

*The 5th Regional Stakeholder Forum
First Regional Information Sharing on Pak Lay Prior Consultation Process
20-21 September 2018
Landmark Hotel, Vientiane, Lao PDR*



Approach and Methodology for Assessment of the Pak Lay Hydropower Project

Dam Safety

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Outlines



Overview of the Submitted Documents



Approach for Technical Review



Methodology

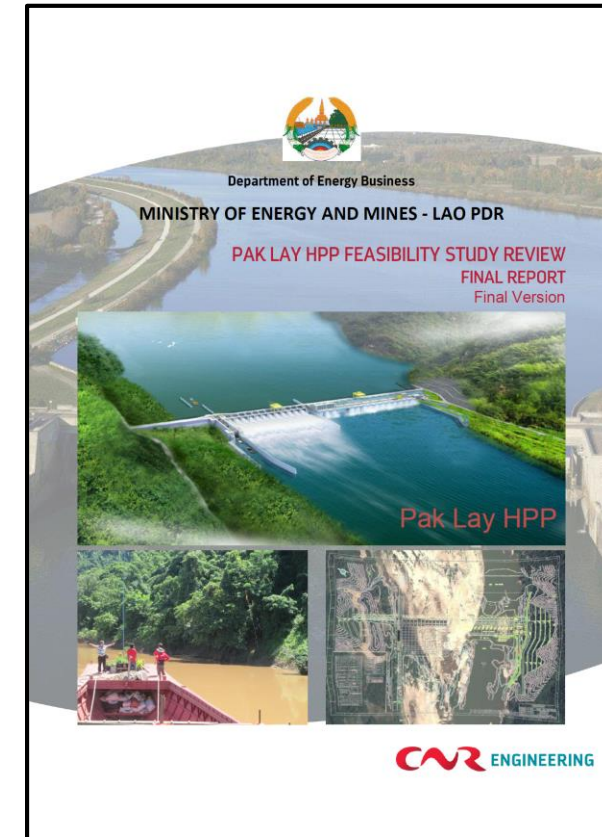
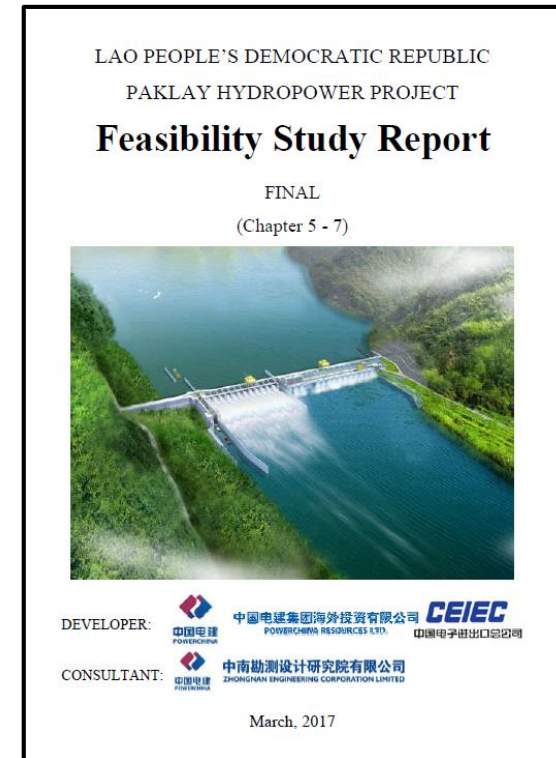
I. Overview of Submitted Documents

The Pak Lay FSR relates to **“Dam Safety”**

- Chapter 2 – Hydrology (82 pages)
- Chapter 3 – Engineering Geology (165 Pages)
- Chapter 5 – Project Layout and Main Structures (245 Pages)
- Chapter 8 – Project Management Plan (61 Pages)
- The review of the FSR by CNR (121 Pages)



Panoramic View at Upper Dam Site (Look to D/S)



I. Overview of Submitted Documents (Cont.)

The Pak Lay FSR makes reference to

- MRC Preliminary Design Guidance
- Lao Electric Power Technical Standards
- ICOLD and the World Bank Guidelines



