

**Water Utility: Eastern Water Resources Development & Management PCI (East Water)**

Eastern Seaboard Area, Bangkok, Thailand

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**Services Provided:** Piped water, , , , Other: Raw water supply

**Utility Type:** , , , , Private,

**Private Sector Involvement:** , , , , Concession Contract, BOOT, BOT Contract,

**Source of Raw Water:** , Storage reservoir/impoundment, Direct river abstraction, ,

**Treatment Method:** None, , , , ,

**Water Supply System description:**

Production capacity = 900,000 m3/day		Distribution network = 232 km		Storage capacity = 2,320,000 m3	
Area of Responsibility		Present Service Area			
Area (sq km)	36,500	18,029			
Population	3,900,000	2,600,000			
No. of Towns = 3		Population served =			
<u>No. of connections:</u>		Domestic (Households) =		Non Domestic = 42	
Typical service connection length = m		Total Connections = 42		Connections with operating meter = 42	
System input volumes:	Produced by W.U. = 206.0 million m3/year		Bulk water imported = zero		
Water consumption:	Metered cons. = zero		% Unmetered cons. = 3% of metered cons.		Ave. meter inaccuracy = 3% of metered cons.
Water Sales:	Domestic = zero		Non Domestic = zero		Bulk Water sales = zero
<u>System Performance:</u>	No. of connections with intermittent supply = 42		Typical duration of supply = 24.0 hours / day		
	No. of pipe breaks in distribution system = N/A		Typical water pressure in mains = 80 m.		
Chlorine Residuals:	Tests required = N/A		Tests carried out = N/A		Tests passed = N/A

**Human Resources (Staff)**

<u>Type of employment:</u> , Permanent staff: with contract, , , Contracted out to outside company/agency, Other: Permanent Staff- Salaried Employee					
<u>No. of staff (FTE):</u>	Corporate Services = zero	Water Supply = zero	Other = zero	Total = zero	
<u>Staff Training:</u>	No. Trained = N/A	Training days = N/A	Training costs = N/A		

**Customer information**

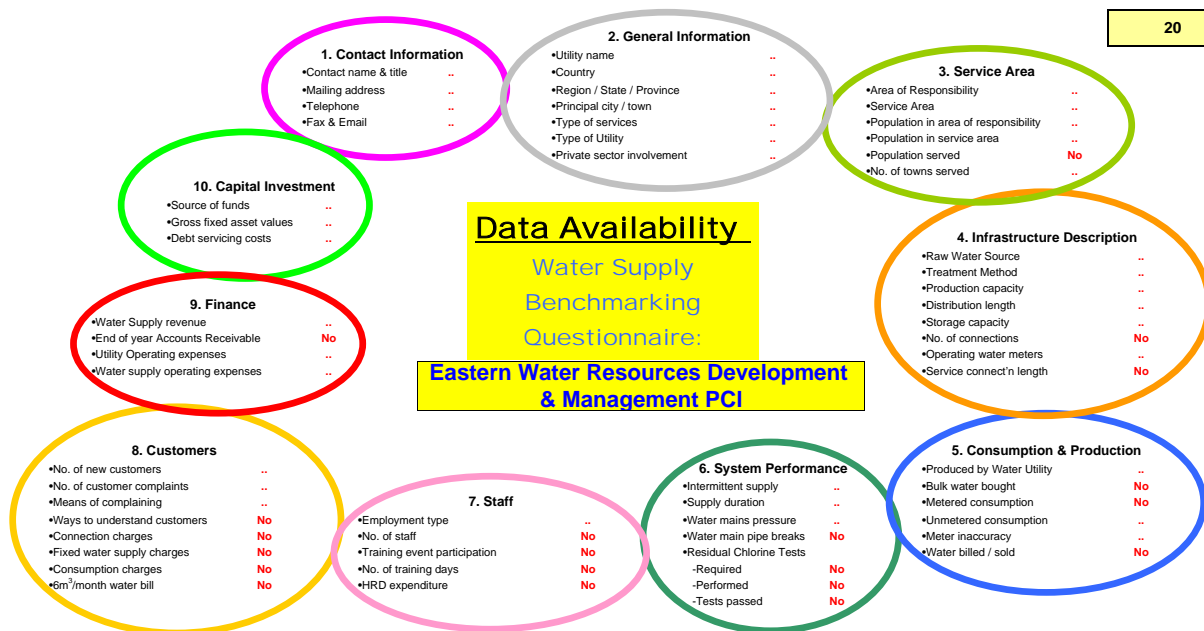
Customer interaction:	New connections = 4 / year	Customer complaints = 15 / year
Complaint method: In person, By telephone, By email, , Other method: Customer satisfaction surveys		
Understanding customers by: , , ,		

