Poverty and Social Assessment

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

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I. EXECUTIVE SUMMARY

1. This project does not generate any direct poverty and social impacts for the population residing in both Ha Noi and Ho Chi Minh City. However, there are some key linkages to poverty reduction that would ensure all urban and peri-urban households have access to affordable electricity on a more reliable basis than they have at present. The social impacts are more difficult to quantify although women as the primary managers of the household should benefit from being able to use arrange of electrical appliances to reduce their existing domestic workload. On a macro basis an improved electricity distribution network is necessary for increasing value-added economic activity.

2. In this PSA extensive use is made of robust VHLSS data that will not only serve as baseline data to assess the impact of the project on living standards improvement but enables EVN to use a greater range of evidence-based socio-economic indicators to justify electricity tariff increases. By focusing on the average monthly consumption of electricity and expenditure the PSA is able to demonstrate in conjunction with impacts ranging from a 5% incremental increase to 2020 to the very high 2011 CPI of 18.5% that most households can probably afford to shoulder tariff increases. This argument is made in the context of uses for electricity to energise a range of household appliances including refrigerators, washing machines and irons that until very recently the poorest 40% of the urban population could not afford.

3. However, in making the point that tariff increases are not generally considered to be too onerous the PSA also recognises that urban poverty in Ha Noi and Ho Chi Minh City must not simply be focused on residents with the legal right to reside in both cities but also on temporary residents, especially in Ho Chi Minh City that can pay up to 300% more in electricity charges than legal residents. But it is also argued that EVN cannot directly address this issue in a project of this nature.

4. The PSA has not utilised every possible socio-economic indicator because such indicators are not considered directly relevant to this project but basic demographic data (that illustrates Ha Noi is more peri-urban than urban in nature and quantification of household size by income quintile for subsequent measurement of income and expenditure data) and perfunctory data on educational backgrounds (key finding is that female students are less likely to participate in TVET than males but otherwise participation rates are relatively equal). Basic health indicators have been included in the PSA primarily to quantify issues such as IMR and the number of serious communicable diseases and how much a typical household is required to spend for each treatment occasion.

5. To better understand the economically active population without any surprises industrial wage labour followed by employment in the services sector and then the public sector are the major locales of waged and salaried employment. Such people in the financial services sector earn nearly four times per month what the lowest paid workers in the manufacturing sector earn and nearly three-fifths of all waged and salary earners are working for enterprises that employ less than 10 people. The average rate of return is highest surprisingly in the agricultural sector but lowest in the energy sector but employees in the latter sector earn at least double what the average employee earns in the agricultural sector.

6. The PSA includes income/expenditure patterns and for all income quintiles income has risen far more quickly than expenditure although surpluses as a percentage have fallen by

nearly 10% in Ha Noi over the past decade but only 1% in Ho Chi Minh City. There are no real surprises but the PSA jettisons the MOLISA criteria in favour of income thresholds provided by both Ha Noi and Ho Chi Minh City. Here it is possible to secure a more accurate picture of urban poverty by using the international poverty line (adjusted for PPP) of US$ 2.00 per day. It is argued in this PSA that by combining household dependency ratios, non-income indicators for the poor and households with at least one business enterprise it is possible to gain a more nuanced understanding of at least the quantitative dimensions of urban income poverty or the lack thereof.

7. Data on average yield of crops and aquaculture production in the peri-urban areas of Ha Noi and Ho Chi Minh City have been included not so much to strengthen the PSA but more to assist EVN compare and contrast more robust databases with the data generated during resettlement investigations, which is not always very robust and in some instances does not address the core issues.

8. However, the core issue in this PSA is whether or not households can afford attendant increases in electricity tariffs that will be necessary to sustain EVN or whichever privatised entity assumes control of EVN. Based on the average monthly consumption of electricity by income quintile it is argued at present even if households were to pay the average CPI increase (18.5% based on 2011 estimate) the increase for the most part would be affordable VHLSS data from 2010 adjusted to 2013 estimates indicate that by focusing on expenditure per capita for food and alcoholic beverages there is a comparative basis to this analysis.

II. TECHNICAL NOTES

9. Much of the official statistical data utilised in this PSA relied on utilised of the income quintile poverty measurement methodology. Consistent with the approach of the GSO in Viet Nam and recognised by most providers of ODA this PSA has divided the population into five quintiles based on 20% of the population in each quintile. This Quintile 1 or Q1 represents the poorest 20% of the population in both Ha Noi and Ho Chi Minh City while Quintile 5 or Q5 represents the richest 20% of the same population. It is not a precise unit of measurement but designed to ensure indicative data is available for further analysis. However, in adopting this methodology a conscious decision was made to enable EVN or of course the ADB to better able to compare and contrast more robust quantitative data on a project-wide basis (the project impact area) than what could be gleaned from the SES undertaken as part of the resettlement investigations.

10. In this PSA where VND and USD have been used interchangeably US$ 1=21,080 although for the overall project a slightly different exchange rate might be used. However, this use does not compromise the veracity or otherwise of the PSA.

A. INTRODUCTION

11. A power grid development sector project such as this project does not generate any direct poverty and social impacts for the population residing in the areas impacted upon by the project except for people who will be affected either through physical and economic displacement or both forms of displacement. These direct impacts are dealt with in the specific resettlement plans prepared for the core projects and if necessary will also be prepared for the noncore projects. The reason is quite obvious because this specific sector project is focusing on the upgrading/rehabilitation/construction of new substations and their associated facilities, notably overhead and underground transmission lines. The project is not dealing with energy supply to individual consuming entities (residential or non-residential) and hence issues associated with the cost and coverage of such connections is not an issue. Nevertheless, the project is required to recoup the investment outlay and this either has to be via direct government subsidies or tariffs adjusted to ensure not only full cost recovery but sufficient operating profit to maintain and expand existing electricity supply in both Ha Noi and Ho Chi Minh.

12. Thus even though poverty and social impacts are very indirect they nevertheless are relevant. The most relevant impact is whether individual consumers can afford to pay necessary tariff increases as it can be witnessed in Viet Nam starting from a very low base all consumers, irrespective of their socio-economic background, are very interested in acquiring the greatest range of electrical appliances necessary. This is not simply to ensure they can maintain and improve upon their existing livelihood status but also of equal importance to improve upon their existing physical and social quality of life. The latest flat-screen digital television set or an expensive CD/DVD player are not necessary to sustain their livelihoods but obviously an investment in an automatic washing machine or steam iron ostensibly reduce the drudgery of domestic labour, which as elsewhere in the world is unfortunately women tend to experience more often than men. This PSA demonstrates how households have and are continuing to invest in a broad range of electrical appliances and is probably one of the few studies where empirical evidence, albeit incomplete, has been brought to bear on the substantive analysis.

13. The problem this PSA faced with gleaning adequately robust empirical evidence was that the resettlement investigations naturally focused only on potentially affected peoples. These

investigations are adequate for understanding the major socio-economic characteristics of affected people but they are inadequately robust for the purposes of this PSA. Given the time and financial constraints it was not possible for the PSA to be prepared based on evidence it could collect in the field therefore secondary sources had to be utilised. The statistically most robust socio-economic data is generated by the Viet Nam Household Living Standards Survey that has been conducted by the Government Statistical Office since 2002. The VHLSS is generally accepted by both providers of ODA and experts on socio-economic development in Viet Nam as the most robust database possible. Using this database it is much easier to quantify the real incidence of poverty.