However, the FSR has been based on Chinese standards

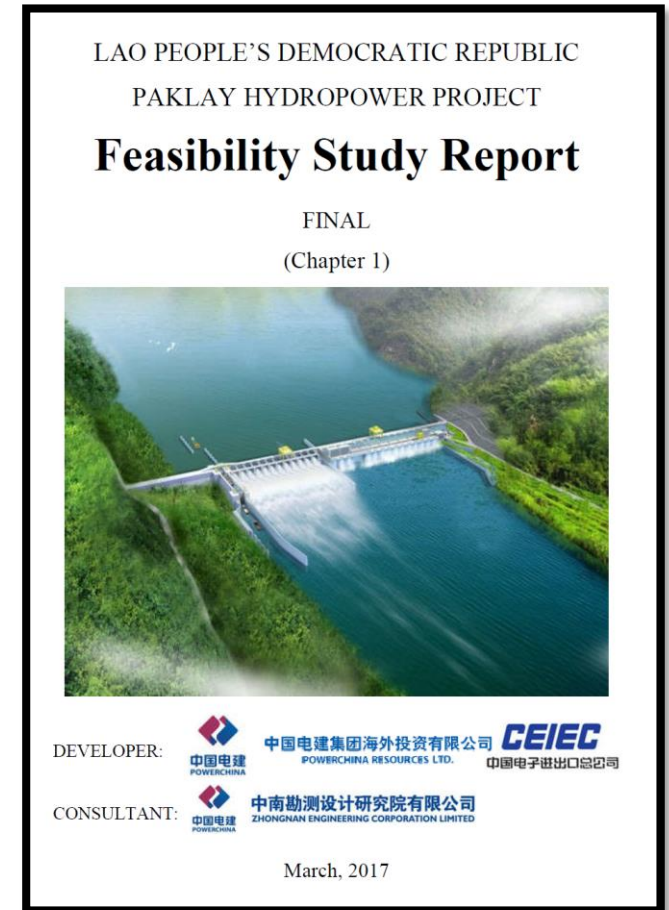


In order to address;

- (1) **The safety issues** related to geology, earthquake, flood risk, structural layout associated with location, scale and structure of the dam
- (2) Initial plan for Emergency Preparedness Plan (**EPP**) and Dam Safety Management System (**DSMS**)

II. Approach for Technical Review

- To **provide a preliminary finding** of the Pak Lay Hydropower Project Feasibility Study Report (FSR) with respect to **Dam Safety requirements**
 - Chapter 2 – Hydrology
 - Chapter 3 – Engineering Geology
 - Chapter 5 – Project Layout and Main Structures
 - Chapter 8 – Project Management Plan
 - The review of the FSR by CNR
- To **suggest (for consideration)** the provision of **additional information and investigations review** for the PNPCA process



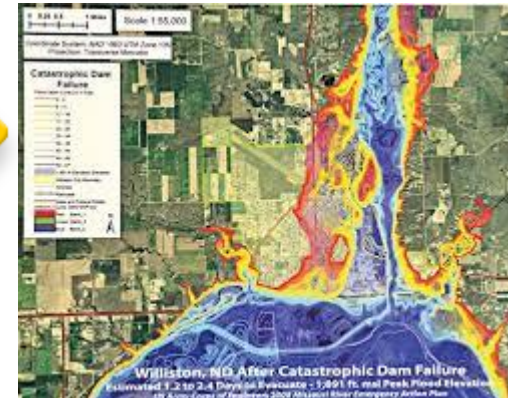
II. Approach for Technical Review

Approach

- Review of the relevant documents and Specifications to confirm compliance with the relevant Dam Safety Standards
- Assessment of the relevant design parameters adopted, the Risk Assessments undertaken and comparing consistency across Lower Mekong Dams
- Provide recommendations on actions to improve the content closer matched with the PDG

Expert Resources

- MRCS expertise
- Independent external expertise
 - National Dam Safety Experts
 - International Dam Safety Expert



Failure impact assessment



Failure Modes



III. Methodology

To review the **safety design of dam** as described in the FSR and to draw attention to any non-compliance with **MRC PDG**



To provide **recommendations on actions** that could help to **improve the current content** as to ensure a closer match with the PDG



To **identify and provide recommendations** related to any other **issues requiring follow-up** so that priorities can be readily established for improvement, remedial measures, or additional investigations



Include the **MRC JC comments** related to Dam Safety into the TRR



The recommendations of the Dam Safety must be included in any **possible Statement and must be followed up by a JAP** - Observed/implemented during the overall process of design, construction and operation



Thank you

