

**Water Utility: PDAM Kota Padang Panjang (PDAM Kota Padang Panjang )**

Kota Padang Panjang , Sumatera Barat , 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 = 6,360 m3/day		Distribution network = 87 km		Storage capacity = 795 m3	
Area (sq km)		Area of Responsibility		Present Service Area	
Population		23		23	
		42,195		42,195	
No. of Towns = 1		Population served = 31,131			
<u>No. of connections:</u>		Domestic (Households) = 4,281		Non Domestic = 584	
		Typical service connection length = 6 m		Total Connections = 4,865	
				Connections with operating meter = 4,865	
System input volumes:		Produced by W.U. = 1.8 million m3/year		Bulk water imported = zero	
Water consumption:		Metered cons. = 1.7 million m3/year		% Unmetered cons. = 15% of metered cons.	
Water Sales:		Domestic = 1.3 million m3/year		Non Domestic = 0.4 million m3/year	
				Bulk Water sales = zero	
<u>System Performance:</u>		No. of connections with intermittent supply = 461		Typical duration of supply = 18.0 hours / day	
		No. of pipe breaks in distribution system = 75 / year		Typical water pressure in mains = 10 m.	
Chlorine Residuals:		Tests required = 117 / year		Tests carried out = 24 / year	
				Tests passed = 16 / year	

**Human Resources (Staff)**

<u>Type of employment:</u> , Permanent staff: with contract, Casual/part-time: contract staff, , ,			
<u>No. of staff (FTE):</u> Corporate Services = 14		Water Supply = 17	
		Other = zero	
		Total = 31	
<u>Staff Training:</u> No. Trained = 12 / year		Training days = 9 / year	
		Training costs = 6.50% of total operating budget	

**Customer information**

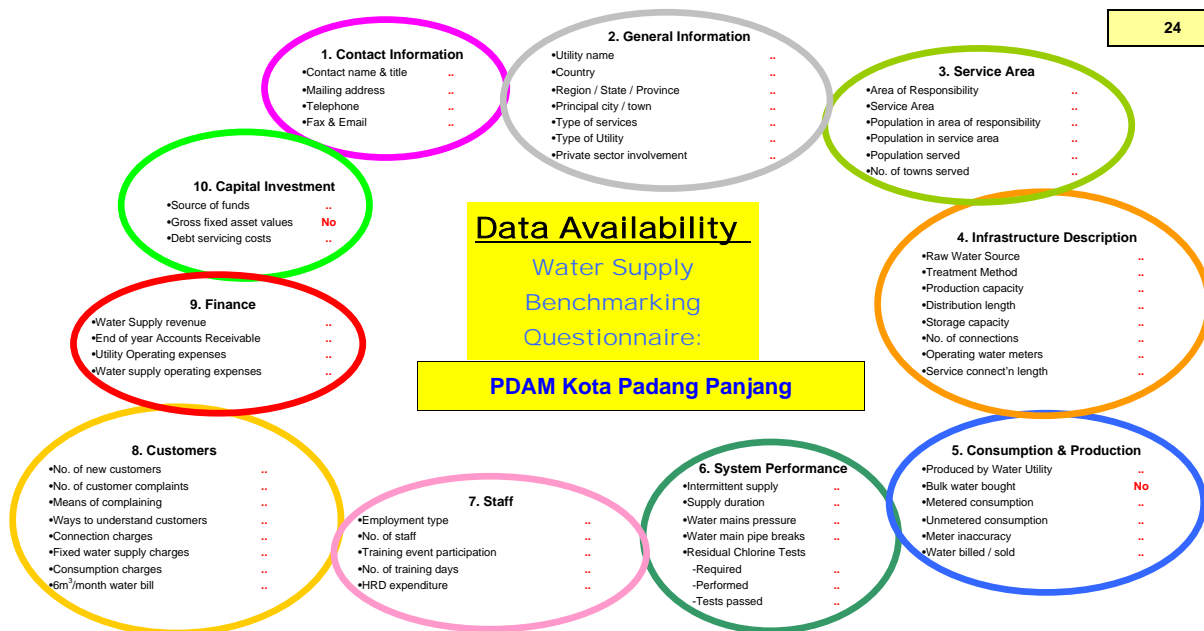
Customer interaction:		New connections = 146 / year		Customer complaints = 1,164 / year	
Complaint method:		In person, By telephone, , ,			
Understanding customers by:		Customer interactions, Responding to complaints, , ,			