14. MOLISA prepares estimates of income poverty levels (mostly outdated) and those households deemed to be living below the income threshold are eligible for GOV poverty support programs but this is often an arbitrary process and not necessarily a real reflection of the incidence of poverty. Moreover, if MOLISA criteria are relied upon to quantify poverty in both Ha Noi and Ho Chi Minh City there are only a handful of poor households. Hence for a PSA such as this PSA the MOLISSA criteria are generally considered not to be helpful.

15. By way of contrast VHLSS data based on a robust and statistically reliable sampling strategy that involves the collection of data during four periods through face-to-face interviews conducted by trained interviewers (MOLISSA or more accurately DOLISA relies on untrained local authorities) and triangulated through interviews with key local officials and random checks of completed surveys. For this PSA the TA Consultant requested of the GSO it supply completed interviews for both Ha Noi and Ho Chi Minh City for 2012 (year of most recent VHLSS) and while GSO is still processing the data (69,360 households from 3,133 administrative entities throughout Viet Nam) it was able to supply names of 100 households that were interviewed in Ho Chi Minh City (these households were contacted by the TA Consultant to assess in more detail appliances owned, electricity consumed, and monthly bills paid) but unfortunately GSO were not able to do the same for Ha Noi. Thus this PSA is at least able to quantify what appliances households own, how much electricity they consume and how much per month they pay using a stratified approach ranging from the bottom 20% to the top 20%. This exercise goes beyond what VHLSS has attempted in the past.

16. However, the heuristic utility of using VHLSS data is that the PSA is able to quantify by income quintile (Q1 to Q5) household size, dependency ratio, monthly income and expenditure per capita (includes expenditure on food and alcohol to quantify consumption expenditure, small business activities) and of relevance as pointed out above to this PSA household monthly consumption of electricity. It is argued here that this can be used as a baseline by EVN to assess just how much it can raise tariffs to recoup investment costs and the evidence provided in this PSA is that for urban and peri-urban consumers there is considerable latitude (even a 15% per annum increase would not be too onerous as demonstrated in this PSA). By using the VHLSS data EVN is far better placed to assess the poverty or lack of poverty impact on households because the baseline data is statistically robust and able to be accessed by anyone because it is in the public domain. The PSA does not rely on the socio-economic surveys undertaken for the core projects in Ha Noi and Ho Chi Minh City and strongly suggests that EVN also not rely on such surveys except for resettlement purposes.

17. Despite VHLSS being statistically robust not all data used in this PSA has been derived from the VHLSS. The demographic profile, basis health indicators, types of schools, female participation rates in education, economically active population, size of economic enterprises, average monthly wage/salary payments, average monthly income/expenditure per capita, average economic rate of return, average yields for crops grown, livestock numbers, and

aquaculture production in peri-urban areas have been derived from a number of different sources, primarily the Statistical Yearbook of Viet Nam 2012 (only made available in October 2013). It also needs to be noted that in some instances the PSA could not rely on data differentiated by urban and peri-urban area and this limits the effectiveness of the PSA somewhat.

18. Finally, a deliberate decision was made not to include every socio-economic indicator in this PSA but for instance average yields for crops grown are included as a baseline to assist in resettlement investigations where there are involuntary resettlement impacts in peri-urban areas but the full range of indicators - especially those that can be found in the VHLSS - have not been utilised because of the specific nature of this project. Social impacts associated with gender have been included where relevant but for this project the relevance of gender-based issues lies in increasing reliability of electricity that will be supplied to households because of grid development, women being able to escape some of the drudgery of domestic work (not a direct impact of this project), greater recognition of women's worth in EVN HANOI and EVN HCMC (although there appears compared to many entities to be quite good awareness and acceptance of women as managers and technical specialists), and for women affected by displacement the equal right to compensation, participation in project-based activities where relevant, and opportunities for limited waged employment. In Ha Noi there are no ethnic minorities whereas in Ho Chi Minh City there are some, especially in peri-urban areas but the general consensus is that these ethnic minority groups (primarily Khmer) are accorded approximately the same status as Kinh if from a similar socio-economic background.

B. POPULATION CHARACTERISTICS

19. A broad definition of peri-urbanism has been adopted for this analysis. As Table 1 demonstrates 57% of Ha Noi's population actually resides in areas that are or will eventually become peri-urban areas there being 18 administrative areas still classified as rural communes all with populations in excess of 120,000 (smallest in Dan Phuong with a population of 132,900 and largest Dong Anh with a population of 301,000) with population densities ranging from a low of 596 persons per square kilometre in Ba Vi Commune to 3,753 persons per square kilometre in Tu Liem Commune). By way of contrast the least densely urban ward is Long Bien with 3,303 persons per square kilometre and a population of 195,5000 to Don Da the most densely populated urban ward with 38,060 persons per square kilometre and a population of 380,600.

Table 1: Demographic Data for Project Areas

	Area km^2	Total Population	Population Density	Percentage of Females	Growth Rate %	Net Migration %
TP Ha Noi	**3,323.6**	**6,844,100**	**2,059**	**50.0**	**1.76**	**-1.1**
Urban	379.0	2,931,300	14,623	49.2	2.00	0.2
Per-Urban	2,944.6	3,912,800	1,496	50.1	3.00	-1.8
TP Ho Chi Minh	**2, 095.6**	**7,681,700**	**3,666**	**52.0**	**2.18**	**7.6**
Urban	494.2	6,384,500	23,314	52.5	2.00	8.2
Peri-Urban	1,601.0	1,297,200	2,212	50.1	1.00	6.1
TOTAL	**5,419.2**	**14,525,800**	**2,680**	**51.0**	**2.00**	**3.0**

Source: Statistical Yearbook of Viet Nam, 2012

20. Ho Chi Minh City presents a somewhat different picture as 84% of the population lives in areas that are primarily urbanised. Of the 24 administrative areas only 4 are currently classified as rural with the least populated commune being Can Gio with a population of 67,900 and the most populated being Binh Chanh with a population of 340,800. Population densities range from

a low of 96 persons per square kilometre in Can Gio to 2,438 persons per square kilometre in Hoc Mon. The most densely populated urban district is District 4 with a population of 189,000 and population density of 45,000 persons per square kilometre and the least densely populated district is District 2 with a population density of 2,604 persons per square kilometre and a population of 130,700.

21. Household size in Ha Noi and Ho Chi Minh City not surprisingly demonstrates that the poorest households (Q1) have larger households than the top 20% (Q5) of households as reflected in Table 2. This has ramifications for income and expenditure patterns as will be demonstrated in this PSA but statistical averages mask a number of important sociological issues. Better-off households in reality are not likely to be simply nuclear-households and anecdotal evidence from all urban areas but especially Ha Noi because in terms of asset accumulation such as the purchase of housing stocks a single household does not simply act on its own. Rather it requests support from other siblings or close familial relatives so households over time that increase their wealth are not simply acting on their own but in tandem with other households. This should not come as any surprise because until very recently it was near impossible to secure a housing loan from financial service providers. However, even in Ho Chi Minh where it is assumed but once again based on anecdotal evidence rather than solid sociological evidence households are less loosely structured although perhaps not as tightly structured as in Ha Noi. It is quite clear that Ho Chi Minh City residents are somewhat less socially cohesive than their contemporaries in Ha Noi but to deny an important degree of social cohesion is at odds with the social reality of residents in Ho Chi Minh City also being quite socially cohesive.

