Client: Sarawak Energy Berhad (SEB)

Belaga HEP – Feasibility Study

Belaga HEP is an impounding reservoir scheme on the Belaga River about 6 km upstream of Belaga Town and the confluence with the Rajang River in the Belaga district of Sarawak, Malaysia. The catchment area is 2,867 km2 and is unregulated, with an average annual rainfall of about 2,286mm.

Assignment
The overall intent of this study was to review, analyze and confirm the feasibility of the proposed site location in an earlier feasibility study (2009) prior to major concept design development works.

Solution
Norconsult rendered the following services: Phase 1: initial review and inception stage. Reviewing previous studies and updating the data and optimising the scheme on the basis of Firm Power and Saleable Energy. Undertook a technical and geological viability review for the scheme.

Hydrological and sediment studies were undertaken and river hydraulic modelling made on design floods. During Phase 2 the geologist provide technical assistance to the site investigation team and evaluated results. A reservoir rim stability assessment was undertaken. At Phase 3 the optimised scheme was developed to concept level design and drawings prepared. The principal qualities were taken off and cost estimates prepared on the basis of a rates analysis. The scheme was subject to a risk analysis to evaluate the key risks and likely out turn costs.

Disciplines and services
Hydropower

Time span
2015 - 2016