

## SBF Project Implementation Monitoring Report

### Pakistan: Tarbela 5 Hydropower Extension Project

#### 1. Project Information

|                                |  |                    |                              |
|--------------------------------|--|--------------------|------------------------------|
| Project ID:                    | 000005   | Investment Number: | L0005A                       |
| Member:                        | Pakistan   | Region:            | Southern asia                |
| Sector:                        | Energy   | Sub-sector:        | Large hydropower generation  |
| AiIB Financing Type:           | Loan: 300 USD million  | Co-financier(s):   | WB (IBRD)                    |
| E&S category:                  | A  | Borrower:          | Islamic Republic of Pakistan |
| Red Flags Assigned:            | 0 (Q1:1)   | Monitoring Regime: | Regular Monitoring           |
| Implementing Agency:           | Water and Power Development Authority (WAPDA), National Transmission and Dispatch Company (NTDC)   |                    |                              |
| Project Team Leader:           | Ghufran Shafi  |                    |                              |
| Project Team Members:          | Liu Yang, Project Counsel - Investment Operations<br>Marife Principe, Senior Social Development Specialist<br>Shonell Robinson, Financial Management Specialist<br>Bernadette Ndeda, Procurement Specialist<br>Zhixi Zhu, Environmental Specialist |                    |                              |
| Completed Site Visits by AIIB: | Nov, 2017<br><br>May, 2019<br>Visits by WB<br><br>Oct, 2019<br>Visits by WB<br><br>Dec, 2020<br>Consultation with WB after its Mission<br><br>Aug, 2021<br>Consultation with WB after its Aug-Sep Mission  |                    |                              |
| Planned Site Visits by AIIB:   | AIIB visit will be planned after the Covid-imposed travel restrictions are eased by the Bank.  |                    |                              |

#### 2. Project Summary and Objectives

To facilitate the sustainable expansion of Pakistan's electricity generation capacity providing a low cost, clean, renewable energy option. The Project will add capacity of 1,410 Megawatt (MW), with annual electricity generation of over 1,800 Gigawatt-hours (GWh), primarily during the summer season when demand is highest. The total capacity at Tarbela with the induction of Tarbela 5 Hydropower extension will become 6,928 MW and annual average generation is expected to increase to 19,000 GWH.

The shortages of energy have held back Pakistan's economic performance. The project will support generation of low-cost renewable energy during the peak demand period of summer months when shortages are at their worst. Increased supply at competitive prices from the project would support economic growth for all enterprises that use electricity, regardless of size or sector. In addition to increasing the supply thus reducing load shedding it will also supplement government's reform program to reduce power sector subsidies and improve its financial viability by reducing the dependence on imported fuels and lowering the cost of supply. The project has major incremental benefits, accruing to all consuming sectors (industry, agriculture, commercial and residential), by making available required energy as well as non-incremental benefits, by replacing the expensive and unclean thermal generation.

Main components of the project are indicated below. Of these, AIIB is co-financing the first two components: the civil works and electro-mechanical equipment.

- (i) The construction of a power-house and modification of the existing Tunnel 5 to house the power plant,
- (ii) The installation of power units and ancillary equipment,
- (iii) The provision of technical assistance to support implementation of a social action plan, environmental and social management plan, and dam safety monitoring surveillance program,
- (iv) The provision of technical assistance to carry out construction supervision, monitoring and evaluation of Project progress, quality, and impacts as well as independent supervision of the social action plan and environmental and social management plan,
- (v) The project management, and strengthen capacity to plan, develop and manage the hydropower infrastructure in the long term,

#### 3. Key Dates

|           |               |          |               |
|-----------|---------------|----------|---------------|
| Approval: | Sep. 27, 2016 | Signing: | Jan. 18, 2017 |
|-----------|---------------|----------|---------------|

|                |               |                        |  |
|----------------|---------------|------------------------|--|
| Effective:     | Aug. 11, 2017 | Restructured (if any): |  |
| Orig. Closing: | Jun. 30, 2022 | Rev. Closing (if any): |  |

#### 4. Disbursement Summary (million)

|                 |         |   |                      |
|-----------------|---------|---|----------------------|
| Currency:       | USD     |   |                      |
| a) Committed:   | 300     | b) Cancellation (if any):                       |                      |
| c) Disbursed:   | 40.725  | d) Most recent disbursement:<br>(amount / date) | 8.467, Aug. 23, 2020 |
| e) Undisbursed: | 259.275 | f) Disbursement Ratio(%) <sup>1</sup> :         | 13.6                 |

<sup>1</sup> Disbursement Ratio is defined as the volume (i.e. the dollar amount) of total disbursed amount as a percentage of the net committed volume, i.e.,  $f = c / (a - b)$

#### 5. Project Implementation Update

The T5HP designs were finalized after extensive additional geotechnical and site investigations after. During the design review, the forecast of electricity generation was also updated, which confirmed the constructability of the project. The analysis also confirmed the strong economic returns of the T5HP.