Table 2: Household Size by Income Quintile (No of HH Members)

	Total HH Size	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Viet Nam	3.89	4.18	4.10	3.96	3.82	3.47
Ha Noi	3.96	3.90	4.10	4.00	3.90	3.70
Urban	3.72	3.85	4.00	3.90	3.85	3.65
Rural	3.80	3.95	4.05	3.98	3.89	3.95
Ho Chi Minh	3.60	4.20	4.10	3.70	3.40	3.50
Urban	3.52	3.79	3.95	3.52	3.35	3.10
Rural	3.75	3.85	4.01	3.69	3.42	3.25

Source: VHLSS, 2012 (adjusted by TA Consultant, December 2013)

22. In the absence of solid sociological evidence generalisations in relation to peri-urban areas in Ho Chi Minh City cannot be made although insofar as ethnic Khmer (Kampuchea Krom) are concerned (very smallish minority) it is difficult to assess real levels of social cohesion. The Khmer kinship system is biased towards a form of truncated matriarchy as expressed traditionally in the fact that men after marriage resided in their spouse's maternal household and property used to be inherited by women rather than men. This was quite different to the Kinh (similarity was in the public sphere both Kinh and Khmer males were the "face" of the household) but with land user rights now being allocated by the state these traditional practices have been undermined. In the peri-urban areas of Ha Noi by way of contrast it can be asserted with a greater degree of confidence that social cohesion in these households (bearing in mind much of Ha Noi is peri-urban rather than urban) is greater than what would be found in Ho Chi Minh City.

23. For a project of this nature the actual relevance remains the linkage between household size and poverty. According to VHLSS data as will be argued elsewhere the larger a household

the more likely it is to be less well off. However, there are other factors as well such as household dependency rates, the educational background of adult members, potential life chances for younger household members, and in non-quantifiable ways the vicissitudes of fate.

C. EDUCATIONAL BACKGROUND

24. Ha Noi and Ho Chi Minh City are better served by kindergartens, upper secondary schools, TVET and universities than the rest of Viet Nam as Table 3 demonstrates. However, this table also demonstrates that there are more kindergartens in Ho Chi Minh City than Ha Noi but significantly more lower-secondary schools and slightly more upper secondary schools in Ha Noi than Ho Chi Minh City. Although what this means in reality is that schools are larger in Ho Chi Minh than Ha Noi and is more are a reflection of historical reality prior to reunification in 1976. Unfortunately it was not possible for this PSA to find reliable data on schools in the peri-urban areas of both cities. GSO has such data based on commune and district records and with some effort it is possible to obtain but for the purposes of this PSA what the focus should be is on TVET facilities, especially if resettlement were to result in some affected people being severely affected.

Table 3: Number of Schools by Type in Project Areas

	Kindergarten Level	Primary Level	Lower Secondary	Upper Secondary	TVET Level	University Level
Viet Nam	31.0	37.0	24.0	05.1	00.8	01.2
TP Ha Noi	37.0	28.0	25.0	07.0	01.0	02.0
TP Ho Chi Minh	46.0	27.0	14.0	06.0	02.9	04.0

Source: Statistical Yearbook of Viet Nam, 2012

25. Female participation rates in both Ha Noi and Ho Chi Minh City indicate according to Table 4 that apart from TVET females are as likely or even slightly more likely especially in Ha Noi to participate in upper secondary schooling and university level education. In the context of education there is a relatively high degree of equality but of course participation has to be linked to outcomes and for the latter no reliable data is available for this PSA.

Table 4: Female Participation Rates in Education

	Kindergarten Level	Primary Level	Lower Secondary	Upper Secondary	TVET Level	University Level
Viet Nam	49.0	47.0	46.0	52.0	36.0	51.0
TP Ha Noi	47.0	48.0	48.0	53.0	32.0	52.0
TP Ho Chi Minh	48.0	47.0	47.0	50.0	36.0	50.0

Source: Statistical Yearbook of Viet Nam, 2012

26. What the above data demonstrates is that arguments premised on females being less well educated than males in either Ha Noi or Ho Chi Minh City are largely incorrect. Perhaps the only issue of relevance to a project of this nature especially in relation to the staffing of PMUs is whether females have the technical background that they would typically acquire at the TVET level to provide the necessary level of expertise. However, the TA Consultant has observed women employed or contracted by EVN HANOI and EVN HCMC are very competent in a variety of managerial fields and even though there is no GAP required for this project this should not deter women employed by or seeking to be employed by EVN from being considered for positions they are technically qualified to undertake.

D. LABOUR AND EMPLOYMENT

27. As to be expected based on Table 5 most of the economically active population in both Ha Noi and Ho Chi Minh City are involved in non-agricultural based economic activities. Indeed for the whole of Viet Nam based on labour market data provided by GSO and MOLISA the same applies throughout Viet Nam (but this reflects the waged labour force not those working on their own account such as farmers or small business-persons). It comes as no surprise that 20% of the waged economically active population in the peri-urban areas of Ha Noi and 12% in Ho Chi Minh City are involved in agricultural sector based employment.

Table 5: Economically Active Population in Project Areas (%)

	Industrial Wage Labour	Services Sector Employment	Public Sector Employment	Agricultural Sector Employment	Percentage of Females
Viet Nam	68.0	22.0	06.0	0.6	39.0
TP Ha Noi	62.0	2.4	12.0	0.6	36.0
Urban	64.0	22.0	14.0	-	38.0
Per-Urban	55.0	18.0	07.0	20.0	45.0
TP Ho Chi Minh	64.3	29.4	05.1	0.2	41.0
Urban	61.0	33.0	06.0	-	43.0
Peri-Urban	69.0	17.0	02.0	12.0	47.0
TOTAL					

Source: Statistical Yearbook of Viet Nam, 2012 and Labour Force Participation Data, 2013

28. The above table also indicates that a greater percentage of the economically active population in Ha Noi is employed in the public sector than in Ho Chi Minh City, which is hardly surprising because the seat of national government is in Ha Noi. All governmental institutions in Ho Chi Minh City with the exception of a few (e.g., Inland Waterways Authority) are subordinate to governmental institutions in Ha Noi although the Ho Chi Minh City People's Committee while being subordinate is more equal than less equal and institutionally is very powerful.

29. Table 6 focuses on the size of economic enterprises. This does not include household-based enterprises where a woman might have one or more industrial sewing machines and sewing garments assembled for the export market (more likely in Ho Chi Minh City than Ha Noi). There is no reliable data publicly available that can be used to differentiate between the size of economic enterprises in urban and peri-urban areas but typically unless the economic enterprise is located in an industrial estate most peri-urban areas would only have relatively small-scale economic enterprises.