**Charges & Fees**

<u>Typical connection charge:</u>		Domestic = 600,000IDR / conn. (66 US\$ / conn.)		Non Domestic = 600,000IDR / conn. (66 US\$ / conn.)	
<u>Fixed water charge:</u>		Domestic = 7,000IDR / month (1 US\$ / conn.)		Non Domestic = 7,000IDR / month (1 US\$ / conn.)	
				Bulk water sales = 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> )	0 - 10	10 - 20	20	
	Price (IDR / m <sup>3</sup> )	400	600	850	
	(US\$ / m <sup>3</sup> )	\$0.04	\$0.07	\$0.09	
Non Domestic	From - To (m <sup>3</sup> )	0 - 20	20		
	Price (IDR / m <sup>3</sup> )	1,300	2,650		
	(US\$ / m <sup>3</sup> )	\$0.14	\$0.29		
Bulk Water	From - To (m <sup>3</sup> )				
	Price (IDR / m <sup>3</sup> )				
	(US\$ / m <sup>3</sup> )				
		Water bill for household consuming 6 m <sup>3</sup> /month =		7,000 IDR / month (0.76 US\$ / month)	

**Finances**

<u>Revenue:</u>					Year end Accounts
					Receivable
IDR / year	Water Sales	Other water related	Subsidies & grants	Total	478,746,988
US\$ / year	1,334,443,350	175,937,805	zero	1,510,381,155	\$52,266
<u>Operating Expenses:</u>					
IDR / year	Water supply	Other services	Company Overhead	Total	
US\$ / year	629,729,523	zero	787,852,727	1,417,582,251	
<u>Water Supply Operating breakup:</u>					
IDR / year	Labor	Electricity	Chemicals & materials	Contracted out	Other expenses
US\$ / year	463,010,495	237,586,450	7,041,100	zero	zero
<u>Investment funds source:</u> Own internal funds, Grant from Government or ODA project, , , ,					
<u>Fixed Assets value:</u>					Debt Servicing Costs
IDR	Water supply	Other services	Company Overhead	Total	1,417,582,251
US\$	3,234,177,854	zero	zero	3,234,177,854	\$154,760



## Calculation of Overall Performance Indicator (OPI)

Customer Indicators	Value	Rank
Service Coverage in existing service area (%)	73.8%	(23 / 45)
Meter coverage (% with operating water meter)	100.0%	(1 / 46)
Customer complaints / 1000 connections	239.3	(9 / 41)

Water Supply Systems O&M	Value	Rank
Supply Continuity (% of time water available)	75.0%	(46 / 47)
Residual Chlorine tests passed (%)	66.7%	(32 / 34)
Total Unmetered Consumption (% of metered cons.)		
Infrastructure Leakage Index [ILI]	-13.9	(25 / 26)

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**Overall Performance Indicator (OPI) = - 0.46**  
 Number of Standardized Indicators available = 12  
 Overall Ranking = (42 / 47)

Human Resource Indicators	Value	Rank
Total water related staff / 1000 connections	6.4	(17 / 38)
Investment in staff training (days / staff)	0.3	(22 / 33)
Ave. cost of employment / staff (% of per capita GNI)	201%	(23 / 37)

Financial Indicators	Value	Rank
Operating Cost Coverage (water sales only)	0.94	(35 / 43)
Unit water cost (US\$ / m <sup>3</sup> of system input)	\$0.09	(13 / 43)
Water system asset value / Prod'n capacity (US\$ / m <sup>3</sup> /day)	\$56	(5 / 35)
Debt servicing ratio (% of total operating revenue)		

