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

PUBLIC PRIVATE PARTNERSHIP

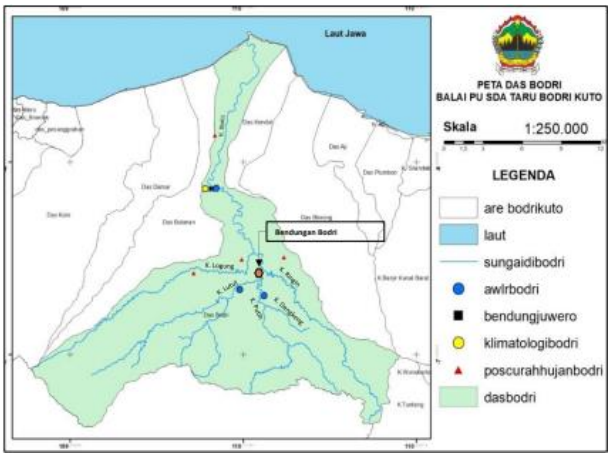
INFRASTRUCTURE PROJECTS PLAN IN INDONESIA

2022

Development of Bodri Dam in Kendal Regency

Location : Kendal, Central Java Province

Sector : Water Resources Infrastructure



Government Contracting Agency:
Minister of Public Works and Public Housing
Type of PPP:
Solicited
Return of Investment:
Availability Payment

Sub-Sector : Dam

Description:
As a city located in a coastal area and in the estuary of 12 rivers that pass through its territory, the Bodri River has the potential to be used as a dam for irrigation, raw water supply, the potential for electric power and flood control in overcoming floods that occurred in Kendal district. This project's scope is to design, build, finance, and maintain the dam and its supporting infrastructure and transfer.

Estimated Project Cost: USD 121.517 Million
Financial Feasibility:
IRR : 9.46%
NPV : USD 35.331 Million

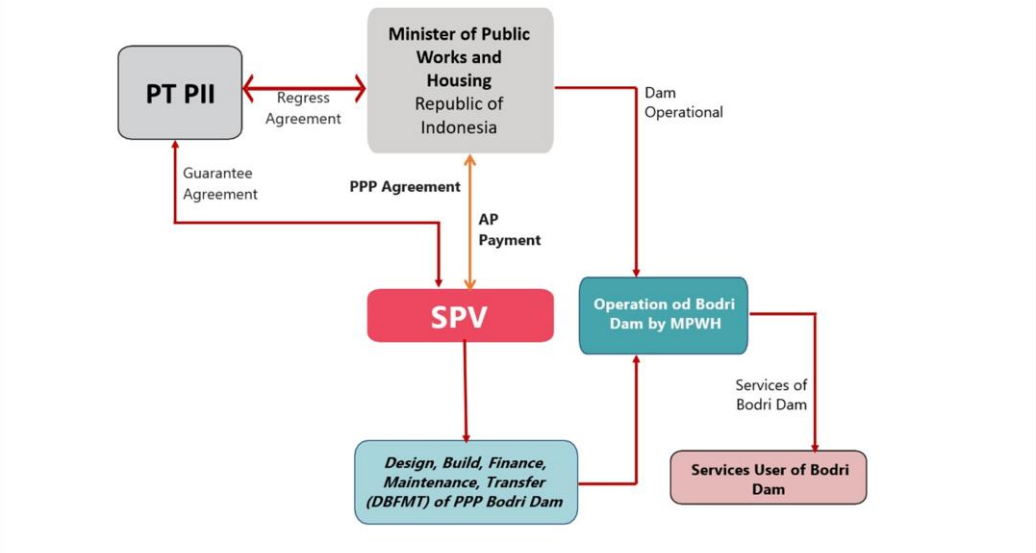
Estimated Concession Period: 4 years construction, 2 years reservoir filling and 12 years maintenance.

