

Water Utility: **Universal Utilities (UU)**
Sattaheep, Chonburi Province, Bangkok, Thailand

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Services Provided: Piped water, , , ,

Utility Type: , , , , , Private,

Private Sector Involvement: , , , Lease Contract, , ,

Source of Raw Water: Bulk water from other utility, , , ,

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

Water Supply System description:

Production capacity = 12,000 m3/day		Distribution network = 149 km		Storage capacity = 3,000 m3	
Area of Responsibility		Present Service Area			
Area (sq km)	160	160			
Population	100,000	100,000			
No. of Towns = 4		Population served = 26,000			
<u>No. of connections:</u>		Domestic (Households) = 6,499		Non Domestic = 781	
Typical service connection length = 10 m				Total Connections = 7,280	
Connections with operating meter = 7,280					
System input volumes:	Produced by W.U. = 0.0 million m3/year	Bulk water imported = 3.6 million m3/year			
Water consumption:	Metered cons. = 2.9 million m3/year	% Unmetered cons. = 16% of metered cons.		Ave. meter inaccuracy = 1% of metered cons.	
Water Sales:	Domestic = 1.9 million m3/year	Non Domestic = 0.0 million m3/year		Bulk Water sales = 1.0 million m3/year	
<u>System Performance:</u>	No. of connections with intermittent supply = N/A		Typical duration of supply = 24.0 hours / day		
	No. of pipe breaks in distribution system = 343 / year		Typical water pressure in mains = 10 m.		
Chlorine Residuals:	Tests required = 365 / year	Tests carried out = 365 / year		Tests passed = 365 / year	

Human Resources (Staff)

<u>Type of employment:</u>	, Permanent staff, with contract, , , ,				
<u>No. of staff (FTE):</u>	Corporate Services = 5	Water Supply = 11	Other = 4	Total = 20	
<u>Staff Training:</u>	No. Trained = 20 / year	Training days = 80 / year	Training costs = N/A		

Customer information

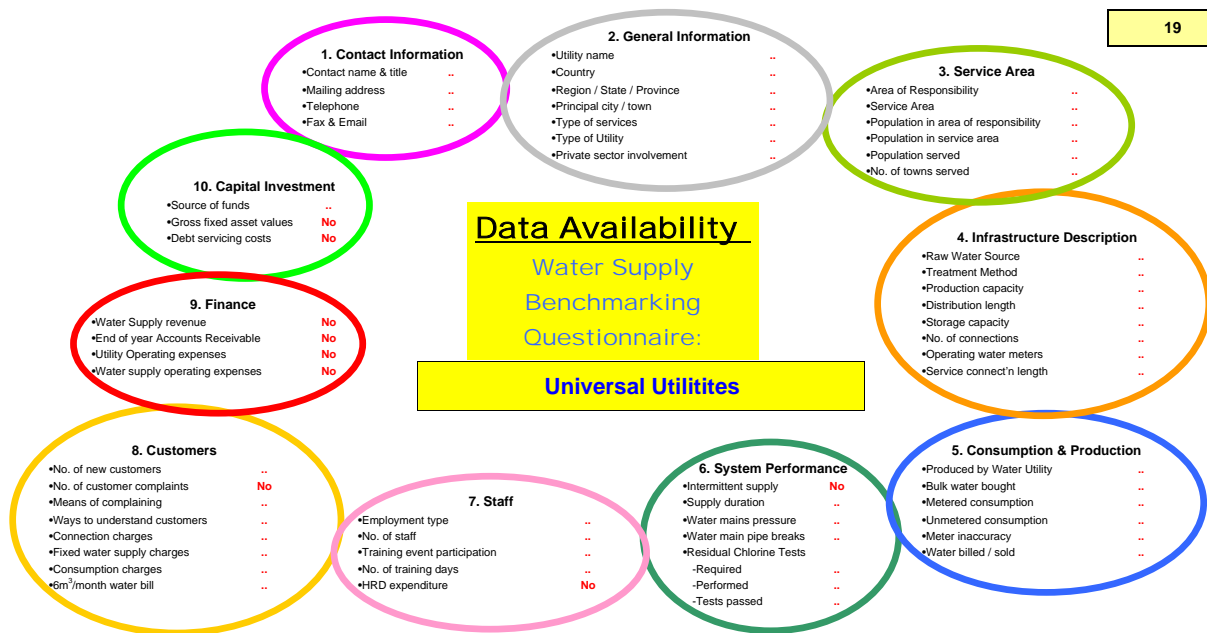
Customer interaction:	New connections = 740 / year	Customer complaints = N/A
Complaint method:	In person, By telephone, By email, By letter,	
Understanding customers by:	Customer interactions, Responding to complaints, , ,	

