

Water Utility: PDAM Kabupaten Banyumas (PDAM Kab Banyumas)

Purwokerto, Central Java , Indonesia

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Services Provided: Piped water, , , ,
Utility Type: , , Statutory organisation, , , ,

Private Sector Involvement: None, , , , ,

Source of Raw Water: , , , Groundwater,

Treatment Method: , Disinfection, , , , ,

Water Supply System description:

Production capacity = 42,053 m3/day		Distribution network = 570 km		Storage capacity = 4,000 m3
Area of Responsibility		Present Service Area		
Area (sq km)	184	165		
Population	1,528,234	236,082		
No. of Towns = 10		Population served = 236,082		
<u>No. of connections:</u>	Domestic (Households) = 30,002	Non Domestic = 3,557	Total Connections = 33,559	
Typical service connection length = 6 m		Connections with operating meter = 33,559		
System input volumes:	Produced by W.U. = 13.9 million m3/year	Bulk water imported = zero		
Water consumption:	Metered cons. = 13.8 million m3/year	% Unmetered cons. = 29% of metered cons.	Ave. meter inaccuracy = 10% of metered cons.	
Water Sales:	Domestic = 8.7 million m3/year	Non Domestic = 1.1 million m3/year	Bulk Water sales = zero	
<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 = 937 / year		Typical water pressure in mains = 10 m.		
Chlorine Residuals:	Tests required = 924 / year	Tests carried out = 187 / year	Tests passed = 137 / year	

Human Resources (Staff)

<u>Type of employment:</u>	, Permanent staff. with contract, , , ,			
<u>No. of staff (FTE):</u>	Corporate Services = zero	Water Supply = zero	Other = zero	Total = zero
<u>Staff Training:</u>	No. Trained = 8 / year	Training days = 24 / year	Training costs = N/A	

Customer information

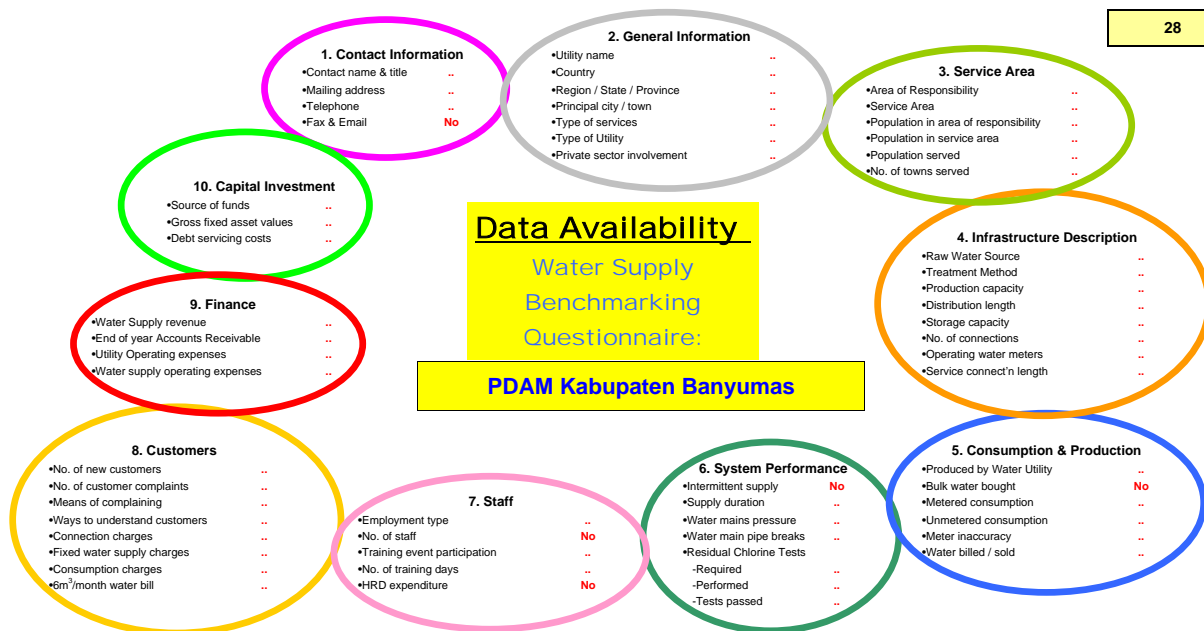
Customer interaction:	New connections = 1,171 / year	Customer complaints = 115 / year
Complaint method:	In person, By telephone, , , ,	
Understanding customers by:	Customer interactions, , Surveys, questionnaires, etc., ,	

Charges & Fees

<u>Typical connection charge:</u>	Domestic = 700,000IDR / conn. (76 US\$ / conn.)	Non Domestic = 800,000IDR / conn. (87 US\$ / conn.)		
<u>Fixed water charge:</u>	Domestic = 725IDR / month (0 US\$ / conn.)	Non Domestic = 1,065IDR / month (0 US\$ / conn.)	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)	0 - 10	10 - 20	20
	Price (IDR / m ³)	400	660	1,000
Non Domestic	From - To (m ³)	0 - 10	10 - 20	20
	Price (IDR / m ³)	745	975	1,490
Bulk Water	From - To (m ³)			
	Price (IDR / m ³)			
Water bill for household consuming 6 m ³ /month =		9,000 IDR / month	(0.98 US\$ / month)	

