



# Workshop on Improving the Regional Distribution of CDM Projects in Asia and the Pacific 8-9 September 2010, ADB Headquarters, Manila, Philippines

## Clean Development Mechanism – CDM Xeset 2 Hydropower Project Lao PDR

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### Project Details: Xeset II Hydropower Project - First CDM Hydropower Project in Lao PDR.

- Located in Saravan Province, southern Lao PDR, 100 km east from Pakse.
- Run of river project with 76 MW installed capacity
- 279,600 MWh of electricity per year
- The Xeset 2 Project is situated upstream of the existing Xeset 1 hydropower project. It includes the diversion of the Houay Tapoung River to the Xeset River to improve the power generation capacity of the Project.
- Will improve the power generation of the Xeset 1 plant by approx 20,000 MWh per year.



# Xeset II Hydropower Project - First CDM Hydropower Project in Lao PDR.

- Supplies electricity to the regional grid which covers southern Lao PDR and Thailand (EGAT grid).
- Average GHG emission reduction of 141,142 tonnes CO<sub>2</sub> equivalent per year.
- Project uses ACM0002 methodology “*Consolidated methodology for grid-connected electricity generation from renewable sources*”.
- Low reservoir inundation area (0.18 km<sup>2</sup>) and high power density.



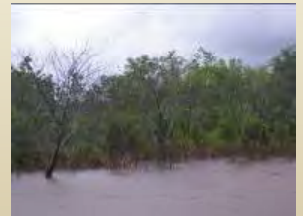
## ∞ Status of Xeset 2 CDM

No.	Descriptions	Date
	<b><i>Steps that have been taken:</i></b>	
1	Prepare and submitted PIN	October 2005
2	PDD preparation (with CDM consultants)	From February 2008
3	Emission Reduction Purchase Agreement with Buyer	February 2008
4	WREA (Lao DNA) Approval received	July 2009
5	Letter of Non-Objection received from Thai DNA	September 2009
6	Commencement of Validation: PDD published on UNFCCC website for Global Stakeholder Consultation	July / August 2009
7	Draft Validation Report Received from DOE	May 2010
8	World Commission on Dams Draft Validation Report received	July 2010
	<b><i>Further steps to be taken:</i></b>	
9	Obtain Final Validation Reports	In progress
10	Apply for Annex 1 Country Approval	In progress
11	Request for CDM Registration	

# Merits/Sustainable Project Benefits

## Benefits of the Project and Sustainable Development

- The Project has a low environmental impact:
  - run-of-river plant
  - small Project footprint
  - minor impact on biodiversity
  - no resettlement required
- Extensive community consultations were held in 1999 and 2004 for the EIA process. Consultation has been ongoing since 2004 (including further consultations in 2008, 2009 and 2010).
  - The community is supportive of the Project.
- The Project will contribute to the sustainable development of Lao PDR through:
  - Promoting economic and social advancement by providing a reliable and affordable domestic power supply
  - Earning foreign exchange from electricity exports
  - Improve the livelihoods of the local community through increased rural electrification coverage, additional income opportunities, improved road access and health care facilities, and extended water supplies.
- A portion of the CERs will be used for sustainability initiatives.



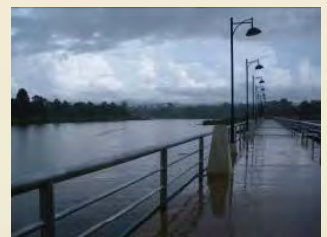
## Issues/challenges

### Project Barriers

- The total exploitable hydropower potential of Lao PDR is around 23,000 MW, yet only about 623 MW has been developed so far. This is largely due to financial and investment constraints faced by the renewable energy sector in Lao PDR.

The barriers faced by the Project include:

- Low Internal Rate of Return (IRR)
- Poor investment climate - Lao PDR is a Least Developed Country (LDC) and one of the poorest country in East Asia.
- Limited financing options
- Delayed Project schedule and increased Project costs



## How the CDM will overcome these barriers

- Additional financing through the CDM is essential for the Xeset II hydropower project:
  - Removing the financial barriers
  - increasing the financial viability of the Project.
- A portion of the CER revenue will be used for sustainability initiatives in the Project area.
- As the first CDM project in the hydropower sector, the Project will provide an incentive for EDL to invest in other similar marginal hydropower projects
- This will encourage the hydropower sector to compete with other economically viable options such as fossil fuel power projects and reduce further GHG emissions.

## Challenges for CDM in Lao PDR

- Further stakeholder understanding required about the CDM process
- More support required for DNA approval process and CDM project identification
- Developing cross-border, grid connected CDM projects (Lao-Thai)
- Funding for CDM project development (especially small-scale)

## ☞ Way forward/Recommendations.

- Provide more training on the CDM process, especially on how to factor CDM considerations during project development
  - planning, financial feasibility, implementation
- Process to identify more CDM projects in Lao PDR
  - Joint CDM workshop with EDL/Lao DNA along with stakeholders/CDM consultants/other developers.
- Regular sharing of CDM experiences among the countries of the region



**Thank You**  
**for**  
**your attention**

**Q&A**

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