

Water Utility: Hanoi Water Business Company (HWBC)

Hanoi, Hanoi, Vietnam

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Services Provided: Piped water, , , ,

Utility Type: , , , State Owned Enterprise, , ,

Private Sector Involvement: None, , , , ,

Source of Raw Water: , , , Groundwater,

Treatment Method: , Disinfection, Filtration, Flocculation and sedimentation, Aeration, ,

Water Supply System description:

Production capacity = 382,209 m3/day		Distribution network = 742 km		Storage capacity = 69,000 m3	
Area of Responsibility		Present Service Area			
Area (sq km)	253	177			
Population	3,007,000	2,170,600			
No. of Towns = 1		Population served = 2,104,900			
<u>No. of connections:</u>		Domestic (Households) = 252,531		Non Domestic = 5,384	
Typical service connection length = m		Total Connections = 257,915		Connections with operating meter =	
System input volumes:	Produced by W.U. = 135.5 million m3/year	Bulk water imported = 4.0 million m3/year		Ave. meter inaccuracy = 6% of metered cons.	
Water consumption:	Metered cons. = 78.1 million m3/year	% Unmetered cons. = 1% of metered cons.			
Water Sales:	Domestic = 54.7 million m3/year	Non Domestic = 23.4 million m3/year		Bulk Water sales = zero	
<u>System Performance:</u>	No. of connections with intermittent supply = 51,583		Typical duration of supply = 24.0 hours / day		
	No. of pipe breaks in distribution system = 1,360 / year		Typical water pressure in mains = 8 m.		
Chlorine Residuals:	Tests required = 1,320 / year	Tests carried out = 1,167 / year		Tests passed = 153 / year	

Human Resources (Staff)

<u>Type of employment:</u>	Permanent staff: salaried Government employees, Permanent staff: with contract, Casual/part-time: contract staff, , Contracted out to outside company/agency,				
<u>No. of staff (FTE):</u>	Corporate Services = 209	Water Supply = 1,555	Other = zero	Total = 1,764	
<u>Staff Training:</u>	No. Trained = 454 / year	Training days = 271 / year	Training costs = 0.06% of total operating budget		

Customer information

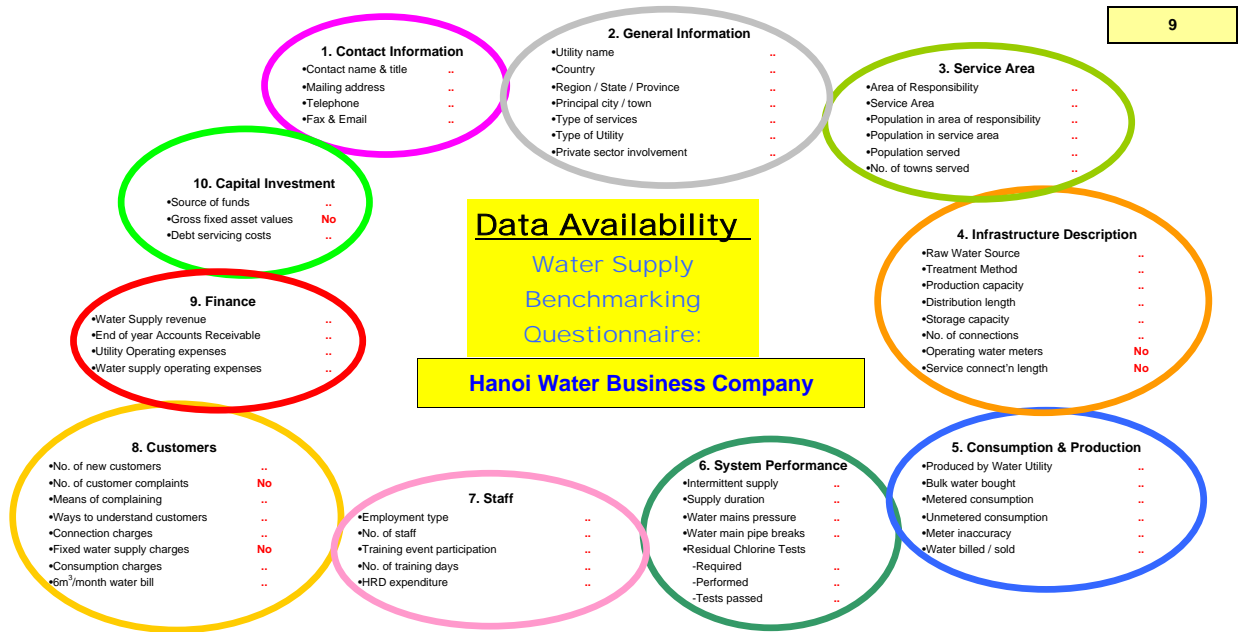
Customer interaction:	New connections = 30,793 / year	Customer complaints = N/A
Complaint method:	In person, By telephone, , By letter, Other method: Through newspaper	
Understanding customers by:	Customer interactions, Responding to complaints, , ,	