Table 6: Size of Economic Enterprises

	Less than 5 Persons	5 to 10 Persons	11 to 50 Persons	51 to 200 Persons	201 to 5,000 Persons	Total N° of Enterprises
Viet Nam	32.0	29.0	28.0	6.0	5.0	324,691
TP Ha Noi	27.0	34.0	30.0	5.0	4.0	72,455
TP Ho Chi Minh	43.0	28.0	21.0	4.0	4.0	104,299

Source: Statistical Yearbook of Viet Nam, 2012

30. However, it should come as no surprise that Ho Chi Minh contains nearly one-third of all economic enterprises in Viet Nam because it generates nearly 40% of GDP (2013 estimates). But what the data also indicates is that in Ho Chi Minh because there are a greater number of

economic enterprises that employ less than 5 people that during economic downturns when larger economic enterprises lay off workers this does not occur to the same extent with the smaller enterprises. It is also estimated in both Ha Noi and Ho Chi Minh that upwards of 80% of female labour is found in economic enterprises employing less than 10 persons as against approximately 61% in Ha Noi and 71% in Ho Chi Minh.

31. Average monthly wages/salaries paid to Viet Namese workers in both Ha Noi and Ho Chi Minh using data included in Table 7 indicate the best paid jobs are to be found in the financial services sector and the worst paid jobs in the manufacturing sector. This is not surprising because workers in the latter are generally the least well paid in most industrialised or industrialising societies although the data from Viet Nam indicates workers in the agricultural sector are somewhat better paid than their contemporaries working in industry.

Table 7: Average Monthly Wage/Salary in Urban Based Economic Activities (VND)

	Manufacturing Industries	Provision of Energy	Non-Financial	Financial Services	Public Admin	Agricultural Sector
Viet Nam	3,958,000	11,412,000	6,232,953	15,704,000	6,500,000	5,610,000
TP Ha Noi	4,353,000	13,235,986	7,400,102	14,258,600	8,750,000	4,965,000
TP Ho Chi Minh	4,756,650	14,559,584	6,050,100	16,900,000	5,250,620	5,890,250

Source: Statistical Yearbook of Viet Nam, 2012

32. What the above table also indicates is that waged and salaried workers on average are paid more in Ho Chi Minh City for all sectors except the non-financial and public administration sectors. It is relatively easy to understand why these workers would be paid more in the public administration sector because Ha Noi has considerably more senior public sector workers than in Ho Chi Minh City and being the seat of government there are better paying jobs at higher levels for public sector workers in Ha Noi. In relation to non-financial services sector it is somewhat difficult to provide a cogent explanation except to argue that the services sector is more concentrated in Ho Chi Minh City and these is less room for intermediaries but this is not a robust evidence-driven assertion.

33. Table 8 provides an official estimate of the average economic rate of return and interestingly the agricultural sector in Ho Chi Minh City despite its more highly urbanised nature than Ha Noi generates a much higher economic rate of return than even the financial services sector. The agricultural sector in Ho Chi Minh City is far more value-added than it is in Ha Noi and both supply and value chains are much better developed.

Table 8: Average Economic Rate of Return (%)

	Manufacturing Industries	Provision of Energy	Non-Financial	Financial Services	Public Admin	Agricultural Sector
Viet Nam	3.35	1.09	4.00	10.00	-	19.96
TP Ha Noi	2.25	0.45	5.15	9.01	-	10.35
TP Ho Chi Minh	4.15	2.05	5.25	11.00	-	21.53

Source: Statistical Yearbook of Viet Nam, 2012

34. In relation to average wage and salary payments workers that provide financial services are able to garner much higher monthly payments than most other workers but the table above also demonstrates that workers who are involved with the provision of energy are also relatively well-paid despite the low average economic rate of return but this can also be explained by the fact they are working in a very strategic position: disruption to energy supplies (especially

electricity) creates highly unfavourable impacts on the rest of the economy, including it might be argued for lower-income workers.

E. PUBLIC HEALTH

35. This section covers basic health indicators and provision of healthcare services in Ha Noi and Ho Chi Minh City. A decision was made not to include unnecessary data on public hygiene, water supply and sanitation not because they are unimportant issues but not relevant to this specific PSA. Table 9 presents basis health indicators for both Ha Noi and Ho Chi Minh and also peri-urban areas thanks to the Ministry of Health in Ha Noi.

Table 9: Basic Health Indicators for Project Areas (%)

	Infant Mortality Rate	Under 5 Mortality Rate	Serious Physical Disabilities	Chronically Unwell Persons	Serious Communicable Diseases	Average Life Expectancy
Viet Nam	15.4	23.2	10.5	12.2	263,378	73.0
TP Ha Noi	10.5	15.2	5.2	9.3	24,983	75.2
Urban	9.1	12.5	6.1	7.0	23,216	77.2
Per-Urban	11.8	16.8	8.5	10.5	1,767	74.2
TP Ho Chi Minh	8.1	11.2	4.9	7.5	63,663	78.1
Urban	6.3	10.5	3.1	5.2	61,235	79.2
Peri-Urban	9.5	13.5	5.2	8.1	2,428	77.0

Source: Statistical Yearbook of Viet Nam, 2012 and Ministry of Health, Ha Noi, 2013

36. It can be seen from this table that infant mortality rates are considerably lower in both cities but in Ho Chi Minh City the IMR is 31% lower than in Ha Noi and for peri-urban areas 20% lower. A somewhat similar pattern exists for people with serious physical disabilities and chronically unwell persons. However, Ho Chi Minh City has a much greater percentage of serious communicable diseases (tuberculosis and HIV/AIDS) than Ha Noi but whether HIV/AIDS can be associated with more liberal social norms in Ho Chi Minh City is difficult to argue. It appears that many of the HIV/AIDS sufferers are also injectable drug users but it also needs to be noted that there are both more commercial sex workers and other persons not necessarily CSW but who on occasion offer sexual services in exchange for some form or remuneration in Ho Chi Minh than in Ha Noi.

37. Table 10 contains details of basic health service provision in both cities including average cost per treatment per capita provided by the GSO.

Table 10: Basic Health Service Provision in Project Areas

	Public Hospitals	Local Health Centres	Private Clinics	Persons Per Physician	Persons Per Nurse	Average Cost in VND
Viet Nam	07.0	86.0	07.0	833	532	33,264
TP Ha Noi	06.0	85.0	08.0	710	579	36,765
Urban	06.0	85.0	08.0	652	525	35,022
Peri-Urban	-	93.0	07.0	856	578	43,667
TP Ho Chi Minh	13.0	85.0	02.0	790	556	37,170
Urban	12.0	85.0	03.0	710	535	37,947
Peri-Urban	01.0	86.0	13.0	825	590	48,144

Source: Statistical Yearbook of Viet Nam, 2012

38. As to be expected public hospitals are more likely to be found in urban areas of the city than in peri-urban areas but most peri-urban areas have at least a local health centre and in the peri-urban areas of Ho Chi Minh City almost double the national average rely on private clinics and this is reflected in the fact that the average cost per treatment in the peri-urban Ho Chi Minh City is 31% higher than the national average. No analysis here is offered on the quality of such services although it is well-known that better-off households (i.e. those in Q5) prefer private clinics to the public hospitals because they believe they get provided with a better service.

F. INCOME/EXPENDITURE PATTERNS

39. From the Statistical Yearbook of Viet Nam 2012 the TA Consultant in Table 11 has adjusted the estimates for 2013 and compared them with 2004 to demonstrate the increase in both income and expenditure over the past decade.