After initial procurement delays, implementation has picked up and important procurement milestones (including pre-qualification and tendering/bidding) were achieved in time. Physical works consist of two main contracts: (i) civil works contract for construction of powerhouse connection to tunnel and intakes; and (ii) Electro-mechanical (EM) contract for supply and installation of EM equipment and substation. WAPDA successfully signed the civil works contract in May 2021 and EM contract in June 2021. Contractors have mobilized and works have commenced. Based on these timelines, the plant is expected to be commissioned in 2024. The Implementation period and loan agreement will accordingly be extended after a request is received from Government. The disbursement projection shown below are based on the extended implementation period.

| Components   | Physical Progress | Environmental & Social Compliance  | Procurement  |
|--|-------------------|--|--|
| Component A:<br>Powerhouse and<br>Tunnel Works<br>(USD133.2 M)                       | 0                 | An Environmental and Social Assessment (ESA) of the Project has been prepared jointly by WAPDA and NTDC. The Resettlement Action Plan (RAP) for the transmission line has been prepared and is under review. The contractors have prepared Contractor's ESMPs that are under PMU's review. | Civil Works contract (approximately valued at USD356 million) was signed in May 2021 |
| Component B1:<br>Turbines generators<br>and related equipment<br>(USD110.6 M)        | 0                 | An Environmental and Social Assessment (ESA) of the Project has been prepared jointly by WAPDA and NTDC. The Resettlement Action Plan (RAP) for the transmission line has been prepared and is under review. The contractors have prepared Contractor's ESMPs that are under PMU's review. | EM Works contract (approximately valued at USD209 million) was signed in June 2021   |
| Component B2:<br>Transformers,<br>switchyard electrical<br>connection<br>(USD30.1 M) | 0                 | An Environmental and Social Assessment (ESA) of the Project has been prepared jointly by WAPDA and NTDC. The Resettlement Action Plan (RAP) for the transmission line has been prepared and is under review. The contractors have prepared Contractor's ESMPs that are under PMU's review. | EM Works contract was signed in June 2021  |

#### Financial Management:

No AIIB disbursement was made in last fiscal year, ending in June 2021. However, as there have been disbursements under the project by the World Bank and WAPDA, the project financial statements for the period ended June 30, 2020 became due on December 31, 2020. The project financial statements were submitted to the World Bank, however, the audit opinion on the financial statements remains outstanding. AIIB/WB are following up on the outstanding report.

#### 6. Status of the Grievance Redress Mechanism (GRM)

A Project-specific Grievance Redress Mechanism has been established. A tripartite Grievance Redress Committee on labor issues has been operational during Tarbela 4 Hydropower Project and continues to address labor complaints and employment issues under the Project.

#### 7. Results Monitoring

Project implementation was delayed and implementation of major works just commenced. There is therefore no results to report.

Baseline Year: Jan. 1, 2017 End Target Year: Dec. 31, 2024

## Project Objective Indicators #1

Indicator #1: Generation Capacity of Hydropower Constructed Under the Project (MW)

| Year          | Target | Actual | Others, if any |
|---------------|--------|--------|----------------|
| Dec. 31, 2024 | 1410   | -      |                |

## Project Objective Indicators #2

Indicator #2: Electricity supply of renewable energy annually (GWh)

| Year          | Target    | Actual | Others, if any |
|---------------|-----------|--------|----------------|
| Dec. 31, 2024 | 19,000GWh | -      |                |

## Project Objective Indicators #3

Indicator #3: Availability of generation capacity during summer months (MW)

| Year          | Target  | Actual | Others, if any |
|---------------|---------|--------|----------------|
| Dec. 31, 2024 | 6,298MW | -      |                |

## Project Objective Indicators #4

Indicator #4: Preparation of hydropower project, completion of pilot solar project and capacity building program (%)

| Year          | Target | Actual | Others, if any |
|---------------|--------|--------|----------------|
| Dec. 31, 2023 | 100%   | -      |                |

## Intermediate Result Indicators #1

Indicator #1: Component A. Construction of T5 power house and connection to Tunnel 5

| Year          | Target | Actual | Others, if any |
|---------------|--------|--------|----------------|
| Dec. 31, 2024 | 100%   | -      |                |

## Intermediate Result Indicators #2

Indicator #2: Component A. Construction of intake modification for Tunnel 5

| Year          | Target | Actual | Others, if any |
|---------------|--------|--------|----------------|
| Dec. 31, 2024 | 100%   | -      |                |

## Intermediate Result Indicators #3

Indicator #3: Component B. Installation of number of power units on Tunnel 5

| Year          | Target | Actual | Others, if any |
|---------------|--------|--------|----------------|
| Dec. 31, 2024 | 3      | -      |                |

## Intermediate Result Indicators #4

Indicator #4: Component B. Construction of T5 Switchyard

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| Year          | Target | Actual | Others, if any |
|---------------|--------|--------|----------------|
| Dec. 31, 2024 | 100%   | -      |                |

Intermediate Result Indicators #5

Indicator #5: Component B. Transmission line for power evacuation

| Year          | Target | Actual | Others, if any |
|---------------|--------|--------|----------------|
| Dec. 31, 2024 | 100%   | -      |                |

**Remarks:** Since the project implementation is still under procurement stage, no result has been generated.