Finances

<u>Revenue:</u>	Water Sales	Other water related	Subsidies & grants	Total	Year end Accounts Receivable
IDR / year	9,389,844,968	191,823,455	zero	9,581,668,423	1,381,293,342
US\$ / year	\$1,025,103	\$20,942	zero	\$1,046,045	\$150,798
<u>Operating Expenses:</u>	Water supply	Other services	Company Overhead	Total	
IDR / year	3,178,765,518	zero	4,101,916,506	7,280,682,025	
US\$ / year	\$347,031	zero	\$447,812	\$794,843	
<u>Water Supply Operating breakup:</u>	Labor	Electricity	Chemicals & materials	Contracted out	Other expenses
IDR / year	805,088,820	131,134,000	482,930,000	1,759,612,698	zero
US\$ / year	\$87,893	\$14,316	\$52,722	\$192,100	zero
<u>Investment funds source:</u>	Own internal funds, , Loan from Government Bank, , , ,				
<u>Fixed Assets value:</u>	Water supply	Other services	Company Overhead	Total	Debt Servicing Costs
IDR	14,479,279,754	zero	2,118,725,586	16,598,005,340	7,280,682,025
US\$	\$1,580,725	zero	\$231,304	\$1,812,029	\$794,843



Calculation of Overall Performance Indicator (OPI)

Customer Indicators	Value	Rank
Service Coverage in existing service area (%)	100.0%	(3 / 45)
Meter coverage (% with operating water meter)	100.0%	(1 / 46)
Customer complaints / 1000 connections	3.4	(35 / 41)

Water Supply Systems O&M	Value	Rank
Supply Continuity (% of time water available)	100.0%	(1 / 47)
Residual Chlorine tests passed (%)	73.3%	(31 / 34)
Total Unmetered Consumption (% of metered cons.)		
Infrastructure Leakage Index [ILI]	-25.6	(24 / 26)

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Overall Performance Indicator (OPI) = 0.08
 Number of Standardized Indicators available = 9
 Overall Ranking = (18 / 47)

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)	1.29	(16 / 43)
Unit water cost (US\$ / m ³ of system input)	\$0.06	(3 / 43)
Water system asset value / Prod'n capacity (US\$ / m ³ /day)	\$38	(3 / 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)	1.29	Overhead expenses / Total Operating expenses ratio	0.56
Operating Cost Coverage (total revenue)	1.32	Labour costs / Water operating expenses	0.25
		Electricity costs / Water operating expenses	0.04
		Chemical & other materials costs / Water operating expenses	0.15
		Contracted out services costs / Water operating expenses	0.55
<u>Revenue</u>			
Water sales revenue / Total revenue ratio	0.98	Unit water cost (US\$ / m ³ of metered cons.)	0.08
Subsidies & Grants / Total revenue ratio	#N/A	(US\$ / m ³ of system input)	0.06
Revenue Collection period (months)	1.77	Debt servicing ratio (% of total operating revenue)	76.0%
Unit water price - ave. (US\$ / m ³ of metered cons.)	0.11		

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 ³ /day)	38
Asset value / pipe length (US\$ / m. pipe)	3
Asset value / Customer (US\$ / conn.)	47

System Input

Production capacity utilization (%)	90%
Bulk water imported (% of total system input)	0%
System Input Rate (litres/person/day)	161
(m ³ /connection/month)	34.0
System Input / Distribution ratio (m ³ /day per km pipe)	67.0
System Input / Storage ratio (m ³ /day per m ³ storage)	9.5
Supply Continuity (% customers with continuous supply)	#N/A
Supply Continuity (% of time water available)	100%

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OPI Ranking = 18 / 47

Human Resource Indicators

<u>Human Resource Utilisation</u>		<u>Human Resource Development</u>	
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	<u>Human Resources Costs</u>	
Direct water supply staff		Ave. cost of employment / staff (% of per capita GNI)	#N/A
Staff / 1000 connections	#N/A	Contracting out services / in-house Labour costs ratio	2.20
Staff / 1000 m ³ /day system input	#N/A		
Staff / 100 km of pipework	#N/A		

Distribution

Distribution / customer (m. pipe per connection)	17.0
Storage / customer (m ³ per connection)	0.10
Residual Chlorine	
Sampling compliance (%)	20%
Tests passed (%)	73%
Non Revenue Water (UFW)	
% of System Input	29%
m ³ / km / day	19.5
m ³ / connection / day	0.33
NRW adjusted for continuous supply (% of System Input)	29%
Unbilled Authorized & Unauthorized Cons. (% of metered cons.)	19%
Unmetered cons. due to meter inaccuracies (% of metered cons.)	10%
Total Unmetered Consumption (% of metered cons.)	29%
Infrastructure Leakage Index [ILI]	-25.60
Mains failures ratio (breaks / km pipe / year)	1.60

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)	101
- Total Cons. (litres/person/day)	114
(m ³ /conn/month)	24
Total consumption - metered & unmetered (litres/person/day)	147.00
(m ³ /conn/month)	31.00
Domestic share of total metered consumption (%)	89%
Non Domestic share of total metered consumption (%)	11%

Demography

Average town / city size (persons / town)	152,823
Population density in area of responsibility (persons/sq.km)	8,309
Population density in existing service area (persons/sq.km)	1,433
Average Household size (persons / domestic connection)	8

Customer Interactions

Customer complaints / 1000 connections	3
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Connections

Service Coverage in area of responsibility (%)	15%
Service Coverage in existing service area (%)	100%
Domestic / Non-Domestic connections ratio	8.4
Domestic / Non-Domestic consumption rate ratio	8.2
New connection growth rate (% / year)	4%
New domestic connection cost (US\$ / connection)	76
New domestic connections (% of per capita GNI)	1%
Meter coverage (% with operating water meter)	100%
Billed unmetered consumption (% of metered cons.)	-29%

Water Sales & Production Information

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