Table 11: Monthly Average Income/Expenditure Per Capita

	Income		Expenditure	
	2004	**2013**	**2004**	**2013**
Viet Nam	484,000	2,613,000	397,000	1,608,000
Urban	815,000	3,541,000	652,000	2,304,000
Rural	378,000	1,776,000	314,000	1,316,000
TP Ha Noi	986,150	4,249,200	739,613	3,186,900
Urban	1,084,765	4,674,120	813,574	3,505,590
Rural	575,200	2,220,000	431,400	1,665,000
TP Ho Chi Minh	1,071,000	4,886,488	803,248	3,664,866
Urban	1,231,650	5,863,785	923,738	4,397,839
Rural	723,450	2,464,000	542,588	1,848,000

Source: Statistical Yearbook of Viet Nam, 2012 and TA 2013 Adjusted Estimates

40. In 2004 the average monthly income per capita (this covers all of Viet Nam) was 484,000 and average expenditure per capita was 397,000 with the resultant surplus of income over expenditure of VND 87,000 or a surplus of approximately 18%. By 2013 income surplus over expenditure is approximately 39% which is a highly significant difference although admittedly from a relatively low base. However, there are some significant differences for both Ha Noi (surplus in 2004 was approximately 34% but only approximately 25% in 2013) and Ho Chi Minh City (surplus in 2004 was approximately 26% and in 2013 similarly 25% with Ha Noi).

41. How are such differences explained? The most plausible explanation is that while income surpluses have increased everywhere it is in the countryside that the greatest increases have occurred. This can be linked to greater off-farm income in the non-agricultural sector, buoyant commodity prices for exportable foodstuffs and a reduction in the cost of goods and services. Nevertheless, too unequivocally state this is the only explanation is lacking in evidence and it is beyond the scope of this PSA to delve deeper into such macro-economic concerns. It is sufficient here to note that on average Viet Namese households irrespective as to their location have been living within their means if this means ensuring income exceeds expenditure since at least 2004. Whether they will continue to do so is another issue but if the data is reasonably accurate then even poorer households are able to more-or-less cope with household budgets.

42. Table 12 focuses on monthly income per capita by income quintile and is a necessary adjunct to Table 11 because it provides a stratified account of households from different socio-economic backgrounds (emphasis more on the economic dimensions than social dimensions because households at different stages in the life-cycle but from a similar social background

cannot be defined as socially different). It should come as no surprise that the poorest households have monthly incomes nine times less than the best-off households although this varies between eight times less in Ha Noi and six times less in Ho Chi Minh City suggesting higher levels of income inequality (marginally so) in Ha Noi than Ho Chi Minh City but this also serves as a baseline for a more robust estimate of monthly household incomes per capita for monitoring purposes (including resettlement impacts).

Table 12: Monthly Income Per Capita by Income Quintile (VND)

	Total HH Size	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Viet Nam	1,733,000	461,000	835,000	1,250,000	1,862,000	4,262,000
Ha Noi	2,815,000	676,000	1,226,000	1,732, 000	2,798,000	6,041,000
Urban	3,096,500	743,000	1,348,600	1,905,200	3,077,800	6,645,100
Rural	2,533,500	608,400	1,103,400	1,558,800	2,519,000	5,436,900
Ho Chi Minh	3,421,000	1,206,000	1,926,000	2,522,000	3,407,000	8,036,000
Urban	3,743,100	1,326,000	2,118,600	2,774,200	3,747,700	8,839,600
Rural	3,070,800	1,086,000	1,734,000	2,269,800	3,066,300	7,232,400

Source: Household Living Standards Survey, 2010 (adjusted for 2013 by TA Consultant)

43. In a similar manner Table 13 that quantifies monthly expenditure per capita utilising the same criteria paints a quite variegated picture of household expenditure for consumption.

Table 13: Monthly Expenditure Per Capita by Income Quintile (VND)

	Total HH Size	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Viet Nam	**1,528,363**	**441,000**	**801,050**	**1,106,000**	**1,765,000**	**3,705,215**
Ha Noi	**2,350,006**	**610,205**	**1,011,356**	**1,561,958**	**2,465,000**	**5,151,246**
Urban	2,632,006	683,429	1,132,718	1,749,392	2,760,000	5,769,395
Rural	2,115,000	549,185	910,221	1,405,763	2,515,500	5,254,471
Ho Chi Minh	**3,096,515**	**1,091,437**	**1,645,001**	**2,235,095**	**3,156,429**	**6,260,315**
Urban	3,468,096	1,221,000	1,842,401	2,503,306	3,535,200	7,011,552
Rural	2,786,864	982,294	1,479,500	2,011,586	2,840,787	5,634,284

Source: Household Living Standards Survey, 2010 (adjusted for 2013 by TA Consultant)

44. As with Table 12 this can serve as a robust baseline for EVN and is far less subject to statistical manipulation than data that might be generated at the local level by authorities either attempting to portray a favourable account of income surpluses over expenditures or on the contrary a less favourable account. Although it is also argued in this PSA that local authorities in both Ha Noi and Ho Chi Minh City because of the relevant absence of MOLISA eligible households do not need to engage in such forms of statistical manipulation. The PSA has also been able to provide data for both urban and peri-urban areas and this should prove very helpful because it quantifies the income and expenditure levels between these two areas.

G. INCIDENCE OF POVERTY

45. Based on MOLISA criteria there is very little or no poverty in either urban Ha Noi or urban Ho Chi Minh City but this is not the view of either Ha Noi and Ho Chi Minh when the US$ 2.00 per capita per day (adjusted for PPP) is utilised as in Table 14.

Table 14: Income-Based Poverty Rates in Ha Noi and Ho Chi Minh In 2013

	National Poverty Line 2013 VND500,000 per capita per month	International Poverty Line US$ 1.25 per capita per day	International Poverty Line US$ 2.00 per capita per day	Individual City's Poverty Line 2013
Both Cities	0.65	0.65	2.95	9.62
Ha Noi	1.27	1.34	4.57	1.56
Ho Chi Minh City	0.31	0.29	2.08	13.92
Urban	0.28	0.23	1.68	8.28
Rural	1.69	1.86	6.51	13.42
With Local Resident Status	0.54	0.58	3.01	9.60
Without Local Resident Status	1.16	1.03	2.64	9.74
% of People Without Local Resident Status in the Poor Population	31.31	27.36	15.59	17.63

Source: Nguyen Bui Linh (2010) and TA Estimates (2013)

46. The reason income-based poverty rates appear almost identical to those estimated in 2010 is that MOLISA raised the income-threshold for urban households to VND 500,000 per capita, per day beginning January 2011 and both cities have re-estimated their individual city's poverty line based on each of these city's specific income poverty characteristics that are more nuanced than the general urban income-based poverty line adopted by MOLISA. Moreover, both of these city's differentiate between the structural poor (those that have low incomes and few assets) and the stochastic poor (those with low incomes but are not considered poor based on the assets they own).

47. Of special relevance here and that includes for EVN is that people without local residential status (not able to enrol children in local schools, access free or subsidised healthcare, be eligible for energy subsidies or take advantage of a range of other programs targeted at the poor) are likely to be considerably poorer than even the poorest households (the Q1 of VHLSS data). In Ho Chi Minh City it is estimated that upwards of 1,000,000 people (not included in population estimates in Table 1) are in this category and a much lesser number in Ha Noi (perhaps 150,000). These are the people that live in boarding houses or share over-crowded apartments with other people and often have to pay landlords 150 to 300% more in electricity and water charges than other households. This is beyond the control of EVN because such people are only registered as guests and not the legal occupier of the building for which electricity is supplied. As will be stressed in the conclusion it is this category of person for whom sensible pro-poor approaches such as pre-payment of electricity charges could be targeted by EVN.

