



REPUBLIC OF INDONESIA
MINISTRY OF NATIONAL DEVELOPMENT PLANNING/
NATIONAL DEVELOPMENT PLANNING AGENCY

PUBLIC PRIVATE PARTNERSHIP

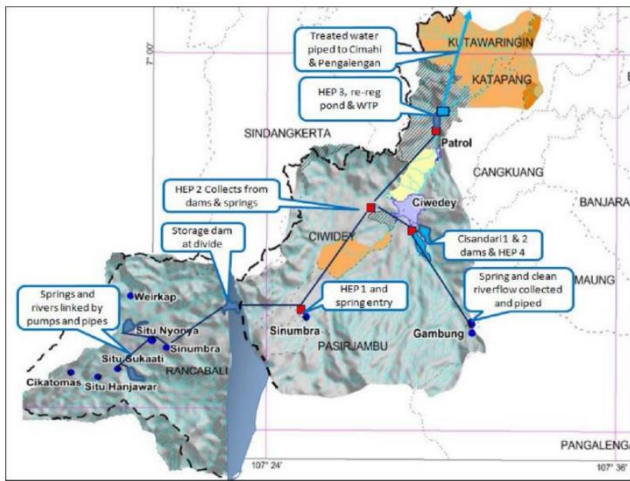
INFRASTRUCTURE PROJECTS PLAN IN INDONESIA

2022

Development of Sinumbra Water Supply System

Location : West Java

Sector : Drinking Water



Sub-Sector : Water Supply System

Description:

The Greater Bandung Metropolitan Regional Water Supply Project West Region-1 Sinumbra (Sinumbra Water Supply) is a Drinking Water Supply System that will supply bulk water to western parts of the Bandung Metropolitan area with a capacity of 1,200 Liters/second to serve 120,000 house connections. The Sinumbra Regional Water Supply System supplies water from 3 springs in Sinumbra Plantation at 1,300-1,428 m asl to Metropolitan Bandung Area (approx. 700 m asl).

Estimated Project Cost: USD 51.25 Million

Financial Feasibility:

IRR : 12.56%
 NPV : USD 22.3 Million

Estimated Concession Period: 3 years construction and 20 years operation.

Government Contracting Agency:
 Governor of West Java Province

Type of PPP:
 Unsolicited

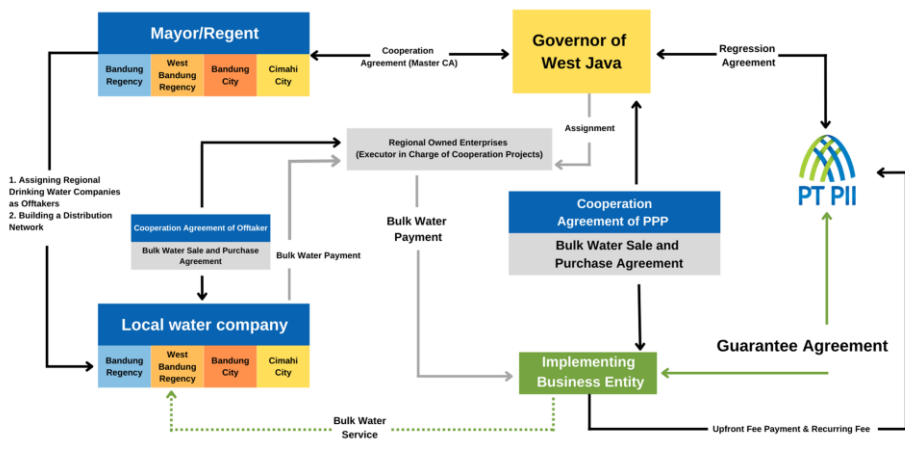
Return of Investment:
 User Charge (Take or Pay)