Indicative Project Schedule

FBC Q2-Q4 2022 → Pre-Qualification Q2-Q3 2023 → RfP Q3-Q4 2023 → Bid Award Q4 2023 → Financial Close Q3-Q4 2024 → Construction Q1 2025-Q1 2031

Project Status : Final Business Case

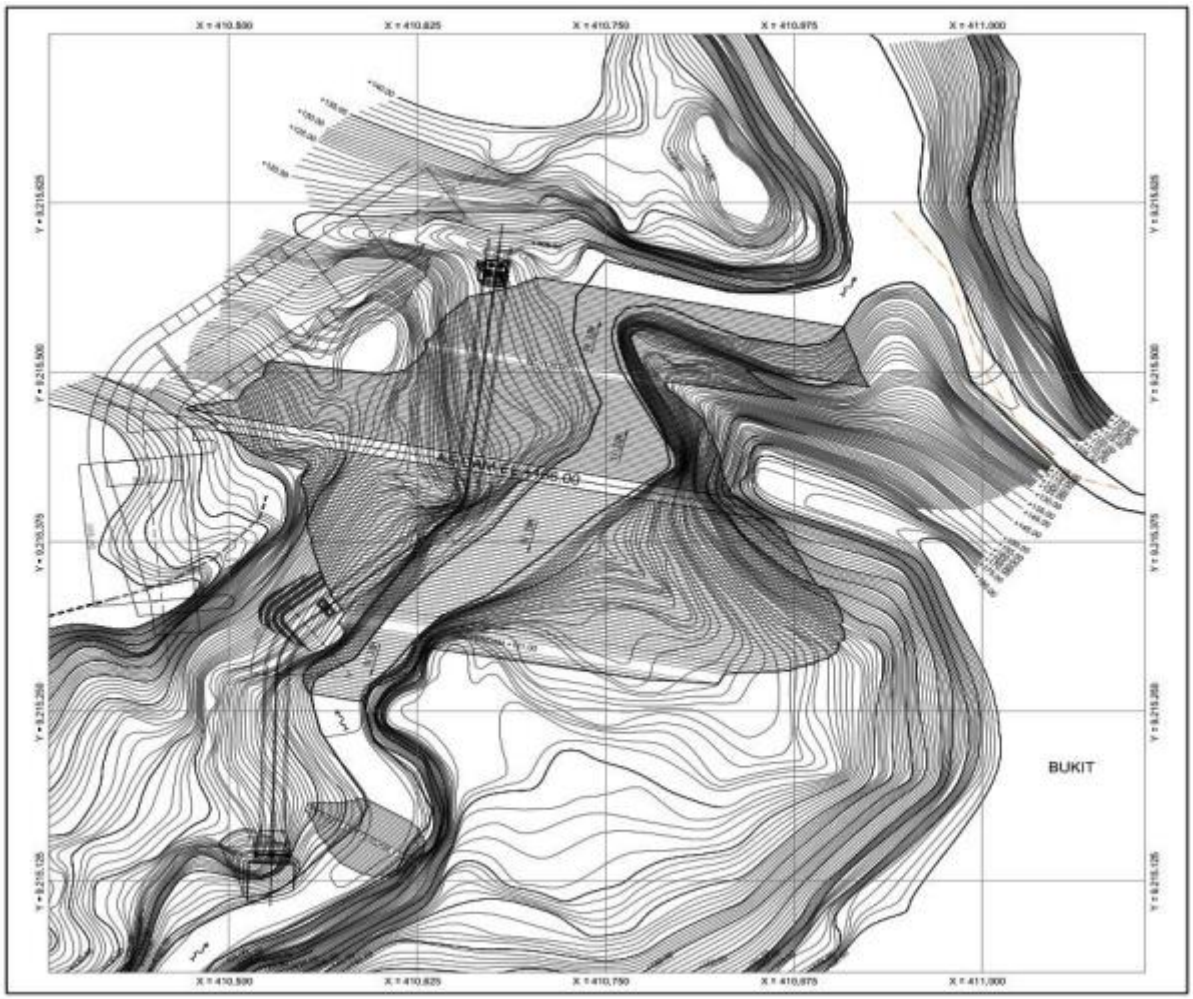
Indicative Project Structure



Project Digest

Project Title	Construction of Bodri Dam in Kendal Regency
Government Contracting Agency	Minister of Public Works and Public Housing
Implementing Agency	Directorate General of Water Resources (DGWR)
Preparation Agency	Directorate General of Infrastructure Financing
Project Cost	USD 121.517 Million
Estimated Concession Period	18 years (4 years construction, 2 years reservoir filling & 12 years maintenance)
Location	Kendal, Central Java Province

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



Picture 1 – Dam Layout

2. The Opportunity

2.1. Project Background

Kendal is one of the areas in Central Java Province that has the potential to develop, especially in the agricultural sector, which is being prioritized in the national agricultural development process. Availability of water both sourced from groundwater and surface water is very necessary for the development of agriculture. In addition, flooding is one of the main issues related to controlling the destructive water power encountered by the Kendal district. As a city located in a coastal area with flat contours and located in the estuary of 12 rivers that pass through its territory, the Bodri River has the potential to be used as a dam for irrigation, raw water supply, the potential electric power and flood control in overcoming floods that occur in Kendal district.

