales. The costs of EVN HCMC are largely fixed, but its revenues (in the absence of fixed customer charges) are dependent on sales volumes. Slower-than-expected demand growth creates a risk for PCs that they will move into losses and negative cash flows unless it is possible to reduce expenditures by, for example, delaying investment projects.

56. Both of these variables are uncertain. The costs of power purchases, and hence the required BST, is likely to become more volatile in future with the expansion of the competitive power market and with the growing share of power generation linked to international fuel prices[29]. However, there still appears to be reluctance to fully pass through such cost changes into tariffs despite the introduction of a market-based pricing system.

[29] In 2001, coal, oil and gas-fired power plants represented 47% of total installed capacity. By 2011, this had risen to 53.5% and, by 2020, it is planned to increase to 65%. While not all this capacity is supplied at prices linked to international markets, a significant part is and this will increase over time with growing use of imported coal in southern Vietnam and the expected start of LNG imports.

57. As illustrated by the historical experience, demand growth is volatile. EVN HCMC's projections are for very rapid growth in electricity demand exceeding that in recent years despite a slowing economy. According to World Bank estimates, Vietnam's real GDP grew by 5.25% in 2012 and is projected to expand by 5.3% in 2013 and 5.4% in 2014[30]. This small increase in economic growth would seem unlikely to lead to the large rises in annual electricity sales growth rates projected by EVN HCMC and by the Institute of Energy.

58. Reflecting this uncertainty, the sensitivity of the projected financial performance of EVN HCMC to changes in these two variables has been assessed. The projected increase in average revenues in 2013 has been adjusted to match the approved increase in average retail tariffs. For 2014 to 2017, the pattern in recent years of two increases within each year in retail tariffs of 5% each time is assumed to continue. This means a slightly lower rate of growth in average revenues than projected by EVN HCMC—in 2017, projected average revenues are 2,246 VND/kWh compared to 2,388 VND/kWh in the base case assumptions, or some 6% lower.

59. Sales from 2014 to 2017 are assumed to grow by the average annual growth rate from 2007 to 2012 of 7.7%. Power purchases are reduced accordingly. All other assumptions, including the BST level, capital expenditures and non-power purchase costs are assumed to remain unchanged.

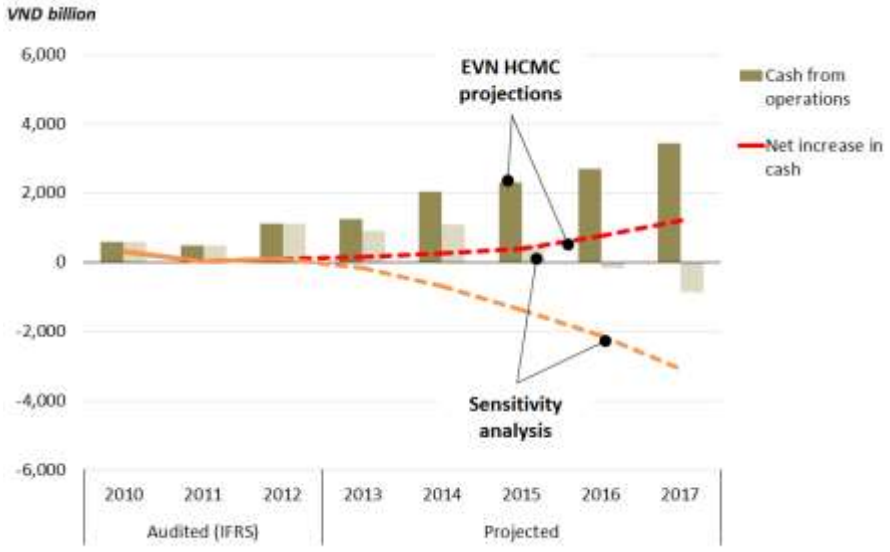
60. The impacts of these changes on EVN HCMC's financial position are very significant. EVN HCMC begins to make losses and its return on equity becomes strongly negative.

