Lai Chau HPP, 1200MW, 3 units, 137m RCC dam
## Salient Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
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<tbody>
<tr>
<td>Dam type</td>
<td>RCC Gravity Dam</td>
</tr>
<tr>
<td></td>
<td>Height 137.0 m, Crest Length 611 m</td>
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<tr>
<td></td>
<td>RCC 2 M.m³</td>
</tr>
<tr>
<td>Reservoir</td>
<td>Catchment Area 26,000 km²</td>
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<tr>
<td></td>
<td>Life Storage 710.9 M.m³</td>
</tr>
<tr>
<td>Spillway &amp; Low Level Outlets</td>
<td>max. Discharge 35’077 m³/s</td>
</tr>
<tr>
<td>Powerhouse</td>
<td>3x 400 MW Francis, total 1’200 MW</td>
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</tbody>
</table>
POWER ENGINEERING CONSULTING JOINT STOCK COMPANY 1

PROJECT LOCATION

[Map showing locations of Lai Chau HPP, Son La HPP, and Hoa Binh HPP]
DEVELOPMENT OF DA RIVER
## Design Time Line

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<tbody>
<tr>
<td>Feasibility and Basic Design Report (PECC1)</td>
<td>Technical Design Stage (PECC1 plus RCC Dam design AF-C)</td>
<td>Approval of Technical Design by Higher Authorities</td>
<td>Start of RCC Construction 03/13</td>
<td>December: Unit 1 generation</td>
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<tr>
<td>Start excavation 2010 - Construction of Diversion Excavation of Powerhouse etc</td>
<td>Drawing Design and Main FST</td>
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RCC dam is designed to the requirements of both, International Standards & Vietnamese Standards
Introduction

Project design
Introduction

RCC gravity dam design
Challenges in the dam construction
Layout, block arrangement, programme
Investigation prepared by PECC1 since 2004
RCC Testing including mix design in laboratory and full trial embankment test prepared by PECC1
Starting construction of auxiliary works at the site since 2010
Completing, diversion culvert on right bank and river closure stage 1 on 24th April 2012
RCC placement at block C1 and block C2
Challenges in the dam construction

Foundation & Son La reservoir
Low Level Outlet and Intake
Overview of the project during construction at the night in Dec 2014
Overview of the project when RCC placement is completed with maximum placement rate to lift RCC layer of 27.3m/month
Overview of the project before impounding reservoir in June 2015 after official construction time of 19 months
Upstream view before impounding reservoir
Downstream view before impounding reservoir
Spillway operated after impounding reservoir in flood season in 2015
Overview of the project after impounding reservoir and before generating unit 1 in Dec., 2015. Unit 2 and 3 will be generated power and the project will be completed in 2016
Artist’s impression

THANK YOU FOR YOUR ATTENTION!