**Financial Indicators: Annual expenses & revenue**

Operating Cost Coverage		Expenses	
Operating Cost Coverage (water sales only)	0.94	Overhead expenses / Total Operating expenses ratio	0.56
Operating Cost Coverage (total revenue)	1.07	Labour costs / Water operating expenses	0.74
		Electricity costs / Water operating expenses	0.38
		Chemical & other materials costs / Water operating expenses	0.01
		Contracted out services costs / Water operating expenses	#N/A
Revenue			
Water sales revenue / Total revenue ratio	0.88	Unit water cost (US\$ / m <sup>3</sup> of metered cons.)	0.09
Subsidies & Grants / Total revenue ratio	#N/A	Unit water cost (US\$ / m <sup>3</sup> of system input)	0.09
Revenue Collection period (months)	4.31	Debt servicing ratio (% of total operating revenue)	93.9%
Unit water price - ave. (US\$ / m <sup>3</sup> of metered cons.)	0.08		

**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 <sup>3</sup> /day)	56
Asset value / pipe length (US\$ / m. pipe)	4
Asset value / Customer (US\$ / conn.)	73

**System Input**

Production capacity utilization (%)	75%
Bulk water imported (% of total system input)	0%
System Input Rate (litres/person/day)	154
(m <sup>3</sup> /connection/month)	30.0
System Input / Distribution ratio (m <sup>3</sup> /day per km pipe)	55.0
System Input / Storage ratio (m <sup>3</sup> /day per m <sup>3</sup> storage)	6.0
Supply Continuity (% customers with continuous supply)	91%
Supply Continuity (% of time water available)	75%

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OPI Ranking = 42 / 47

**Human Resource Indicators**

Human Resource Utilisation		Human Resource Development	
Overhead staff ratio (% of total FTE staff)	45%	Staff Training participation rate (% staff)	39%
Water supply staff ratio (% of total FTE staff)	55%	Staff Training duration rate (days / staff)	0.3
Total water related staff / 1000 connections	6.40	Investment in staff training (% of direct labour costs)	8.84%
Direct water supply staff		Investment in staff training (% of total operating costs)	6.50%
Staff / 1000 connections	3.50	Human Resources Costs	
Staff / 1000 m <sup>3</sup> /day system input	3.50	Ave. cost of employment / staff (% of per capita GNI)	2.01
Staff / 100 km of pipework	19.60	Contracting out services / in-house Labour costs ratio	#N/A

**Distribution**

Distribution / customer (m. pipe per connection)	17.9
Storage / customer (m <sup>3</sup> per connection)	0.20
Residual Chlorine	
Sampling compliance (%)	21%
Tests passed (%)	67%
Non Revenue Water (UFW)	
% of System Input	1%
m <sup>3</sup> / km / day	0.3
m <sup>3</sup> / connection / day	0.01
NRW adjusted for continuous supply (% of System Input)	-3%
Unbilled Authorized & Unauthorized Cons. (% of metered cons.)	3%
Unmetered cons. due to meter inaccuracies (% of metered cons.)	12%
Total Unmetered Consumption (% of metered cons.)	15%
Infrastructure Leakage Index [ILI]	-13.90
Mains failures ratio (breaks / km pipe / year)	0.90

**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)	115
- Total Cons. (litres/person/day)	153
(m <sup>3</sup> /conn/month)	30
Total consumption - metered & unmetered	
(litres/person/day)	176.00
(m <sup>3</sup> /conn/month)	34.00
Domestic share of total metered consumption (%)	75%
Non Domestic share of total metered consumption (%)	25%

**Demography**

Average town / city size (persons / town)	42,195
Population density in area of responsibility (persons/sq.km)	1,835
Population density in existing service area (persons/sq.km)	1,835
Average Household size (persons / domestic connection)	7

**Customer Interactions**

Customer complaints / 1000 connections	239
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**Connections**

Service Coverage in area of responsibility (%)	74%
Service Coverage in existing service area (%)	74%
Domestic / Non-Domestic connections ratio	7.3
Domestic / Non-Domestic consumption rate ratio	3.0
New connection growth rate (% / year)	3%
New domestic connection cost (US\$ / connection)	66
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

## PDAM Kota Padang Panjang