61. While the changes may seem relatively small, these large impacts on EVN HCMC come about because of the small margin between the retail tariff and BST and the assumed inflexibility of EVN HCMC's own costs. In 2014, the distribution margin (the difference between retail tariff revenues and costs of bulk power purchases from EVN) is projected to be VND 4.4 trillion under the base projections. The impact of the assumed slower rate of increase in tariffs is to reduce the margin to VND 3.7 trillion or by 17%. The impact of the assumed slower rate of growth in demand is to further reduce the margin to VND 3.5 trillion. The impact of slower growth rates in demand on the margin is less because of the associated reduction in power purchase costs.

62. The combination of losses on operations with the assumption of an unchanged level of borrowing means that EVN has insufficient cash flows to cover its planned capital expenditures. Net cash flows after financing and investing activities are negative in each year from 2013 onwards and cash balances fall below zero by 2015.

[30] An Update on Vietnam's Recent Economic Development, World Bank, July 2013 (http://documents.worldbank.org/curated/en/2013/07/18042915/taking-stock-update-vietnams-recent-economic-developments)

Figure 36 EVN HCMC net cashflows - sensitivity analysis (2010-17)



63. This is an extreme case, in that it assumes that EVN fails to adjust the BST to take account of EVN HCMC's financial difficulties and that EVN HCMC has no capability to reduce cash outflows by, for example delaying capital expenditures or allowing payables to EVN to increase. However, it is clear that EVN HCMC's financial performance is extremely sensitive to changes in tariffs and sales volumes. Relatively small reductions in outturn values compared to projected levels would imply large losses unless corrective action is taken.

64. Given the build-up of foreign borrowing, we have also looked at EVN HCMC's exposure to exchange rate movements. Existing foreign currency-denominated debt as at December 2012 was dominated by borrowing in US$ which represented 55% of all long-term borrowings and 88% of foreign currency-denominated borrowing. We have, therefore, for simplicity, assumed all existing and new foreign currency borrowings are in US$. Projected annual foreign exchange losses are calculated assuming that exchange rates move to maintain constant purchasing power parity. This would imply a depreciation of around 20% of the VND against the US$ between 2013 and 2017.

65. The resulting projected foreign exchange losses would reach VND 192 billion in 2015 against the VND 47 billion projected by EVN HCMC for that year[31]. This would be equivalent to around 0.3% of EVN HCMC's turnover or 3% of its distribution margin (the difference between revenues and bulk power purchase costs in that year). The impacts are, therefore, relatively small.

V Conclusions and recommendations

A Conclusions

66. The main conclusions from the financial review are that:

[31] We use 2015 for the comparison as that is the last year for which projections of foreign exchange losses by EVN HCMC are available.

(i) EVN HCMC's historic financial performance and projected finances are reasonably strong, and suggest that it should be able to service the proposed ADB loan under most circumstances.

(ii) However, EVN HCMC's financial performance is to a large extent outside its control. Revenues are determined by the margin between allowed retail tariffs (approved by MOIT or the Prime Minister depending on the magnitude of the increase) and the BST (set by EVN) multiplied by the volumes of sales. Costs are largely fixed in the short-term.

(iii) The resulting risks to EVN HCMC were demonstrated in 2011 where a decision by EVN to increase the BST by significantly more than the increase in allowed retail tariffs drove EVN HCMC into making a loss. It has been further illustrated through the sensitivity analysis carried out on EVN HCMC's financial projections.

(iv) Although EVN committed to compensate EVN HCMC for the 2011 loss by adjusting the BST by less than retail tariffs in future years, and appears to have done so in 2012, there is no formal obligation on it to do so.

(v) EVN HCMC expects to become heavily dependent on borrowing, in particular from international development sources, to fund future capital expenditures. While this is not a cause for concern in the short to medium-term, care will be needed to ensure that projects funded with these loans are financially viable and able to repay the debts incurred for their construction.

(vi) A long-term risk is that the introduction of wholesale followed by retail competition will undermine EVN HCMC's viability, where this is dependent on cross-subsidies between customers. Competition will allow those customers funding these cross-subsidies (and whose prices are, therefore, above their costs of service) to switch to other suppliers leaving EVN HCMC with those customers dependent on cross-subsidies but without the means to fund these.

B Recommendations

67. To ensure that EVN HCMC is able to service its debts in future years, it is necessary to address the risks posed by the potential for retail tariffs and the BST to move away from the levels required for it to recover its costs in full.