Charges & Fees

<u>Typical connection charge:</u>		Domestic = 295VND / conn.		Non Domestic = 700,000VND / conn.	
		N/A		(44 US\$ / conn.)	
<u>Fixed water charge:</u>		Domestic = N/A		Non Domestic = N/A	
		N/A		Bulk water sales = N/A	
<u>Water consumption tariff</u> (typical of all towns and in each category):		Tariff Block 1	Tariff Block 2	Tariff Block 3	Tariff Block 4
Domestic	From - To (m ³)				
	Price (VND / m3)	2,000			
	(US\$ / m ³)	\$0.13			
Non Domestic	From - To (m ³)				
	Price (VND / m3)	4,500			
	(US\$ / m ³)	\$0.29			
Bulk Water	From - To (m ³)				
	Price (VND / m3)				
	(US\$ / m ³)				
		Water bill for household consuming 6 m ³ /month =		12,000 VND / month	(0.76 US\$ / month)

Finances

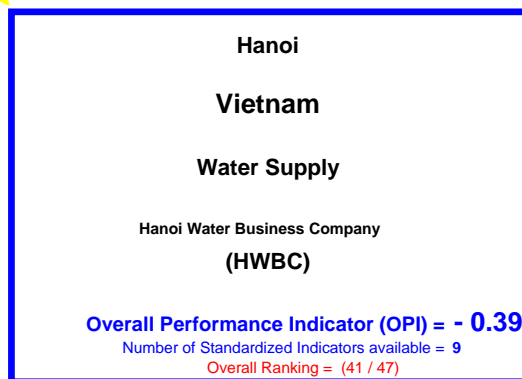
<u>Revenue:</u>	Water Sales	Other water related	Subsidies & grants	Total	Year end Accounts Receivable
	VND / year	139,518,000,000	29,388,000,000	zero	168,906,000,000
	US\$ / year	\$8,847,612	\$1,863,657	zero	\$10,711,269
<u>Operating Expenses:</u>	Water supply	Other services	Company Overhead	Total	
	VND / year	148,949,000,000	zero	10,494,000,000	159,443,000,000
	US\$ / year	\$9,445,685	zero	\$665,483	\$10,111,167
<u>Water Supply Operating breakup:</u>	Labor	Electricity	Chemicals & materials	Contracted out	Other expenses
	VND / year	34,507,000,000	51,132,000,000	16,993,000,000	6,176,000,000
	US\$ / year	\$2,188,281	\$3,242,565	\$1,077,621	\$391,655
<u>Investment funds source:</u> Own internal funds, Grant from Government or ODA project, , Loan from ODA sources, , , Other method: Loan from WB					
<u>Fixed Assets value:</u>	Water supply	Other services	Company Overhead	Total	Debt Servicing Costs
	VND	558,654,000,000	zero	zero	558,654,870,000
	US\$	\$35,427,357	zero	zero	\$35,427,413



Calculation of Overall Performance Indicator (OPI)

Customer Indicators	Value	Rank
Service Coverage in existing service area (%)	97.0%	(10 / 45)
Meter coverage (% with operating water meter)	#N/A	
Customer complaints / 1000 connections	#N/A	

Water Supply Systems O&M	Value	Rank
Supply Continuity (% of time water available)	100.0%	(1 / 47)
Residual Chlorine tests passed (%)	13.1%	(34 / 34)
Total Unmetered Consumption (% of metered cons.)		
Infrastructure Leakage Index [ILI]	#N/A	



Human Resource Indicators	Value	Rank
Total water related staff / 1000 connections	6.8	(19 / 38)
Investment in staff training (days / staff)	0.2	(25 / 33)
Ave. cost of employment / staff (% of per capita GNI)	258%	(15 / 37)

Financial Indicators	Value	Rank
Operating Cost Coverage (water sales only)	0.88	(37 / 43)
Unit water cost (US\$ / m ³ of system input)	\$0.07	(6 / 43)
Water system asset value / Prod'n capacity (US\$ / m ³ /day)	\$93	(14 / 35)
Debt servicing ratio (% of total operating revenue)		