Charges & Fees

<u>Typical connection charge:</u>		Domestic = 2,900THB / conn. (75 US\$ / conn.)		Non Domestic = 4,100THB / conn. (106 US\$ / conn.)	
<u>Fixed water charge:</u>		Domestic = 30THB / month (1 US\$ / conn.)		Non Domestic = 50THB / month (1 US\$ / conn.)	
<u>Bulk water sales = 50THB / month (1 US\$ / conn.)</u>					
<u>Water consumption tariff (typical of all towns and in each category):</u>		Tariff Block 1	Tariff Block 2	Tariff Block 3	Tariff Block 4
Domestic	From - To (m ³)	0 - 10	10 - 20	20 - 30	>30
	Price (THB / m3)	8	9	11	15
	(US\$ / m ³)	\$0.20	\$0.22	\$0.28	\$0.39
Non Domestic	From - To (m ³)	0 - 10	10 - 20	20 - 30	>30
	Price (THB / m3)	10	12	15	18
	(US\$ / m ³)	\$0.25	\$0.32	\$0.37	\$0.46
Bulk Water	From - To (m ³)				
	Price (THB / m3)				
	(US\$ / m ³)				
Water bill for household consuming 6 m ³ /month =		47 THB / month		(1.20 US\$ / month)	

Finances

<u>Revenue:</u>	Water Sales	Other water related	Subsidies & grants	Total	Year end Accounts Receivable
	zero	zero	zero	zero	zero
	zero	zero	zero	zero	zero
<u>Operating Expenses:</u>	Water supply	Other services	Company Overhead	Total	
	zero	zero	zero	zero	
	zero	zero	zero	zero	
<u>Water Supply Operating breakup:</u>	Labor	Electricity	Chemicals & materials	Contracted out	Other expenses
	zero	zero	zero	zero	zero
	zero	zero	zero	zero	zero
<u>Investment funds source:</u> , , , , , Private sector investment,					
<u>Fixed Assets value:</u>	Water supply	Other services	Company Overhead	Total	Debt Servicing Costs
	zero	zero	zero	zero	zero
	zero	zero	zero	zero	zero



Calculation of Overall Performance Indicator (OPI)

Customer Indicators	Value	Rank
Service Coverage in existing service area (%)	26.0%	(45 / 45)
Meter coverage (% with operating water meter)	100.0%	(1 / 46)
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 (%)	100.0%	(1 / 34)
Total Unmetered Consumption (% of metered cons.)		
Infrastructure Leakage Index [ILI]	7.9	(8 / 26)

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Overall Performance Indicator (OPI) = 0.26
Number of Standardized Indicators available = 7
Overall Ranking = (8 / 47)

Human Resource Indicators	Value	Rank
Total water related staff / 1000 connections	2	(2 / 38)
Investment in staff training (days / staff)	4	(5 / 33)
Ave. cost of employment / staff (% of per capita GNI)	#N/A	

Financial Indicators	Value	Rank
Operating Cost Coverage (water sales only)	#N/A	
Unit water cost (US\$ / m ³ of system input)	#N/A	
Water system asset value / Prod'n capacity (US\$ / m ³ /day)	#N/A	
Debt servicing ratio (% of total operating revenue)	#N/A	

Financial Indicators: Annual expenses & revenue

Operating Cost Coverage		Expenses	
Operating Cost Coverage (water sales only)	#N/A	Overhead expenses / Total Operating expenses ratio	#N/A
Operating Cost Coverage (total revenue)	#N/A	Labour costs / Water operating expenses	#N/A
		Electricity costs / Water operating expenses	#N/A
		Chemical & other materials costs / Water operating expenses	#N/A
		Contracted out services costs / Water operating expenses	#N/A
Revenue			
Water sales revenue / Total revenue ratio	#N/A	Unit water cost (US\$ / m ³ of metered cons.)	#N/A
Subsidies & Grants / Total revenue ratio	#N/A	(US\$ / m ³ of system input)	#N/A
Revenue Collection period (months)	#N/A	Debt servicing ratio (% of total operating revenue)	#N/A
Unit water price - ave. (US\$ / m ³ of metered cons.)	#N/A		

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)	#N/A
Asset value / pipe length (US\$ / m. pipe)	#N/A
Asset value / Customer (US\$ / conn.)	#N/A

System Input

Production capacity utilization (%)	0%
Bulk water imported (% of total system input)	100%
System Input Rate (litres/person/day)	281
(m ³ /connection/month)	31.0
System Input / Distribution ratio (m ³ /day per km pipe)	67.0
System Input / Storage ratio (m ³ /day per m ³ storage)	3.3
Supply Continuity (% customers with continuous supply)	#N/A
Supply Continuity (% of time water available)	100%

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OPI Ranking = 8 / 47

Human Resource Indicators

Human Resource Utilisation		Human Resource Development	
Overhead staff ratio (% of total FTE staff)	25%	Staff Training participation rate (% staff)	100%
Water supply staff ratio (% of total FTE staff)	55%	Staff Training duration rate (days / staff)	4.0
Total water related staff / 1000 connections	2.00	Investment in staff training (% of direct labour costs)	#N/A
Direct water supply staff		Investment in staff training (% of total operating costs)	#N/A
Staff / 1000 connections	1.50	Human Resources Costs	
Staff / 1000 m ³ /day system input	1.10	Ave. cost of employment / staff (% of per capita GNI)	#N/A
Staff / 100 km of pipework	7.40	Contracting out services / in-house Labour costs ratio	#N/A

Distribution

Distribution / customer (m. pipe per connection)	20.5
Storage / customer (m ³ per connection)	0.40
Residual Chlorine	
Sampling compliance (%)	100%
Tests passed (%)	100%
Non Revenue Water (UFW)	
% of System Input	21%
m ³ / km / day	14.0
m ³ / connection / day	0.29
NRW adjusted for continuous supply (% of System Input)	21%
Unbilled Authorized & Unauthorized Cons. (% of metered cons.)	15%
Unmetered cons. due to meter inaccuracies (% of metered cons.)	1%
Total Unmetered Consumption (% of metered cons.)	16%
Infrastructure Leakage Index [ILI]	7.90
Mains failures ratio (breaks / km pipe / year)	2.30

Water consumption

Bulk water exported (% of total metered cons.)	34%
Average domestic water charges (% of per capita GNI)	#N/A
Metered consumption rate	
- Domestic (litres/person/day)	200
- Total Cons. (litres/person/day)	201
	(m ³ /conn/month)
	22
Total consumption - metered & unmetered	
	(litres/person/day)
	233.00
	(m ³ /conn/month)
	25.00
Domestic share of total metered consumption (%)	66%
Non Domestic share of total metered consumption (%)	0%

Demography

Average town / city size (persons / town)	25,000
Population density in area of responsibility (persons/sq.km)	625
Population density in existing service area (persons/sq.km)	625
Average Household size (persons / domestic connection)	4

Customer Interactions

Customer complaints / 1000 connections	#N/A
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Connections

Service Coverage in area of responsibility (%)	26%
Service Coverage in existing service area (%)	26%
Domestic / Non-Domestic connections ratio	8.3
Domestic / Non-Domestic consumption rate ratio	1.9
New connection growth rate (% / year)	10%
New domestic connection cost (US\$ / connection)	75
New domestic connections (% of per capita GNI)	1%
Meter coverage (% with operating water meter)	100%
Billed unmetered consumption (% of metered cons.)	0%

Water Sales & Production Information

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