68. In principle, the regulated retail tariff is already adjusted to match changes in costs. However, in practice, adjustments to the tariff do not seem to fully track changing costs. Ideally, this should be addressed through commitments from the government agencies concerned (MOIT and the Prime Minister's Office) to fully implement the adjustment mechanism including permitting regular increases in excess of 10% (under the November 2013 decision) where changes in costs justify this. However, given the wider socio-economic impacts of large changes in electricity tariffs, such commitments may be difficult to obtain or enforce.

69. It may be more practical, therefore, to ensure that the BST is adjusted so as to maintain an adequate distribution margin for EVN HCMC as its costs and retail tariffs change. The most effective way to achieve this would be to take responsibility for setting the BST away from EVN and allocate it to ERAV, as the power sector regulatory agency. This will remove EVN's discretionary powers to use the BST to allocate profits and losses across the EVN group of companies. As with other regulated tariffs and charges, ERAV will need to adopt a defined and transparent process for setting the BST which will increase the certainty and predictability of EVN HCMC's revenues in future.

70. This would leave EVN bearing any shortfall between revenues from regulated retail tariffs and its costs, without the opportunity to transfer this to PCs. However, this may be preferable to the current situation. EVN's costs are dominated by those of purchases of fuel and power, which are in large part paid to other state enterprises and private investors. Removing the current option of 'hiding' shortfalls by transferring these to PCs will make the mismatch between tariffs and costs more visible as it will show up in rising levels of payables to third parties. This should support measures to address the mismatch through adjustments to tariffs to increase these towards fully cost-recovering levels.

71. A requirement to transfer responsibility for setting the BST to ERAV and for regulations to be issued for this purpose could, therefore, form a covenant under the loan agreement. Alternatively, EVN might enter into commitments to set the BST in a way that is transparent and ensures cost-recovery for the PCs concerned.

72. EVN has argued that it has an obligation to support EVN HCMC (and other PCs) financially where required given their status as wholly-owned one-member companies and that, therefore, further commitments are unnecessary. Under the Law on Enterprises (Law No. 60/2005/QH11, dated 29th November 2005), the owner of a one-member company is obliged to contribute capital in full and on time or, where failing to do so, to be responsible for debts of the company (Article 65(1)). However, this appears to be limited to the charter capital of the one-member company. Following the recently approved increase, the charter capital of EVN HCMC is VND 7.3 trillion. By 2017, total long-term debt of EVN HCMC is projected at VND 10.4 trillion, implying that this obligation on EVN would be sufficient to cover around three-quarters of outstanding debt. If this obligation was called then the remaining one-quarter of the total debt should be financeable by EVN HCMC itself.

ANNEXES

VI Summary financial statements (2007-17)

A Income statement

VND billion	---------- Audited (IFRS) ----------						----- Projected -----				
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Revenues											
Sales of electricity	12,408	13,492	15,879	18,863	21,718	26,126	30,650	37,059	45,268	55,294	67,542
Other revenues	194	224	363	410	561	359	-	-	-	-	-
Total revenues	12,601	13,716	16,243	19,273	22,279	26,485	30,650	37,059	45,268	55,294	67,542
Costs											
Electricity purchases from EVN	(11,024)	(11,598)	(13,714)	(16,683)	(19,939)	(23,060)	(26,719)	(32,652)	(40,368)	(49,909)	(61,704)
Salary	(275)	(333)	(399)	(500)	(570)	(738)	(1,165)	(1,305)	(1,462)	(1,637)	(1,833)
Depreciation (from Cash Flow Statement)	(493)	(713)	(732)	(437)	(550)	(671)	(1,464)	(1,680)	(1,913)	(2,496)	(3,225)
Financing costs	(51)	(70)	(71)	(85)	(123)	(113)	(134)	(151)	(226)	(359)	(494)
Net foreign exchange losses	(11)	(52)	(38)	(44)	(102)	23	(39)	(46)	(47)	(62)	(77)
Other	(761)	(888)	(1,226)	(1,467)	(1,393)	(1,212)	(1,129)	(1,225)	(1,252)	(832)	(208)
Profit before tax	**(14)**	**62**	**63**	**57**	**(398)**	**714**	**0**	**0**	**-**	**-**	**-**
Corporate income tax	(44)	(28)	(34)	(22)	(14)	(65)	(0)	(0)	-	-	-
Profit / (loss) after tax	**(57)**	**34**	**29**	**35**	**(412)**	**649**	**0**	**0**	**-**	**-**	**-**
Revaluation	-	-	-	-	-	4,408	-	-	-	-	-
Total income	**(57)**	**34**	**29**	**35**	**(412)**	**5,057**	**0**	**0**	**0**	**0**	**0**

