

## **International Rivers Comments on Xeset 2 Hydropower Project, Lao PDR**

August 7, 2009

Submitted to the Project Validator, Bureau Veritas Certification Holding

### Summary of Comments:

- The project is not additional. The project attracted financing from the China Export-Import Bank, and will start generating power this month. The project will not lead to a net reduction in greenhouse gas emissions since the main alternative source of generation for domestic needs in Southern Laos is hydropower. The PDD states that the project will displace electricity imports from Thailand and therefore displace the need for fossil fuel plants in Thailand. However, the main imports from Thailand occur in the dry season due to Xeset 1's inability to generate much power during the dry season. Xeset 2 will do little to alleviate this situation since it has little storage capacity (only 800 cubic meters according to the Government of Laos' website).
- The project has serious impacts, especially on the Xeset River, which will be dewatered for a long stretch, and two other rivers that will be essentially dewatered in order to divert water for the project. All three rivers are crucial for the health and livelihoods of people who live adjacent and near the streams. The PDD makes no mention of the more than 18,000 people, including a large number of indigenous peoples, who will be affected by this de-watering. EdL has an extremely poor track record in compensating communities for their losses. There is no evidence that the situation will be any different in the case of Xeset 2. Even though people will lose domestic water sources, wild fisheries, irrigation water, vegetable gardens, water for raising fish, and recreational and income generating opportunities, they are only expected to receive a few wells as compensation. This certainly does not meet international standards, or represent just and fair compensation.
- The claim that funds from CERs will be used to assist the project owner in implementing the Environmental and Social Action Plan for the project are disingenuous. Given that construction is complete, EdL should have included funds for the action plan in the initial project budget. Given past experience, it is likely that any funds from CER sales would go into EdL's coffers rather than being used for community benefits, as has occurred in the Theun-Hinboun, Nam Leuk and Nam Song Projects. The validators should review the track record of hydropower construction in Laos before accepting EdL's claims in this regard.
- The PDD states that community consultations for Xeset 2 occurred in 1999 and 2004, and have been ongoing since 2004. In a country such as Laos, which is a one-party communist state that does not tolerate dissent, consultation processes are rubber-stamping devices where communities feel afraid to speak out or raise concerns due to fear of repercussions.

## (1) Additionality

The project is not additional. The project was developed through a loan from the China Export-Import Bank of \$108 million in 2004 and a 20% contribution from the Lao utility, Electricité du Laos. The PDD states that the CDM benefit and greenhouse gas emission reductions were considered during the feasibility and environmental assessment stages for the project. While it is quite possible that the potential financial benefits from CDM registration were considered, it is not credible that receiving these benefits were crucial to the project's development given that the project was able to secure financing and complete construction without CDM accreditation, and with no reasonable certainty that CERs would ever be granted to the project. The *Vientiane Times* reports that the project will start generating power this month.<sup>1</sup>

The PDD states that CERs are required to meet the financial benchmark internal rate of return of 8%. It states that without the sale of CERs the project IRR is 6.96%, but with it the project IRR is 8.07%, thereby allowing the project to overcome the proposed investment barrier. The figure of 8% as the financial benchmark IRR is extremely low, and seems to have been chosen because it matched the numbers for Xeset 2 with CERs. This conclusion is bolstered by the fact that a footnote of the PDD on page 15 states that the proposed Nam Ngiep hydropower project feasibility study identifies an IRR of 12.8% and that coal-fired power plants in the region have an IRR in the range of 12 to 15%. There is no justification for the much lower benchmark IRR of 8% assigned to Xeset 2. By comparison, Maunsell and Laymeyer, in their *Power System Development Plan for Lao PDR*, August 2004, put the benchmark rate of return on equity for a hydropower project in Laos at 17%.<sup>2</sup> The FIRR for the Nam Theun 2 Hydropower Project in Laos was estimated to be 14.4%.<sup>3</sup>

Indeed, the project has a very low internal rate of return, but this was not an investment barrier because EdL managed to secure funding from the China Ex-Im Bank, funding which went straight to a Chinese construction company, Norinco, to build the project. The project attracted financing largely due to geo-political and economic reasons rather than financial reasons. China is playing an increasingly important role as funder and donor to the Lao government, and Chinese financial assistance is being used to subsidize Chinese construction companies operating overseas.

The PDD states that the proposed project is “not considered as common practice for the region and is additional”. They claim that only two hydro projects have been developed in southern Laos: Houay Ho and Xeset 1. This is untrue. In southern Laos right now the XeKaman 3 project is under construction and several other projects are at an advanced stage of planning. According to the government-run *Vientiane Times*, Laos currently has nine projects that have been granted Concession Agreements or are under construction. A total of 17 projects are at the Project Development Agreement stage and another 42 have signed MOUs.<sup>4</sup> One of the main barriers to

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<sup>1</sup> “Energy developer proceeds with Nam Phay plant,” *Vientiane Times*, 27 July 2009

<sup>2</sup> See p. 217 of report.

