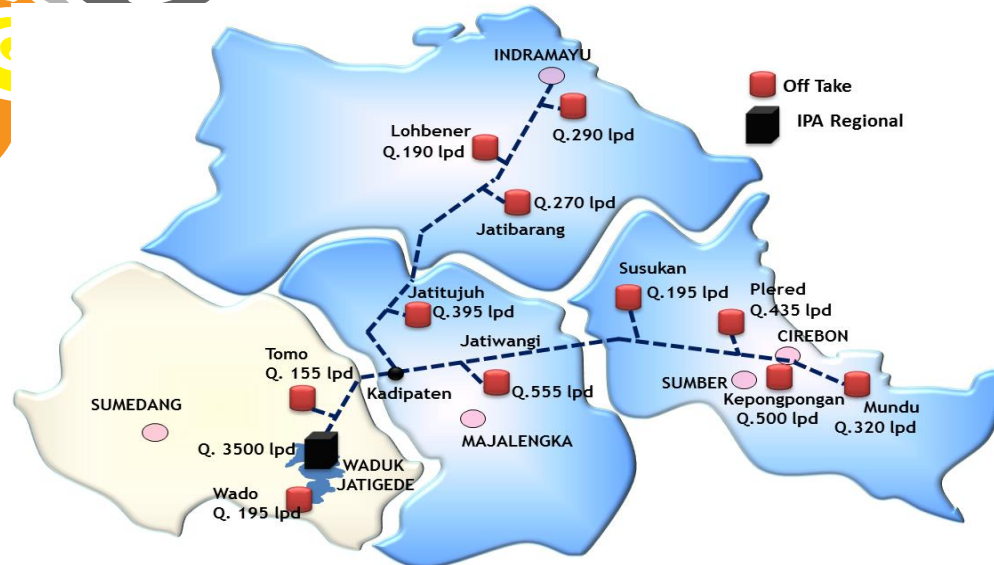




**REGIONAL SPAM
DEVELOPMENT PLAN
CIREBON RAYA
METROPOLITAN (JATIGEDE)**

REGIONAL SPAM DEVELOPMENT PLAN CIREBON RAYA METROPOLITAN (JATIGEDE)

GENERAL OVERVIEW SPAM JATIGEDE



Service Area

Sumedang, Majalengka, Indramayu,
Cirebon, Cirebon City

Capacity

1.500 Liter/second

Source of Raw Water

Jatigede Dam

Benefit Recipients

600 thousand people atau **120.000** SR

Scope of Activities

1. Intake (2000 L/second)
2. Water Treatment Plant (IPA) (1500 L/second)
3. Main Distribution Network
4. Reservoir *Offtake*

Investment Estimates

RP. 2,1 Trillion

Regional Master Plan	Available (2016 Prov APBD)
Feasibility Study	Available (APBN – 2014)
AMDAL Study	Available (2015 Prov APBD, 2019 FY review)
Detail Engineering Desain	Available (2014 Prov APBD, review 2017)
Mutual Agreement	Available
Cooperation Agreement	Not Available
OBC Preparation	PrepeAvailable (2018 APBN – BPPSPAM KemenPUPR)



REGIONAL SPAM DEVELOPMENT PLAN CIREBON RAYA METROPOLITAN (JATIGEDE)

NO	COST DESCRIPTION		TOTAL COST
A	CONSTRUCTION COSTS (PHYSICAL)		1.173.576.501.451
I	RAW WATER UNIT		70.745.480.286
1	Cilutung Intake Building		27.111.109.616
2	Cilutung - Kadipaten Raw Water Transmission Pipe (HDPE Pipe ND.1.200 mm, 2,000 m)		43.634.370.669
II	PRODUCTION UNIT		189.210.843.330
1	IPA Kadipaten Capacity 3 x 500 l/d		157.702.659.081
2	Reservoir Capacity 3 x 5000 m3 and Pumping System		31.508.184.249
III	DISTRIBUTION UNIT		1.419.040.762.177
1	JDU Kadipaten Pipe - Tomo (HDPE Pipe ND 300 mm, 9.824 m)		17.512.602.977
2	JDU Kadipaten Pipe - Kertajati (HDPE Pipe ND 800 mm, 16.270 m)		247.828.551.854
3	JDU Kertajati Pipe - Jatibarang (HDPE Pipe ND 800 mm, 6.166 m and ND 700 mm, 17.847 m)		248.579.622.889
4	JDU Jatibarang Pipe - Karang Ampel (HDPE Pipe ND 700 mm, 22.813 m)		198.128.091.261
5	Offtake Kertajati Pipe (HDPE Pipe ND 400 mm, 4.000 m)		9.181.410.308
6	Offtake Kertajati Pipe (HDPE Pipe ND 400 mm, 907 m)		2.155.799.525
7	JDU Kadipaten Pipe - Simpang Offtake Jatiwangi (HDPE Pipe ND 900 mm, 12.354 m)		167.288.151.188
8	JDU Simpang Offtake Jatiwangi Pipe - Simpang Offtake Babadan (HDPE Pipe ND 900 mm, 26.846 m)		363.520.933.056
9	JDU Simpang Offtake babadan Pipe - Offtake Kepompongan (HDPE Pipe ND 9700 mm, 11.185 m)		151.457.210.327
10	Offtake Babadan Pipe - (HDPE Pipe ND 400 mm, 5.960 m)		13.388.388.792
IV	OFFTAKE RESERVIOR BUILDINGS		34.579.415.658
1	Reservior 900 m3 Capacity and Pumping System (Tomo)		2.483.135.295
2	Reservior 4.500 m3 Capacity and Pumping System (Kepompongan)		9.460.877.415
3	Reservior 2.200 m3 Capacity and Pumping System (Kerangkeng)		6.777.502.438
4	Reservior 1.750 m3 Capacity and Pumping System (Kertajati)		4.358.624.465
5	Reservior 1750 m3 Capacity and Pumping System (Jatibarang)		4.358.624.465
6	Reservior 900 m3 Capacity and Pumping System (Jatiwangi)		2.782.009.115
7	Reservior 1.750 m3 Capacity and Pumping System (Babadan)		4.358.624.465
B	NON CONSTRUCTION COST (NON PHYSICAL)		22.219.832.401
I	BUP Preparation Cost	0,20%	3.418.435.754
II	Permit Cost	0,40%	6.836.871.508
III	DED Cost	0,30%	5.127.653.631
IV	Supervision Cost	0,30%	5.127.653.631
V	Insurance Cost	0,10%	1.709.217.877
		Total A + B	1.735.796.333.852
		PPN 10%	173.579.633.385
		Contingency 7.5%	130.184.725.039
		Grand Total	2.039.560.692.276