B Statement of financial position (balance sheet)

VND billion			Audited (IFRS)						Projected		
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
ASSETS											
Non-current assets											
Property, plant and equipment	3,233	3,268	2,815	3,624	4,371	9,754	10,143	11,302	12,859	14,282	15,231
Investments in associates	49	105	114	105	259	256	256	256	256	256	256
Other	609	811	725	999	577	617	617	617	617	617	617
Current assets											
Trade and other receivables	427	545	898	862	1,170	990	1,596	1,929	2,356	2,878	3,516
Cash and bank balances	476	386	1,012	1,320	1,354	1,459	1,629	1,889	2,281	3,054	4,257
Other	438	390	437	291	247	283	283	283	283	283	283
Total assets	**5,232**	**5,504**	**6,002**	**7,200**	**7,978**	**13,359**	**14,523**	**16,277**	**18,652**	**21,371**	**24,160**
EQUITY AND LIABILITIES											
Equity											
Capital	1,945	2,091	2,103	2,338	2,513	2,887	2,887	2,887	2,887	2,887	2,887
Other	56	130	64	110	(268)	4,591	4,591	4,591	4,591	4,591	4,591
Non-currrent liabilities											
Long-term borrowings	1,324	1,404	1,689	1,869	2,319	2,232	3,037	4,176	5,935	8,147	10,350
Other	37	34	45	43	44	36	36	36	36	36	36
Current liabilities											
EVN payables	747	853	986	1,219	1,868	1,735	2,126	2,598	3,212	3,971	4,909
Other payables	894	749	883	1,234	1,105	1,336	1,326	1,462	1,568	1,427	1,180
Borrowings	157	164	182	278	346	372	377	337	186	13	(170)
Other	72	78	50	108	52	170	144	191	237	300	377
Total equity and liabilities	**5,232**	**5,504**	**6,002**	**7,200**	**7,978**	**13,359**	**14,523**	**16,277**	**18,652**	**21,371**	**24,160**

C Cash flow statement

VND billion			Audited (IFRS)						Projected		
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Profit / (loss) for the year	(57)	34	29	35	(412)	649	0	0	-	-	-
Depreciation and amortisation of non-current assets	493	713	732	437	550	671	1,464	1,680	1,913	2,496	3,225
Movements in working capital	590	(154)	(100)	126	371	(246)	(186)	321	340	158	131
Other adjustments	(37)	(33)	54	4	(21)	49	(26)	46	47	62	77
Net cash from operating activities	**988**	**559**	**715**	**602**	**488**	**1,123**	**1,252**	**2,047**	**2,299**	**2,716**	**3,433**
Payments for PPE	(867)	(533)	(386)	(562)	(968)	(922)	(1,853)	(2,840)	(3,469)	(3,919)	(4,174)
Other investing activities	(150)	(132)	39	54	76	75	-	-	-	-	-
Net cash used in investing activities	**(1,016)**	**(665)**	**(347)**	**(508)**	**(892)**	**(847)**	**(1,853)**	**(2,840)**	**(3,469)**	**(3,919)**	**(4,174)**
Proceeds from borrowings	212	172	438	457	762	307	957	1,244	1,712	2,148	2,126
Repayments of borrowings	(199)	(142)	(186)	(243)	(326)	(471)	(186)	(191)	(151)	(171)	(183)
Net capital injected	(1)	(16)	6	-	-	-	-	-	-	-	-
Net cash used in financing activities	**12**	**15**	**258**	**214**	**436**	**(164)**	**771**	**1,053**	**1,561**	**1,977**	**1,943**
Net increase in cash and cash equivalents	**(16)**	**(90)**	**626**	**308**	**31**	**112**	**170**	**260**	**391**	**774**	**1,202**
Cash at beginning of the year	493	476	386	1,012	1,320	1,354	1,459	1,629	1,889	2,281	3,054
	-	-	-	-	2	(7)	-	-	-	-	-
Cash at end of the year	**476**	**386**	**1,012**	**1,320**	**1,354**	**1,459**	**1,629**	**1,889**	**2,281**	**3,054**	**4,257**