2.2. Project Description

The Bodri Dam is a multipurpose dam PPP project in Indonesia. The Bodri Dam Project is located in Singgorojo Village, Kendal, Central Java Province. The multipurpose dam provides water for an irrigation scheme covering about 8,861 hectares in Kendal Regency with water gross storage volume of 41.7 Million m³, Bodri River flood reduction by 8.36% (Q100), there is a head of 43 m and a discharge of about 9.0 m^3/s, which could generate power of 3.24 MW. Other program components include local water supply, recreation, and social infrastructure. The option in this project development is to build a dam using Availability Payment scheme to cover the private's investment, risks and returns. The concession will last 18 years (4 years construction, 2 years reservoir filling and 12 years maintenance).

2.3. Project Objectives

The Bodri dam construction in Central Java aims to contribute to irrigation water needs, raw water supply, flood control and electric potential. In accordance with the PUPR Visium 2020-2024 capacity target Indonesia's per capita multipurpose dam is 68.11 m^3/capita/year. The construction of new dams in the future will be carried out to meet the national water and food security targets, in particular the provision of raw water of 54.81 cubic meters per second in 2024.

3. Business Entity's Scope of Work

Design-Build-Finance-Maintenance-Transfer (DBFMT)

The project scope is as follows:

1. Preparing the design and specifications of Bodri Dam to obtain a design certification from the Minister of Public Works and Housing.
2. Financing (equity and loan) the initial capital costs of Bodri Dam construction and maintenance during the service life.
3. Constructing Bodri Dam after obtaining a design certification issued by the Minister of Public Works and Housing.
4. Performing 3 (three) types of maintenance: routine maintenance, periodic maintenance and rehabilitation
5. Transferring Bodri Dam to the government contracting agency after the concession period ended.

4. Technical Specification

The technical specifications for Bodri Dam in Kendal Regency are as follows:

No	Facilities	Capacity
1	Length of crest dam	396.67 m
2	Height	73.50 m
3	Effective holding volume	24.08 Million m^3
4	Reservoir capacity at Normal Water Level	41.7 Million m^3
5	Dam Body Volume	2,119,458.68 m^3
6	Inundation area	240.20 hectares
7	Area	259.55 Ha
8	Raw water supply	0.497 m^3/det
9	Flood reduction (Q100)	8.36%
10	Elevation of normal water level	+ 160,00 m

Dam element outline:

a) The dam body
b) Spillway building
c) Building taking
d) Dodge building
e) Management office facility building
f) Access roads
g) Reservoir/reservoir
h) Powerhouse/PLTM

5. Environmental Impact Assessment (EIA/AMDAL) Findings

For the construction of the Bodri dam, it is necessary to prepare an Environmental Impact Analysis (AMDAL) study to obtain an Environmental Permit given the regulations following Law Number 32 of 2009 concerning Environmental Protection and Management ("UU No. 32/2009"). Directorate General of Water Resources is preparing the AMDAL study and targeted to finish by September 2022.

6. Land Acquisition and Resettlement Action Plan

Based on survey results, currently, there are no residents affected by the relocation area, but there is 1 village affected by the relocation with an estimated area of < 10 ha. The community itself hopes that if there is an area for them to be affected by relocation/land acquisition, the form of compensation is in the form of money with a value of Rp. 5,000,000/m^2. Further mapping of the current land status and the land area that needs to be expanded will be assessed in the subsequent studies.

7. Project Cost Structure

Estimated Project Cost	USD 121.517 Million
Indicative Debt to Equity Ratio	
- **Debt Level**	70%
- **Equity Level**	30%
IRR	9.46%
NPV	USD 35.331

8. Government Support and Guarantee

Final business case study indicates that this project will require government guarantee.

9. Contact Information

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