REGIONAL SPAM DEVELOPMENT PLAN CIREBON RAYA METROPOLITAN (JATIGEDE)

TOTAL COST Constant Price (Rp Million)	OPTION 2 FINANCING (Rp.)			
	APBN SDA	APBN CK + APBD West Java Province	KPBU	VGf
2.039.627	70.745	1.131,962	836,920	393,352
100%	4%	55%	41,5%	
			53%	47%

INVESTMENT FEASIBILITY ANALYSIS RESULTS			
DESCRIPTION	KPBU without t VGf	KPBU with VGf	Unit
PROJECT CAPITAL STRUCTURE (2020-2025)			
Equity (Equity the business entity)	30.0%	30.0%	(%)
Loans (Investment & Working Capital Loans)	70.0%	70.0%	(%)
- Principal Loan Value	654,151	348,700	Rp. Million
- Total Interest Payment	72,648	38,980	Rp. Million
- Equity Investor_Early Investment	280,350	148,588	Rp. Million
- Equity Investor_Operating Cash Deficit	118,052	62,588	Rp. Million
- Equity Investor_Replacement			Rp. Million
INDICATORS OF FEASIBILITY_INVESTOR / BUSINESS ENTITY			
- Weight Average Cost of Capital (WACC)	11.91%	11.91%	
Cost of Equity Without Loan	11.50%	11.50%	
+ Risk Free Rate/Deposito	5.50%	5.50%	
+ Risk Factor of SPAM	6.00%	6.00%	
IRR > WACC			
- FIRR Equity/ Investor	14.19%	14.19%	WORTH

- NPV Equity / Investor with Disc Factor	130,537	68,171	Rp. Juta
- Payback (13 year(s)	13 year(s)	tahun
- Dividends for the 30 years of cooperation	4,773,989	2,401,570	Rp. Juta
- Equity to Dividen Ratio	11.38	11.37	x Equity Investor
- FIRR Project	16.48%	10.37%	
- NPV Project	346,300	(98,033)	Rp. Juta
- Project Payback	8 year(s)	13 year(s)	Tahun
- Return on Investment	5.02	5.02	x Total Investasi
Early year of cooperation	0	2023	
End of year cooperation	30	2053	
Income divided by the volume of water sold			
Bulk Water Income	2027	4,742	3,070 (Rp/m3)
Opex Recovery	2027	1,093	1,093 (Rp/m3)
Capex Recovery	2027	5,343	3,639 (Rp/m3)
% increase in bulk water prices	12%	12%	PER TAHUN
Period for Increasing Drinking Water Rates	2025	2	2025 2 / TAHUN
Increase in Drinking Water Rates starting from Year			
PDAM Sumedang	3,553	2,300	(Rp/m3)
PDAM Majalengka	3,624	2,346	(Rp/m3)
PDAM Cirebon	3,731	2,415	(Rp/m3)
PDAM Indramayu	4,086	2,645	(Rp/m3)
PDAM Cirebon City	3,908	2,530	(Rp/m3)
Average of Ideal Bulk Selling Price of Water	3,780	2,447	(Rp/m3)
(Cash flow is not negative to cover loan interest)			



REGIONAL SPAM DEVELOPMENT PLAN CIREBON RAYA METROPOLITAN (JATIGEDE)

CHRONOLOGICAL PREPARATION AND PROGRESS:

