Case Study – InfraCo Asia's Coc San Hydropower project in Vietnam

Enabling industrialization from hydropower

The Coc San Hydropower Project is a run-of-river plant located in the Lao Cai province, Vietnam, close to the border with China. At 29.7MW, this project is the first foreign direct investment in the low-income Lao Cai province and is part of the provincial power development plan that seeks to reach production capacity of 1,000 MW by 2020. The local authorities strongly support the project as it is expected to underpin an expansion of iron mining, copper industries, and fertilizer production from apatite mines and to boost provincial fiscal revenue. Moreover, it will reduce import of power from mainland China that has been both unreliable and expensive.

Background

Electricity demand in Vietnam is growing at a rate of 15 percent annually, creating huge pressures to increase capacity of generation, transmission and distribution. At the end of 2013, the state company, Vietnam Electricity (EVN), owned over 70 percent of the 30,000 MW generating capacity and controlled the transmission grid. Hydropower accounts for about 44 percent of energy generated, followed by oil and gas thermal with 34 percent, and coal with 19 percent. The hydropower potential is estimated to be as high as 200,000 MW but only about 13,000 MW has been developed.

Vietnam is focused on developing generation of renewable energy. For projects below 30 MW, the Ministry of Industry and Trade (MOIT) has instituted a standard Power Purchasing Agreement (PPA) that obliges EVN to buy the bulk of power at Avoided Cost Tariffs (ACT) set by the Electricity Regulatory Authority of Vietnam (ERAV). At the same time, a competitive electricity market is also being established in Vietnam.

The Project has been developed and will be operated by a local company, the Lao Cai Renewable Energy (Vietnam) Joint Stock Company (LCRE). The original shareholders of LCRE and sponsors of the Project were Colben Energy Holdings (Vietnam) Ltd (VCEH), a subsidiary of Singapore-based Asiatic Group (Holdings) Ltd and two Vietnamese companies, the Vietnam Infrastructure Development and Finance Investment Company (VIDIFI) and HVD Construction and Investment Consultant (HVD). IAD later became a majority shareholder of LCRE through its wholly owned subsidiary Viet Hydro Pte. Ltd.

The Deal

At financial close, capital mobilised for the project stood at USD49.9 million with the financing structure shown in the table below. The debt is completely financed through a local bank which is one of the seven banks certified to receive a credit line from the World Bank's Renewable Energy Development Project that can be used to refinance loans for small hydroelectric projects (below 30MW). The project is supported by two other PIDG facilities - a $5M Viability Gap Funding (VGF) grant from Technical Assistance Facility (TAF) and a loan facility from InfraCo Asia Investments (IAI) to the tune of $10M. The project is expected to achieve a financial IRR of 16% and its revenues are backed with a PPA of 20 years.

Financing structure of the company at Financial Close

	Contribution (US$)	% share of equity
Equity		
Viet Hydro*	21.1	78.4%
Colben Energy	3.3	12.3%
VIDIFI	1.8	6.7%
HVD	0.7	2.6%
Sub-total (Equity)	**26.9**	**100%**
Debt		
Saigon Hanoi Commercial Bank	23.0	
Sub-Total (Debt)	**23.0**	
Total	**49.9**	

*Viet Hydro shareholding

- IAD: 77.9%
- Colben: 22.1%

Supported by

- Grant from TAF
- Loan from IAI

PIDG Role

InfraCo Asia's involvement in the project provided the necessary thrust to overcome the barriers that the project faced at various stages.

Prior to IAD involvement, project implementation had already started but had to be stopped in 2011 at an early stage, when the initial capital was expended and the project company had been unsuccessful in securing long-term loan financing. Prospective Vietnamese bank lenders objected to the high leverage of the project company and to insufficient due diligence and safeguard issues, exacerbated by adverse macro-economic conditions at the time.

IAD shortlisted the project in 2012 and undertook the following actions to address the above:

- Prepared transaction documents for the project and reached agreement with the original promoters to restructure the project
- Commissioned an Environmental and Social Impact Assessment (ESIA) gap analysis in accordance with World Bank and IFC standards
- Restructured the construction arrangements and negotiated revised contract terms with the EPC contractor
- Secured $23M non-recourse long-term debt financing from the Saigon and Hanoi Commercial Bank (SHB)
- Secured additional equity investment commitment from VCEH to be made once Financial Close was achieved
- Other development work allowing Financial Close to be achieved in December 2014.

In mid-2014, when the Project was at advanced stage of reaching Financial Close, the regulatory authorities proposed an amendment that would leave tariffs flat for the duration of the PPA for small hydro power projects and adversely impact commercial viability which would have put financial close at risk. IAD successfully addressed this issue by leveraging in-country resources of DFAT and SECO during the consultation period for the proposed amendment and ultimately the proposal was rescinded. With certainty on the tariff, IAD was able to resume work and bring the project to financial close before the end of 2014.

As mentioned earlier, IAD was supported by other PIDG facilities in achieving this as well:

- VGF of $5M from TAF allowed the project to become financially viable since the tariff regime and the carbon reduction credits on their own did not allow resulting revenues to cover the costs of a project which had significant development impact.
- A bridge loan of $10M from IAI helped achieve financial close in a timely manner. Without this, project schedule and cost would have been adversely impacted thereby jeopardising debt financing that was already secured as well as government approvals all of which significantly increased the risk of not being able to reach financial close at all. Moreover, it increased the prospects of a successful exit soon after financial close and reducing IAD to a minority stake.

Development Impact

In addition to the expected financial internal rate of return of 16%, the project will also achieve the developmental objectives summarized below

Key Development Indicators	
Private sector investment	
Commercial equity and debt	$30.94M
Development Finance Institution	$13.96M
Fiscal Benefits	
Tax revenue	None/Tax incentives apply for first 5 years
Job creation	
Temporary (during construction)	250
Permanent (during operation)	40 (of whom 8 are female)
People expected to benefit from new/better infrastructure	130,000 (of whom ~51,000 are female)
Environmental Benefits	Reducing pollution by generating clean electricity from hydro resources
Additional benefits • Reducing cost of electricity and enhance energy security by providing an alternative to the high cost and unreliable electricity from China • Support expansion of various industries such as iron mining, copper, and fertilizer production from apatite mines	

The Chairman of the Lao Cai Provincial Peoples Committee, Mr. Doan Van Huong, has further characterized the impact of this project as follows: *"The Coc San project is the first Foreign Direct Invested (FDI) project in the hydroelectric power sector in Lao Cai province and the first ever FDI project in Bat Xat district. Once the project will be in operation the*

Province will significantly reduce power import from China. We will also benefit due to increase electricity reliability which will support Industrial Zone developments and attracting investments in mineral processing facilities to support existing mining projects. Lastly the project will be a tax contributor to the Province"