<sup>3</sup> Nam Theun 2 Project Economics, Interim Summary Report, Prepared for the World Bank, August 21, 2004, p.15.

<sup>4</sup> “Vientiane hydropower project to be studied,” *Vientiane Times*, 24 July 2009

development of these projects – which are primarily for export - is that Thailand is not in need of the power.

Indeed, even though the PDD claims that this project is additional to meet Thailand's growing energy needs, and will offset fossil fuel emissions from Thai plants, the government of Laos' poweringprogress.org website states that the project's "main objective is to serve the southern provinces. About 20% of its energy may also be exported to Thailand, depending on local demands."<sup>5</sup>

If the main objective of the project is to serve southern provinces, the PDD has made no case as to how the project will contribute to emissions reductions in Laos. The main source of generation for domestic needs in Southern Laos is hydropower and power imports from Thailand. In terms of alternative generating options for Southern Laos, the main alternative is hydropower, therefore the project would result in no net emission reductions in Laos. In terms of displacing electricity imports from Thailand, the main imports occur in the dry season due to Xeset 1's inability to generate much power during the dry season. Xeset 2 will do little to alleviate this situation since it has little storage capacity (only 800 cubic meters according to the Government of Laos' website). Even though the project includes a diversion of water into the Xeset River from the Tapoung and Pao Rivers to increase the Xeset River's flow, the Tapoung and Pao Rivers have very low flows during the dry season, meaning they will contribute little to the project's capacity to generate additional electricity during the dry season.

Consequently, the project will not alleviate the need for Southern Laos to import electricity from Thailand during the dry season. It will also do little to displace fossil fuels in Thailand since Thailand is most in need of electricity from Laos in the dry season, when its own hydropower plants (such as Pak Mun Dam) are operating at low capacity. This issue is not mentioned at all in the PDD.

## **(2) Environmental and Social Impacts**

The Environmental and Social Impact Assessment and the PDD fail to consider the downstream impacts of the project, despite the fact that the project will cause substantial environmental and social harm. The PDD states that "aquatic ecosystem impacts are expected to be minor in the Xeset River and the Houay Tapoung River". The Houay Pao River is not mentioned at all. In any case, this is an absurd statement. An approximately 16-kilometer stretch of the Xeset River between the Xeset 2 Dam and the Xeset 2 powerhouse will be dewatered for much of the year. This project is not a 'run-of-river' project literally, in terms of the same river running down its natural watercourse. It involves the diversion of waterbodies, thus greatly altering river flow patterns. The PDD states that a downstream mitigation flow of 0.5 m<sup>3</sup>/s will be provided, stating that this will allow for the "maintenance of aquatic and wildlife systems". The minimum release of 0.5 m<sup>3</sup>/s essentially reduces the Xeset River to a trickle, totally insufficient for maintaining aquatic biodiversity.

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<sup>5</sup> [http://poweringprogress.org/index.php?view=article&catid=129%3Aproject-under-construction&id=114%3Ase-xet-2-76mw&option=com\\_content&Itemid=74](http://poweringprogress.org/index.php?view=article&catid=129%3Aproject-under-construction&id=114%3Ase-xet-2-76mw&option=com_content&Itemid=74), accessed August 6, 2009

According to a report by Phetsavanh Sayaboulaven entitled *Xeset 2 and Xeset 3 Dam: A report on the potential environmental and social impacts*<sup>6</sup>, published in November 2005, eight villages with 706 families and 2,736 people use this stretch of the Xeset River to catch fish, cultivate vegetables along the riverbanks and for water supply. With much of the Xeset River's flow being diverted by the Xeset 2 Dam, these people are likely to see the disappearance of their fish along with almost all the other benefits that they receive from the river.

In addition, the diversion of water from the Tapoung and Pao rivers will greatly reduce flows in those rivers, affecting aquatic biodiversity and thousands of people who depend on them. According to the same report, people farm the riverbanks and adjacent plains of the Tapoung River. For some families, sales of these crops generate an income of several hundred thousand Lao kip per year. In some areas, families use water from the Tapoung River to cultivate dry season rice crops. The fisheries of the river are an important source of protein for communities living downstream of the Sen and Sok falls, and people rely on the Tapoung as a source of water for livestock during the dry season. Twenty-five villages with 2,666 families and 12,540 people are situated along the river below the diversion. These people are not even mentioned as affected in the PDD.

Finally, the Tapoung-Xeset 2 Diversion Channel would also capture and divert water from the Houay Pao River, with consequent de-watering of that river. Nine villages with 678 families and 3,256 people are situated along this stream below the proposed diversion, and will also suffer losses of fisheries, water supply and dry season agriculture.