Financial Indicators: Annual expenses & revenue

<u>Operating Cost Coverage</u>		<u>Expenses</u>	
Operating Cost Coverage (water sales only)	0.88	Overhead expenses / Total Operating expenses ratio	0.07
Operating Cost Coverage (total revenue)	1.06	Labour costs / Water operating expenses	0.23
		Electricity costs / Water operating expenses	0.34
		Chemical & other materials costs / Water operating expenses	0.11
		Contracted out services costs / Water operating expenses	0.04
<u>Revenue</u>		Unit water cost	(US\$ / m ³ of metered cons.) 0.13
Water sales revenue / Total revenue ratio	0.83		(US\$ / m ³ of system input) 0.07
Subsidies & Grants / Total revenue ratio	0.00		
Revenue Collection period (months)	4.76	Debt servicing ratio (% of total operating revenue)	11.6%
Unit water price - ave. (US\$ / m ³ of metered cons.)	0.11		

Fixed Assets

Corporate Fixed Assets / Total Fixed Assets	#N/A
Water system asset values	
Asset value / Total water related assets	#N/A
Asset value / Prod'n capacity (US\$ / m ³ /day)	93
Asset value / pipe length (US\$ / m. pipe)	48
Asset value / Customer (US\$ / conn.)	137

System Input

Production capacity utilization (%)	97%
Bulk water imported (% of total system input)	3%
System Input Rate (litres/person/day)	182
(m ³ /connection/month)	45.0
System Input / Distribution ratio (m ³ /day per km pipe)	515.0
System Input / Storage ratio (m ³ /day per m ³ storage)	5.5
Supply Continuity (% customers with continuous supply)	80%
Supply Continuity (% of time water available)	100%

Hanoi Vietnam Water Supply

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OPI Ranking = 41 / 47

Human Resource Indicators

<u>Human Resource Utilisation</u>		<u>Human Resource Development</u>	
Overhead staff ratio (% of total FTE staff)	12%	Staff Training participation rate (% staff)	26%
Water supply staff ratio (% of total FTE staff)	88%	Staff Training duration rate (days / staff)	0.2
Total water related staff / 1000 connections	6.80	Investment in staff training (% of direct labour costs)	0.26%
Direct water supply staff		Investment in staff training (% of total operating costs)	0.06%
Staff / 1000 connections	6.00	<u>Human Resources Costs</u>	
Staff / 1000 m ³ /day system input	4.10	Ave. cost of employment / staff (% of per capita GNI)	2.58
Staff / 100 km of pipework	209.50	Contracting out services / in-house Labour costs ratio	0.20

Distribution

Distribution / customer (m. pipe per connection)	2.9
Storage / customer (m ³ per connection)	0.30
Residual Chlorine	
Sampling compliance (%)	88%
Tests passed (%)	13%
Non Revenue Water (UFW)	
% of System Input	44%
m ³ / km / day	226.7
m ³ / connection / day	0.65
NRW adjusted for continuous supply (% of System Input)	44%
Unbilled Authorized & Unauthorized Cons. (% of metered cons.)	-5%
Unmetered cons. due to meter inaccuracies (% of metered cons.)	6%
Total Unmetered Consumption (% of metered cons.)	1%
Infrastructure Leakage Index [ILI]	#N/A
Mains failures ratio (breaks / km pipe / year)	1.80

Water consumption

Bulk water exported (% of total metered cons.)	0%
Average domestic water charges (% of per capita GNI)	1%
Metered consumption rate	
- Domestic (litres/person/day)	71
- Total Cons. (litres/person/day)	102
(m ³ /conn/month)	25
Total consumption - metered & unmetered	
(litres/person/day)	102.00
(m ³ /conn/month)	25.00
Domestic share of total metered consumption (%)	70%
Non Domestic share of total metered consumption (%)	30%

Demography

Average town / city size (persons / town)	3,007,000
Population density in area of responsibility (persons/sq.km)	11,890
Population density in existing service area (persons/sq.km)	12,261
Average Household size (persons / domestic connection)	8

Customer Interactions

Customer complaints / 1000 connections	#N/A
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Connections

Service Coverage in area of responsibility (%)	70%
Service Coverage in existing service area (%)	97%
Domestic / Non-Domestic connections ratio	46.9
Domestic / Non-Domestic consumption rate ratio	2.3
New connection growth rate (% / year)	12%
New domestic connection cost (US\$ / connection)	0
New domestic connections (% of per capita GNI)	0%
Meter coverage (% with operating water meter)	#N/A
Billed unmetered consumption (% of metered cons.)	0%

Water Sales & Production Information

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