**Charges & Fees**

<u>Typical connection charge:</u>		Domestic = N/A		Non Domestic = N/A	
		N/A		N/A	
<u>Fixed water charge:</u>		Domestic = N/A		Non Domestic = N/A	
		N/A		Bulk water sales = N/A	
		N/A		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 <sup>3</sup> )				
	Price (THB / m3)				
	(US\$ / m <sup>3</sup> )				
Non Domestic	From - To (m <sup>3</sup> )				
	Price (THB / m3)	8			
	(US\$ / m <sup>3</sup> )	\$0.19			
Bulk Water	From - To (m <sup>3</sup> )				
	Price (THB / m3)				
	(US\$ / m <sup>3</sup> )				
Water bill for household consuming 6 m <sup>3</sup> /month =				N/A	N/A

**Finances**

<u>Revenue:</u>	Water Sales	Other water related	Subsidies & grants	Total	Year end Accounts Receivable	
	THB / year	1,257,000,000	32,000,000	zero	1,289,000,000	
	US\$ / year	\$32,410,356	\$825,085	zero	\$33,235,440	zero
<u>Operating Expenses:</u>	Water supply	Other services	Company Overhead	Total		
	THB / year	469,000,000	6,000,000	288,000,000	790,000,000	
	US\$ / year	\$12,092,647	\$154,703	\$7,425,762	\$20,369,277	
<u>Water Supply Operating breakup:</u>	Labor	Electricity	Chemicals & materials	Contracted out	Other expenses	
	THB / year	56,000,000	137,000,000	90,000,000	94,000,000	216,000,000
	US\$ / year	\$1,443,898	\$3,532,394	\$2,320,551	\$2,423,686	\$5,569,321
<u>Investment funds source:</u> Own internal funds, , , , Private sector investment,						
<u>Fixed Assets value:</u>	Water supply	Other services	Company Overhead	Total	Debt Servicing Costs	
	THB	2,652,000,000	zero	393,000,000	3,045,000,000	128,000,000
	US\$	\$68,378,889	zero	\$10,133,071	\$78,511,960	\$3,300,339



## Calculation of Overall Performance Indicator (OPI)

Customer Indicators	Value	Rank
Service Coverage in existing service area (%)	#N/A	
Meter coverage (% with operating water meter)	100.0%	(1 / 46)
Customer complaints / 1000 connections	357.1	(6 / 41)

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

**Eastern Seaboard Area**

**Thailand**

**Water Supply**

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**Overall Performance Indicator (OPI) = 0.34**  
 Number of Standardized Indicators available = 4  
 Overall Ranking = (6 / 41)

Human Resource Indicators	Value	Rank
Total water related staff / 1000 connections	#N/A	
Investment in staff training (days / staff)	#N/A	
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 <sup>3</sup> of system input)	#N/A	
Water system asset value / Prod'n capacity (US\$ / m <sup>3</sup> /day)	\$76	(10 / 35)
Debt servicing ratio (% of total operating revenue)		