The PDD states that any impacts on fisheries and agricultures have been “minimized through compensation programs for the loss of coffee trees and swidden areas, community fishpond development... and water management strategies”. However, compensation has only been provided to families who have lost land directly due to dam construction. Villagers who will be indirectly impacted due to livelihood losses unrelated to land losses have not been compensated. Only a few wells have been built in each of the downstream villages along the Tapoung and Pao rivers, indicating that EDL knows that these communities will be losing their stream water sources. The record of Electricité du Laos in providing compensation for affected communities is extremely poor. For years, the Asian Development Bank has been working to get Electricité du Laos to implement fish ponds and dry season water supply for villages affected by the Nam Leuk and Nam Song Hydropower Projects, both EdL projects, and more than a decade later outstanding problems remain, despite the ADB providing additional funding to EdL to resolve the impacts.<sup>7</sup> Until recently, EdL was the major government shareholder in the Theun-Hinboun Power Company, a project that has generated substantial revenues for the Lao government but has had devastating and uncompensated impacts on 30,000 people living downstream.<sup>8</sup> The experience with providing fish ponds as compensation for loss of wild fisheries has been very poor in Laos due to the costs involved in operating successful fish ponds, which includes purchasing fish seed and food, and avoiding escapes, a common problem in an area that floods

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<sup>6</sup> The report is available at <http://www.akha.org/upload/dams/xesetreporttitlepage.pdf>

<sup>7</sup> For more information see <http://www.internationalrivers.org/en/node/877>

<sup>8</sup> For more information see <http://www.internationalrivers.org/en/node/964>

every wet season. The problem clearly appears to be the lack of capacity and political will of EdL to address the social and environmental impacts of their hydropower projects. There is no evidence that Xeset 2 will be any different.

Further, the claim that funds from CERs will be used to assist the project owner in implementing the Environmental and Social Action Plan for the project are disingenuous. Given that construction is complete, EdL should have included funds for the action plan in the initial project budget. Any funds from CERs would very likely go into EdL's coffers rather than being used for community benefits, as has occurred in the Theun-Hinboun, Nam Leuk and Nam Song Projects. The validators should review the track record of hydropower construction in Laos before accepting EdL's claims in this regard.

### **(3) Consultation**

The PDD states that community consultations for Xeset 2 occurred in 1999 and 2004, and have been ongoing since 2004. In a country such as Laos, which is a one-party communist state that does not tolerate dissent, consultation processes are rubber-stamping devices where communities feel afraid to speak out or raise concerns due to fear of repercussions. The report by Phetsavanh Sayaboulaven describes a climate of fear and intimidation where people did not feel like they had the opportunity to speak out against the project. Sayaboulaven visited 43 communities in 2004 and 2005 to interview villagers about the proposed project and its impacts. Sayaboulaven quotes many villagers expressing their concerns about the project. A few examples are copied below. Bureau Veritas is encouraged to read the report for further examples:

Says one male farmer in Nong Hin Khao: "We are just waiting to see if they will come to build the project. We do not want them to build the dam. It will badly affect our land and the environment. The official compensation will not be adequate, just like in the case of the Houay Ho dam. But we dare not oppose the government officials."

Group of people, Don Lap village, downstream along the Tapoung River: "We have heard that the officials will dam the Tapoung River. They have not asked many people about what they think [about the proposed dam]. They did not ask, 'Are you happy about this?' We all just said, 'Okay'. We dare not oppose them. We are afraid. If we do not agree, they might arrest us."

Female farmer, Da Sia Noi village, who will lose land to the diversion channel: "I have been planting coffee since I was 18 years old. Now I am 67 years old. My coffee plantation is very beautiful because it is near the Houay Pao stream and I have worked hard. I am very worried because the officials say that my coffee plants must be destroyed to make way for the channel. I do not want any compensation, I just want to keep growing my coffee plants."

Lao contacts who visited the dam area in September 2008 reported that most local people living along the Tapoung and Pao Rivers are opposed to the dam, and feel that they are not receiving adequate compensation. One elderly man living along the Tapoung River in Dong Noi village was quoted as saying, "I am very worried that the Tapoung River will go dry because I have long caught fish in the river." Another younger man from Mouang Xoum village said, "I go to cast my net to catch fish in the Tapoung River everyday. In the future, I don't know where I will be

able to go to catch fish.” A woman from Phanouan village said, “I am afraid that there will be no water to plant vegetables in the dry season when the Pao River goes dry.” Another woman from Len village was quoted as saying, “We used to gather shellfish and other aquatic animals with small nets in the Pao River in the dry season to eat and sell but if the Tapoung River goes dry we will lose all hope to do that in the future.”

Considering the sentiment of the people regarding the project, the consultations that have occurred cannot be considered genuine.

If Xeset 2 is validated and registered by the CDM it could open the floodgates for similar non-additional and poorly designed and developed hydropower projects in Lao PDR.

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