Indicative Project Schedule



Project Status : Issuing Approval Letter

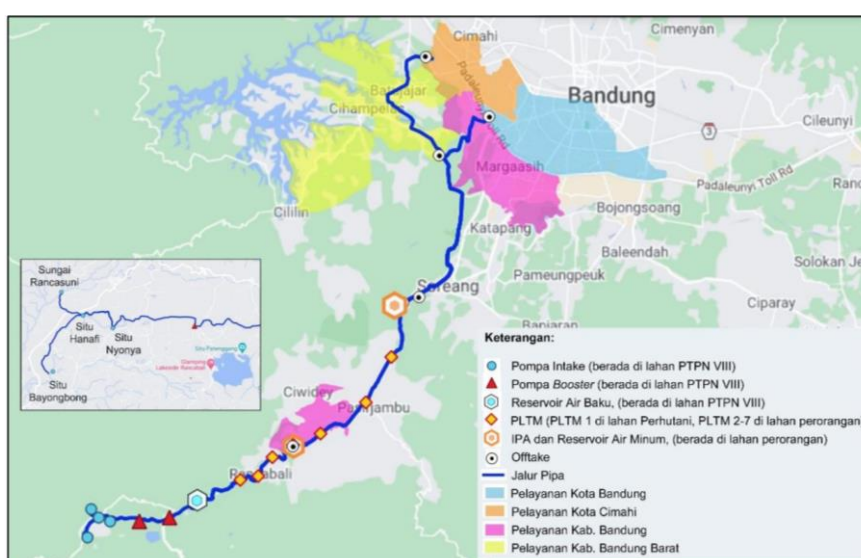
Indicative Project Structure



Project Digest

Project Title	Development of Sinumbra Water Supply System
Government Contracting Agency	Governor of West Java Province
Implementing Agency	PT. Tirta Jabar (PT. Tirta Gemah Ripah)
Preparation Agency	PT. Waskita Karya Infrastruktur and PT. Tirta Anugrah Utama
Project Cost	USD 51.25 Million
Estimated Concession Period	2 years construction and 28 years operation
Location	Bandung, West Java

1. Project Picture (Map and/or Illustration of Project)



Picture 1 – Layout of Sinumbra Water Supply

2. The Opportunity

2.1. Project Background

Based on the National Medium-Term Development Plan (RPJMN) for 2020-2024, the Government targets to fulfill 100% of housing with access to safe drinking water and 30% of housing with piped water access. In 2019, access to safe drinking water has reached 89.27% and the coverage of piped drinking water services by Water Company is 22.91%. To fulfill drinking water needs, especially in Metropolitan Bandung Raya, it is planned to develop SPAM Regional Metropolitan Bandung Raya Barat-1 (Sinumbra) by utilizing raw water sources from several springs and rivers in the Sinumbra tea plantation area, Bandung Regency which has a debit potential of 3,000 liters/second.

The Sinumbra Regional Water Supply will serve Bandung Regency, West Bandung Regency, Cimahi City, and Bandung City, and is included in the Regional Water Supply criteria so that it is the responsibility of the West Java Provincial Government in preparing the development plan of the Sinumbra Regional Water Supply. The number of priorities that must be met by the

Government is one of the obstacles in the development of water supply. Therefore, a breakthrough is needed in terms of the obligation to provide basic infrastructure, one of the alternative solutions is through the Public Private Partnerships (PPP) scheme.

2.2. Project Description

The description of this project is as follows:

Project Name	: Sinumbra Water Supply
Project Location	: West Java
Project Method	: Design - Build - Finance - Operate - Maintenance - Transfer (DBFOMT)
Financing scheme	: Public Private Partnership
Government Contracting Agency	: Governor of West Java Province
Concession	: 30 years (including 2 years construction)

2.3. Project Objectives

The objective of Sinumbra Water Supply is to reduce the gap in drinking water supply shortages in the Greater Bandung Metropolitan area, utilize raw water sources to serve Local water company's or the Regional Government of Bandung City, Cimahi City, Bandung Regency, and West Bandung Regency regionally, and improve drinking water services for ± 580,000 residents through 120,000 new Home Connections.

3. Business Entity's Scope of Work

Design - Build - Finance - Operate - Maintenance - Transfer

Project scope is as follows:

1. Build intakes in 3 springs, and produce raw water with a treatment plant and distributing water to 4 offtake reservoirs.
2. The Governor of West Java Province acts as the Government Contracting Agency to sign the PPP Agreement with the Implementing Business Entity. The PPP agreement is a cooperation agreement with the Design - Build - Finance - Operate - Maintenance - Transfer (DBFOMT) grand scheme covering Design, Build, Finance, Operate, Maintain, and Transfer (DBFOMT) for bulk water production units for 30 years concession period granted to Business Entities. Executor.
3. The Implementing Business Entity supplies Bulk Water Supply to 4 (four) Off takers.
4. The Governor of West Java Province assigned the Regional Owned Enterprises of West Java Province (PT. Tirta Gemah Ripah) to act as the Implementing Government Contracting Agency for financial and operational activities, including but not limited to payment of Government Contracting Agency Financial Obligations to Implementing Business Entity and collectors of Local water company Off takers payments to Government Contracting Agency.
5. In organizing the Sinumbra Regional Water Supply System Project, the Governor of West Java Province signed a Regress Agreement with Indonesia Infrastructure Guarantee Fund (IIGF);
6. Indonesia Infrastructure Guarantee Fund (IIGF). then signed a Guarantee Agreement with the Implementing Business Entity to obtain guarantees for the termination and default of the Project;