48. However, any assessment of poverty also requires an understanding of the household dependency ratio as is demonstrated in Table 15.

Table 15: Household Dependency Ratio by Income Quintile

	Total HH Size	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Viet Nam	42.05	45.15	43.58	42.00	41.75	39.82
Ha Noi	40.65	43.12	41.68	40.06	39.25	37.00
Urban	38.25	41.25	39.25	38.38	37.13	35.02
Rural	41.09	42.55	40.98	39.25	38.15	36.25
Ho Chi Minh	39.08	41.45	39.62	38.73	36.22	34.95
Urban	37.25	40.95	38.08	36.35	35.04	33.25
Rural	40.56	41.90	40.05	39.00	37.25	35.90

Source: Household Living Standards Survey, 2010 (adjusted for 2013 by TA Consultant)

49. It is evident from the above table that poorer households have a considerably higher dependency ratio than better-off households which is a fairly universally accepted observation made by poverty analysts. Households change over time such as when people get older and can no longer work, household members fall ill (sometimes chronically so) and can no longer contribute to the household economy, and perhaps infrequently although on the increase households decompose if a marital spouse (typically male) abandons the household. For EVN it is probably very useful to use the VHLSS to understand existing dependency ratios and accept that they may change over time.

50. When the analysis shifts to gender-related issues it is also useful to recognise that female-headed households per se might not be poor or vulnerable. There are many female-headed households in Viet Nam that are neither poor nor vulnerable. The obvious indicators to identify are the dependency ratio and whether it will change over time (e.g. females in Ha Noi on marriage often reside albeit temporarily with the parents of their marital spouse but does this mean that a female sibling will not provide some support to her maternal household especially if she is working?), to what extent household income on a monthly basis exceeds household consumption expenditure or whether a household member is chronically unwell (tuberculosis or HIV/AIDs are often causative factors). Thus to generalise based on gender alone is not a very helpful indicator.

51. Table 16 identifies some key non-income indicators to assess whether households are living in poverty.

Table 16: Non-Income Indicators for the Poor (%)

	Motorised Transport (e.g. Motor-Cycle or 4 Wheeled Vehicle)	Android mobile phone or similar	Internet connection in home	Electric air conditioner or similar for cooling/heating	Automatic washing machine	HH necessities purchased daily or less frequently
Viet Nam	34.4	16.9	29.1	37.4	43.6	42.8
Ha Noi	45.5	18.5	32.8	42.0	44.5	44.1
Urban	42.1	19.1	33.5	43.1	45.0	45.5
Rural	44.0	20.2	34.1	45.2	46.5	46.1
Ho Chi Minh	47.6	22.5	32.7	39.1	44.6	44.9
Urban	42.1	25.8	33.6	42.5	45.1	45.0
Rural	45.7	24.2	36.8	43.7	46.2	46.5

Source: Household Living Standards Survey, 2010 (adjusted for 2013 by TA Consultant)

52. The reason for identifying the above indicators is because it is argued these indicators clearly for the most part separate the poor from the non-poor. The poor in either Ha Noi or Ho Chi Minh can probably not even afford one motorcycle let alone more than one which is not uncommon among better-off households in either city (the cheapest new motorcycle retails for approximately US$ 1,500 or VND 31,620,000). In a similar manner most households in urban Ha Noi and Ho Chi Minh have at least one mobile phone and probably more. Thus this only becomes an indicator when the mobile phone is an android or similar (cheapest android is approximately US$ 100 or VND 21,080 compared to a non-smart mobile phone of US$ 18 or VND 400,000). A significant percentage of Viet Namese use the internet on a regular basis and this is not a real indicator unless a household has internet connectivity because this also pre-supposes ownership of a computer.

53. However, it is also the other indicators - ownership and use of air-conditioner/s in the home, automatic washing machine and greater tendency to use supermarkets than daily fresh markets - that are also quite important. To be able to use an air-conditioner presupposes both access to continuous electricity of sufficient wattage to operate the air-conditioner and also the financial resources to pay monthly electricity accounts. Being able to use an automatic washing machine on a regular basis presupposes that both the existing water supply and electricity supply are satisfactory and also that the financial resources are available to pay water and electricity on a monthly basis. Shopping for both dry and wet goods at supermarkets requires greater household disposable income than shopping on a daily basis but it also presupposes that households own refrigerators in which they can store perishable foods. The latter rely on an adequate supply of electricity on a continuous basis and the costs of operating a refrigerator are also an item of household expenditure.

54. Finally in this section on poverty it is also necessary to focus on households with at least one business enterprise by income quintile. In Table 17 using VHLSS data and adjust TA estimates for 2013 it is possible to quantify this important form of economic activity that is not the same as household members simply working for wages or salaries.

Table 17: Households with At Least One Business Enterprise by Income Quintile (%)

	Total N° HH	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Viet Nam	34.4	16.9	29.1	37.4	43.6	42.8
Ha Noi	45.5	18.5	32.8	42.0	44.5	44.1
Urban	42.1	19.1	33.5	43.1	45.0	45.5
Rural	44.0	20.2	34.1	45.2	46.5	46.1
Ho Chi Minh	47.6	22.5	32.7	39.1	44.6	44.9
Urban	42.1	25.8	33.6	42.5	45.1	45.0
Rural	45.7	24.2	36.8	43.7	46.2	46.5

Source: Household Living Standards Survey, 2010 (adjusted for 2013 by TA Consultant)

55. This table demonstrates that over 44% of all better-off households have at least one business enterprise while the nearly 20% of the least well-off households also have at least one business enterprise. Unfortunately data was unavailable as to the value of these business enterprises in net terms but physical observation by the TA Consultant suggests better-off households would generate at least 8 to 10 times the net profit of the least well-off households (also extrapolated from monthly per capita income levels).

56. However, it can also be concluded that even poorer households with at least one business enterprise (it might be garment assembly finishing under sub-contract or providing

beauty services and products or even operating a small restaurant or roadside market stall) are most unlikely to be living in poverty. But such households in the context of more reliable electricity supply are clients of EVN that can be negatively impacted upon by frequent power outages. If EVN can minimise such outages by improvements to the existing grid in both cities this is of direct benefit to such households.

H. RELEVANT PERI-URBAN ISSUES

57. It might seem rather odd to include some data relating to agricultural livelihood issues in peri-urban areas but it needs to be remembered that nearly 60% of households in Ha Noi live in loosely defined peri-urban areas and to understand important rural based livelihood issues especially as they relate to households that might be physically impacted upon by the project is rather important. Therefore two areas, the average yields of crops grown in these peri-urban areas and aquaculture production are included for baseline purposes. This would ostensibly assist the project during necessary resettlement planning establish more credible estimates of impacts resultant from land that might be necessary to acquire. At present PEECs assigned to undertake such investigations are not especially knowledgeable in such respects.

58. Table 18 shows that up to three rice crops per year (spring, autumn and winter) are grown in some peri-urban areas of Ho Chi Minh City but only two crops per year (spring and winter) but yields in the peri-urban areas of Ha Noi are 23% higher for the spring crop than in Ho Chi Minh and 35% higher for the winter crop. However, total net yield for the three seasonal crops in Ho Chi Minh is only 7% greater than for Ha Noi but the extant issue here is that for land clearance purposes (waiting until after crop harvest) is somewhat more problematic in Ho Chi Minh than Ha Noi. Animal feed maize yields are 31% higher in the peri-urban areas of Ha Noi but yields for green leaf vegetables are 13% higher in Ho Chi Minh than Ha Noi.