Financial Indicators: Annual expenses & revenue			
Operating Cost Coverage		Expenses	
Operating Cost Coverage (water sales only)	#N/A	Overhead expenses / Total Operating expenses ratio	0.37
Operating Cost Coverage (total revenue)	#N/A	Labour costs / Water operating expenses	0.12
		Electricity costs / Water operating expenses	0.29
Revenue		Chemical & other materials costs / Water operating expenses	0.19
Water sales revenue / Total revenue ratio	0.98	Contracted out services costs / Water operating expenses	0.20
Subsidies & Grants / Total revenue ratio	0.00		
		Unit water cost (US\$ / m <sup>3</sup> of metered cons.)	#N/A
Revenue Collection period (months)	#N/A	(US\$ / m <sup>3</sup> of system input)	#N/A
Unit water price - ave. (US\$ / m <sup>3</sup> of metered cons.)	#N/A	Debt servicing ratio (% of total operating revenue)	9.9%

Fixed Assets	
Corporate Fixed Assets / Total Fixed Assets	0.13
Water system asset values	
Asset value / Total water related assets	#N/A
Asset value / Prod'n capacity (US\$ / m <sup>3</sup> /day)	76
Asset value / pipe length (US\$ / m. pipe)	#N/A
Asset value / Customer (US\$ / conn.)	#N/A

System Input	
Production capacity utilization (%)	63%
Bulk water imported (% of total system input)	0%
System Input Rate (litres/person/day)	#N/A
(m <sup>3</sup> /connection/month)	#N/A
System Input / Distribution ratio (m <sup>3</sup> /day per km pipe)	2433.0
System Input / Storage ratio (m <sup>3</sup> /day per m <sup>3</sup> storage)	0.2
Supply Continuity (% customers with continuous supply)	0%
Supply Continuity (% of time water available)	100%

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**OPI Ranking = 6 / 47**

Human Resource Indicators			
<b>Human Resource Utilisation</b>		<b>Human Resource Development</b>	
Overhead staff ratio (% of total FTE staff)	#N/A	Staff Training participation rate (% staff)	#N/A
Water supply staff ratio (% of total FTE staff)	#N/A	Staff Training duration rate (days / staff)	#N/A
		Investment in staff training (% of direct labour costs)	#N/A
		Investment in staff training (% of total operating costs)	#N/A
Total water related staff / 1000 connections	#N/A		
Direct water supply staff		<b>Human Resources Costs</b>	
Staff / 1000 connections	#N/A	Ave. cost of employment / staff (% of per capita GNI)	#N/A
Staff / 1000 m <sup>3</sup> /day system input	#N/A	Contracting out services / in-house Labour costs ratio	1.70
Staff / 100 km of pipework	#N/A		

Distribution	
Distribution / customer (m. pipe per connection)	#N/A
Storage / customer (m <sup>3</sup> per connection)	#N/A
Residual Chlorine	
Sampling compliance (%)	#N/A
Tests passed (%)	#N/A
Non Revenue Water (UFW)	
% of System Input	#N/A
m <sup>3</sup> / km / day	#N/A
m <sup>3</sup> / connection / day	#N/A
NRW adjusted for continuous supply (% of System Input)	#N/A
Unbilled Authorized & Unauthorized Cons. (% of metered cons.)	0%
Unmetered cons. due to meter inaccuracies (% of metered cons.)	3%
Total Unmetered Consumption (% of metered cons.)	3%
Infrastructure Leakage Index [ILI]	#N/A
Mains failures ratio (breaks / km pipe / year)	0.00

Water consumption			
Bulk water exported (% of total metered cons.)			#N/A
Average domestic water charges (% of per capita GNI)			#N/A
Metered consumption rate	- Domestic (litres/person/day)		#N/A
	- Total Cons. (litres/person/day)		#N/A
	(m <sup>3</sup> /conn/month)		#N/A
Total consumption - metered & unmetered	(litres/person/day)		#N/A
	(m <sup>3</sup> /conn/month)		#N/A
Domestic share of total metered consumption (%)			#N/A
Non Domestic share of total metered consumption (%)			#N/A

Demography	
Average town / city size (persons / town)	1,300,000
Population density in area of responsibility (persons/sq.km)	107
Population density in existing service area (persons/sq.km)	144
Average Household size (persons / domestic connection)	#N/A
Customer Interactions	
Customer complaints / 1000 connections	357

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