4. Technical Specification

The technical specifications for Sinumbra Water Supply System are as follows:

No.	Component	Design Criteria and Technical Specifications
1.	System Capacity	1.250 L/sec
2.	Water Loss	50 L/sec (3%-4%)
3.	Bulk Water Sales	1.200 L/sec
4.	Pipe	
	- Standard	ISO, SNI, Ministerial Regulation PU No.18/2007
	- Flowing capacity	Q maximum (1,1 Average requirement)
	- Flow speed	0,3 m/sec (min); 2 m/sec (max)
	- Type	Option: HDPE (PE 100), DCIP, dan GRP
	- Class	Minimum PN 10, with telescopic design
	- Connection	Weld, socket, spigot
	- Water hammer	According to needs / planning, especially for pumping lines and Mini Hydro Power Plant pipelines
5.	Pump	
	- Standard	ISO, SNI, DN
	- Type	Negative Suction + Self Priming or positive Suction + dry pit
	- Redundancy	N + 1 (1 = standby unit)
6.	WTP	
	- Processing unit	Rapid sand filter (RSF) and chlorination
	- RSF Type	Options: gravity with an open tub/tank, pressure with a closed tub/tank, or a continuous sand filter
	- Filtration speed	15- 20 m/hour
	- Chlorination type	Using chlorine gas
7.	Reservoir	
	- Type and material	Tank (glass to Steel, with mild steel roof) or concrete with K300
	- Capacity	Raw water reservoir: 7 hours* (30,000 m ³) Clean water reservoir: 2 hours (10,000 m ³)
8.	Automation System	SCADA (Supervisory Control and Data Acquisition) and online monitoring, with human machine interface (HMI) control room
9.	Real Time Monitoring	Residual chlorine, pH, turbidity, pressure and water flow
10.	Building construction	SNI 2847:2019 concerning Requirements for Structural Concrete for Buildings; SNI 03-6764 -2002 concerning Structural Steel Specifications; SNI 03-6861.2-2002 concerning Specifications of Building Materials; SNI 2052-2017 concerning Concrete Reinforcement

5. Environmental Impact Assessment (EIA/AMDAL) Findings

The scope of the area that will be included in the EIA study is the environmental area affected by the Sinumbra Regional Water Supply System Project which includes the location of the intake of raw water sources, booster pumps, raw water reservoirs, Mini-hydro Power Plants, Water Treatment Plants, clean water reservoirs, and piping network.

6. Land Acquisition and Resettlement Action Plan

In accordance with the regulations, land acquisition for PPP projects is the government's obligation through the Government Contracting Agency. The land acquisition required for the Sinumbra Regional Water Supply System Project is based on the identification of limited project locations needed for Mini-hydro Power Plants, Water Treatment Plants, clean water reservoirs, and pipelines.

7. Project Cost Structure

Estimated Project Cost		USD 51.25 Million
Indicative Debt to Equity Ratio		
- Debt Level		70%
- Equity Level		30%
IRR		12.56%
NPV		USD 23.3 Million

8. Government Support and Guarantee

1. Land acquisition for the construction of the Sinumbra Regional Water Supply System, including the transfer of State-Owned Enterprises assets (Nusantara Plantation Public Company VIII and State Forestry Public Company).
2. Granting permission to plant pipelines using the open cut method.
3. Development of downstream components or distribution networks so that the target of absorption of bulk water by off takers for 2 (two) years can be achieved.
4. Revitalization of Situ-Situ located around the location of raw water sources/intakes in the Sinumbra Tea Plantation area (Nusantara Plantation Public Company VIII) in order to increase the safety of raw water in the future (30 years).

The Sinumbra Regional Water Supply System PPP project requires a Government Guarantee for the fulfillment of the Government Contracting Agency 's financial obligations caused by risks, including the following:

1. Delays in obtaining licenses or approval permits.
2. Changes in laws and regulations.
3. Violation of the project agreement.
4. There is no integration with the downstream distribution network (delays in the absorption of bulk water).
5. Risks from competing facilities or infrastructure or the emergence of restrictions or changes from the Government Contracting Agency to the agreed service coverage for reasons of matters related to other Cooperation Projects.
6. The non-implementation of tariff adjustments in accordance with the agreed plan in the financial analysis, resulting in reduced Implementing Business Entity profits and/or cash flow due to the difference in payments between the Government Contracting Agency and each off taker.
7. Risk of takeover
8. Risk of default by Government Contracting Agency.
9. Prolonged political events.

10. Prolonged force majeure.

11. Government Contracting Agency unilaterally decides to take over the Project and terminate the PPP Agreement.

In principle, the business entity submits a risk proposal guaranteed by the Government against the risk of default and termination.

9. Contact Information

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