Table 18: Average Yields of Crops Grown in Peri-Urban Project Areas (Quintal/Hectare)

	Spring Rice Crop	Autumn Rice Crop	Winter Rice Crop	Animal Feed Maize	Sweet Potatoes	Green Leaf Vegetables
Viet Nam	66.2	52.5	47.7	46.7	141.6	210.5
TP Ha Noi	61.8	-	55.2	48.3	4.4	215.0
TP Ho Chi Minh	48.0	41.3	36.1	33.8	-	245.2

Source: Statistical Yearbook of Viet Nam, 2012

59. Table 19 quantifies aquaculture production in the peri-urban areas and it can be seen this activity is more important in Ha Noi than Ho Chi Minh City with the exception of shrimp-raising (this is an important export earner for Viet Nam) although in both cities all fish-based products are consumed locally.

Table 19: Aquaculture Production in Peri-Urban Project Areas

	Area of Water Surface (hectare)	Fish Catch Production (ton)	Shrimp Raising Production (ton)	Fish Raising Production (ton)	Domestic Consumption of Product (ton)	Product Destined for Export (ton)
Viet Nam	1,038,900	5,732,903	1,368,928	2,732,812	3,246,268	2,486,635
TP Ha Noi	20,800	71,384	22,594	41,565	100%	-
TP Ho Chi Minh	7,600	46,519	24,708	2,345	100%	-

Source: Statistical Yearbook of Viet Nam, 2012

60. Other activities most notably livestock-raising, especially the raising of pigs, poultry and ducks are also quite important in peri-urban areas of Ha Noi but much less so in Ho Chi Minh City with the possible exception of breeding cattle. However, Ha Noi also has a moderately large number of milking cows - consumption of dairy products more popular in the North than in the South even though major dairy processing facilities are in the South - and according to official statistics there are no milking cows in peri-urban areas of Ho Chi Minh City. But in resettlement impact terms as most of this livestock is penned rather than free-range (draft buffalo being the exception) it would be if physical structures were to be acquired that would cause some impacts, albeit minor impacts. There are no indications that a project of this nature would result in major livelihood losses for affected households raising cattle.

I. PROJECT INDUCED HIGHER TARIFFS

61. EVN and GOV will save substantial amounts of capital that can be invested in additional projects to enhance energy supply in Viet Nam but nevertheless it will need to raise tariffs to finance a project of this nature. However, because it is an ODA investment loan tariff raises should be lower than if an investment loan sourced from the domestic money market. To assist EVN and inform this PSA the TA Consultant has calculated the approximate percentage that householders in Ho Chi Minh City (as explained elsewhere GSO unable to provide names of households interviewed for the 2012 VHLSS for technical reasons) and the results of the survey on which these calculations are based are presented in Table 20.

Table 20: Average Household Monthly Consumption of Electricity (kWh) and Expenditure (VND)

Electrical Appliance	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
• Lighting	22	28	39	55	65
• Television	12	12	18	25	25
• CD/DVD Player	01	01	01	01	02
• Refrigerator	15	15	15	30	30
• Washing Machine	30	30	30	30	30
• Iron	10	15	15	15	15
• Computer	-	-	15	15	20
• Fan	10	45	20	10	10
• Air Conditioner	-	-	260	260	780
• Hot Water Shower	-	15	15	30	45
TOTAL kWh USED	**100**	**161**	**428**	**471**	**762**
Monthly Expenditure (VND)	**114,150**	**212,817**	**653,316**	**719,037**	**1,285,594**
Estimated Total Monthly HH Expenditure	**3,992,917**	**5,158,050**	**6,987,487**	**7,778,062**	**12,899,512**
Percentage of Monthly HH Expenditure	**2.0**	**4.0**	**9.0**	**9.0**	**9.0**

Source: TA Survey Undertaken in Ho Chi Minh City (November 2013)

62. The above data based on evidence derived from the TA-initiated survey of household electricity usage in urban Viet Nam is at variance with existing data that was never stratified by income-quintile except vague references being made to most households in Viet Nam in the late 1990s using less than 50 kWh per month. As the above data indicates even the poorest income-quintile is currently using double the kWh reported in the late 1990s. There are two major reasons for this: (i) data from the late 1990s covered all of Viet Nam and *ipso facto* included households either yet to be connected to the national grid in rural areas including very remote areas and many of these households were living in poverty and (ii) even the poorest urban

households (indeed all households) aspire to energise their houses not simply to provide lighting during non-daylight hours but also for reasons of convenience (refrigerators and irons are in this category), comfort (cooling and hot water showers) and entertainment/information (televisions, CD/DVD players and computers).

63. That the least well off cannot yet afford the full range of electrical appliances (despite the almost 50% reduction in the cost of new electrical appliances over the last decade does not negate the aspirational vision of even the poorest of urban households. This point was made during discussions with households that agreed to participate in this household. It also clearly suggests that for at least the poorest 40% of urban households demand for electricity is highly elastic and will continue to increase. This survey also suggests the poorest 20% could afford to pay higher tariffs based on the percentage of existing monthly expenditure required to pay for household electricity usage.

64. AWTP surveys in such contexts are of limited value. It is clearly stated by poorer households that incrementally they are seeking to acquire the full range of household electrical appliances including air-conditioners that for the poor are still relatively expensive to purchase (and existing houses probably have to be rewired) and also to operate and maintain. A greater household priority is to own and use reliable motorised transport. The top three income-quintiles spend nearly 10% of their consumption expenditure on electricity but it has to be remembered this is not their actual monthly income and the appliances they use up until less than a decade ago would have been the preserve of a very small number of households. Table 21 presents estimates of the impact of tariff increases on households from poorest 20% of households to the richest 20% of households based on the TA survey.

Table 21: Impact per Annum of Incremental Increase in Household Electricity Tariff Based on Present Usage of Electrical Appliances by Income Quintile

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
5.0% Annual Increase	119,857	223,457	685,981	754,988	1,349,873
7.5% Annual Increase	122,711	228,778	702,314	772,964	1,382,013
10.0% Annual Increase	125,565	234,098	718,647	790,940	1,414,153
12.5% Annual Increase	128,418	239,419	734,980	808,916	1,446,293
15.0% Annual Increase	131,272	244,739	751,313	826,892	1,478,433
18.5% CPI (2011)	135,267	252,188	774,179	852,058	1,523,428

Source: Household Living Standards Survey, 2010 (adjusted for 2013 by TA Consultant)

65. If EVN were to raise tariffs across the board by 10% per annum until 2020 by year 2000 Quintile 1 would be paying VND 182,640 or 4% of current average monthly household expenditure, which is double the percentage that it pays now but based on average monthly household expenditures raising by an average of 10% per annum this would offset the percentage increase in electricity tariff. However, as stated above the poorest households have aspirational needs to own and use a greater range of household electrical appliances than they use at present. But even if they increased their ownership and use equivalent to Quintile 2 between 2014 and 2020 and assuming a 10% increase per annum in average monthly household expenditures monthly household electricity bills would increase to 5% of average monthly household expenditure. This would be a 20% increase over what Quintile 2 households are spending on electricity bills monthly.

66. At the other end of the spectrum Quintile 5 households are likely to have all the electrical appliances they need and if annual tariff increases were linked to the CPI they would still be

paying approximately 9% of their monthly consumption expenditure for electricity usage. While these households could actually afford to pay more than they do at present (during discussions with the TA Team none indicated they would reduce their usage simply because they had to pay more) like all consumers they would rather not shoulder significant price increases. It appears for the time being that incremental 10% per annum increases are not opposed although Quintile 5 households also argued that when replacing electrical appliances they would examine specific models to assess whether they are energy efficient or not. This is not because they are necessarily more environmentally aware but have learned for instance that current air-conditioners are more energy-efficient, require less maintenance and are therefore a better investment. Hence price considerations with purchase, operation and maintenance of electrical appliances is generally considered a more decisive factor than whether or not such purchases are good for the physical environment.

67. The PSA sets out to demonstrate that such increases do not appear to be particularly onerous based on monthly expenditure of food per capita by income quintile and specific expenditure on alcoholic beverages per capita also on a monthly basis.

68. Table 22 based on the VHLSS of 2010 and adjusted for 2013 by the TA Consultant estimates the monthly expenditure per capita by income quintile.

Table 22: Monthly Expenditure on Food Per Capita by Income Quintile (VND)

	Total HH Size	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Viet Nam	693,000	330,000	483,000	612,000	7 81,000	1,211,000
Ha Noi	817,000	408,000	612,750	825,000	1,021,250	3,238,500
Urban	898,000	449,350	674,025	907,500	1,123,373	3,562,330
Rural	682,300	341,098	511,647	701,250	868,063	2,752,725
Ho Chi Minh	885,000	442,500	793,052	1,122,000	1,692,722	3,756,251
Urban	973,000	486,750	872,357	1,342,000	1,861,994	4,131,876
Rural	752,250	376,125	674,095	953,700	1,438,814	3,192,743

Source: Household Living Standards Survey, 2010 (adjusted for 2013 by TA Consultant)

69. Whereas Table 23 presents estimates of monthly expenditure on alcoholic beverages per capita by income quintile that also illustrate the substantive points being made in this PSA in relation to ATWP.

Table 23: Monthly Expenditure on Alcoholic Beverages per Capita by Income Quintile (VND)

	Expenditure	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Viet Nam	**18,100**	**7,100**	**10,100**	**14,300**	**22,200**	**38,900**
Ha Noi	**25,250**	**10,250**	**13,560**	**18,250**	**25,650**	**45,970**
Urban	32,600	15,250	16,000	21,005	28,345	47,500
Rural	22,450	10,100	12,960	17,520	23,875	42,300
Ho Chi Minh	**30,350**	**15,000**	**18,250**	**22,150**	**27,575**	**49,235**
Urban	32,010	17,450	20,110	25,500	29,465	52,480
Rural	28,650	14,025	17,450	20,250	24,350	46,250

Source: Household Living Standards Survey, 2010 (adjusted for 2013 by TA Consultant)

70. It can be seen from this table that people in Ha Noi and Ho Chi Minh City - whether in urban or peri-urban areas - spend more on alcoholic beverages per capita than the national average, which is hardly surprising although the TA Consultant suspects that expenditure is

under-estimated somewhat but by how much cannot be quantified for this PSA. But the fact remains even the poorest households spend some of their income on alcoholic beverages and even with tariff increase this will not impact upon such expenditures by all or at least most households (it can be remembered that males rather than females are more likely to drink greater quantities of alcoholic beverages). However, by more closely analysing such expenditures EVN is in a better position to offer evidence-driven assertions in relation to tariff increases.

J. CONCLUSION

To reiterate the point made in the introduction to this PSA that this specific project does not have direct poverty and social impacts but nevertheless will have some positive benefits for consumers, poor and otherwise and women, in both Ha Noi and Ho Chi Minh. Poor and vulnerable groups will benefit from improvements to electricity supply that should result in a greater level of economic activity leading to greater income-generation opportunities because higher-value income-generation activities are primarily based on the use of electricity. Without a reliable supply of electricity at affordable tariffs (analysis demonstrates there is considerable latitude) a project such as this will not benefit the poor and vulnerable. The PSA has provided a more nuanced baseline for which EVN can use to assess such impacts and its importance is reflected in the fact that it has wherever possible relied on robust evidence driven socio-economic data.

71. The PSA also takes cognizance of the fact that there are a significant number of unserved potential consumers partly as a result of their residential status. As the PSA has demonstrated such non-residents are often forced to pay up to 300% the current EVN tariff and are not eligible for energy subsidies. EVN can probably do little to rectify this situation although it could expand its pre-paid meter system although this is also contingent on electricity connections that hitherto excluded consumers have some control over. This is a distributional problem to ensure such poorer and vulnerable consumers pay no more than other users for electricity supplied by EVN.

72. It has been demonstrated (stating perhaps the obvious) that women are the most important managers in most households and are especially supportive of any project that will ensure a reliable supply of electricity. There is a high degree of frustration and inconvenience when power outages occur especially during peak periods such as during meal preparation or when children are doing their homework. But frequent power outages are also a source of income lost especially for women who are working from home in activities ranging from preparing food for sale to garment assembly to the provision of beauty services. Of course the same applies to men who operate small businesses from home or on informal basis on the street.

73. This sector project is not an effective gender mainstreaming project - indeed it could not be for reasons identified in the PSA - but there is plenty of scope for PMUs to ensure that at least 30% of technical and managerial positions should be allocated to suitably qualified women. This does not enhance gender outreach activities (resettlement implementation does provide limited opportunities) but it serves to empower women within EVN given that at least 50% of its consumers are women and if the household manager thesis is to be taken seriously women are more important in this context than men. However, there is some evidence that EVN HANOI and EVN HCMC recognise the value of their female employees but this value can be valorised by women employees being accorded greater decision-making roles in the organisation.

74. Apart from benefits for the poor and women the PSA has reinforced the argument that there is still an unmet demand for electricity in Ha Noi and Ho Chi Minh. While at least 20% of households might have all the electrical appliances they consider it necessary for their physical and social quality of life the other 80% are very interested as their incomes rise and prices for electrical appliances fall to purchase and use more electrical appliances. High expense electrical appliances such as air-conditioners are still out of reach for at least 60% of the population but the purchase of refrigerators, washing machines and steam irons are considered priorities by all households irrespective of their income status. The use of such appliances will of course increase electricity consumption and monthly household expenditure but this does not appear to concern most households.

75. Underpinning all the above-mentioned points is also the major point that EVN by financing grid development in both Ha Noi and Ho Chi Minh City partly via an ADB loan is able to finance these improvements at a lower investment cost than if it were necessary to finance these improvements with domestic sources of financing. This in turn enables EVN to avoid very substantial tariff increases (these can be quantified) that would impact upon consumers especially poor and vulnerable consumers (and as both Ha Noi and Ho Chi Minh City have demonstrated the incidence of poverty is significantly higher than simply relying on MOLISA income poverty thresholds. But using ODA sourced finance EVN and the GOV also enables small enterprises that employ 61% of waged and salary earners in Ha Noi and 71% in Ho Chi Minh City to better able maintain levels of profitable economic activity. Hence this sector project not only benefits individual household consumers but also economically important small enterprises.

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