VII Summary financial indicators (2007-17)

Unit	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Profitability indicators												
Operating ratio	1.4%	0.3%	1.0%	0.8%	0.7%	-1.2%	3.1%	0.4%	0.4%	0.5%	0.6%	0.7%
Net income before interest and taxes / revenues												
Net profit margin	0.4%	-0.5%	0.2%	0.2%	0.2%	-1.8%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Net income after interest and taxes / revenues												
Return on assets	3.1%	0.7%	2.4%	2.2%	2.0%	-3.4%	6.2%	0.9%	0.9%	1.2%	1.7%	2.0%
Net income before interest and taxes / average total assets												
Return on equity	7.2%	1.9%	5.9%	6.2%	5.8%	-12.2%	11.1%	1.8%	2.0%	3.0%	4.8%	6.6%
Net income before interest and taxes / equity												
Return on equity (for tariff-setting)	4.6%	-0.7%	2.8%	2.9%	2.3%	-17.7%	9.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Net income before taxes / equity												
Debt management indicators												
Debt to assets ratio	0.31	0.28	0.28	0.31	0.30	0.33	0.19	0.24	0.28	0.33	0.38	0.42
Total debt / total assets												
Debt to equity ratio	0.71	0.74	0.71	0.86	0.88	1.19	0.35	0.46	0.60	0.82	1.09	1.36
Total debt / equity												
Gearing	0.42	0.43	0.41	0.46	0.47	0.54	0.26	0.31	0.38	0.45	0.52	0.58
Total debt / (total debt + equity)												
Debt service ratio	2.81	3.95	2.64	2.79	1.84	1.09	1.92	3.91	5.99	6.10	5.12	5.07
Cash flow from operations / (interest + principal)												
Liquidity indicators												
Current ratio	1.07	0.72	0.72	1.12	0.87	0.82	0.76	0.88	0.89	0.95	1.09	1.28
Current assets / current liabilities												
Self financing ratio	102.8%	114.0%	105.0%	185.3%	107.1%	50.4%	121.8%	67.6%	72.1%	66.3%	69.3%	82.3%
Net cash flow from operations / capex												
Self financing ratio (3-year average)			108.5%	126.7%	126.7%	94.2%	90.2%	76.5%	78.8%	68.6%	69.0%	73.1%
Asset management indicators												
Days sales in receivables	13.1	12.2	14.3	19.9	16.1	18.9	13.5					
*Accounts receivable / annual revenues * 360 days*												
Days purchases from EVN in payables	24.2	24.4	26.5	25.9	26.3	33.7	27.1					
*Accounts receivable / annual revenues * 360 days*												

VIII Summary physical indicators (2007-17)

		---------- Actual ----------					----- Projected -----				
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Energy purchased (GWh)	12,439	13,187	14,115	15,481	16,265	17,735	19,206	21,278	23,760	26,532	29,627
Energy sold (GWh)	11,560	12,365	13,262	14,567	15,321	16,727	18,150	20,150	22,560	25,258	28,279
yoy change	7.8%	7.0%	7.3%	9.8%	5.2%	9.2%	8.5%	11.0%	12.0%	12.0%	12.0%
Distribution losses	7.1%	6.2%	6.0%	5.9%	5.8%	5.7%	5.5%	5.3%	5.1%	4.8%	4.5%
Average BST (VND/kWh)		880	972	1,078	1,226	1,300	1,391	1,535	1,699	1,881	2,083
yoy change			10.5%	10.9%	13.8%	6.1%	7.0%	10.3%	10.7%	10.7%	10.7%
Average retail revenue (VND/kWh)	1,073	1,091	1,197	1,295	1,418	1,562	1,689	1,839	2,007	2,189	2,388
yoy change	11.3%	1.7%	9.7%	8.1%	9.5%	10.2%	8.1%	8.9%	9.1%	9.1%	9.1%
Distribution margin		153	163	150	116	183	217	219	217	213	206
yoy change			6.6%	-8.4%	-22.4%	57.9%	18.2%	1.0%	-0.7%	-1.8%	-3.2%