

Welcome to ETC – LIRE Workshop
Bottlenecks and Potential Interventions for
Rural Electrification -
from Planning to Implementation
Thakhek 22nd July 2009

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Presentation Outline

1. Introduction to assignment
2. Perception on the CAP REDEO Rural Electrification Plans
3. Bottlenecks for Hydro
4. Bottlenecks for Biomass
5. Bottlenecks for Hydro & Biomass (Transversal)
6. Requirement for Successful Implementation
7. Other Recommendations by Stakeholders
8. LIRE Proposal for discussion: Informed Choice
9. Open for Discussion



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1. Introduction to Assignment

1. Objectives

1. Consult the Energy Sector Stakeholders – public and private (second round of meetings)
2. Address the bottlenecks foreseen
3. Discuss requirements and find answers to support the implementation of plans and provide better energy access in rural areas

2. Methodology

1. Consultation period: 22 to 25 June 2009
2. Compilation of the views of the stakeholders: 1 to 15 July 2009
3. Presentation of results to the consulted persons: 22 July 2009



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2. Perception on the CAP REDEO Rural Electrification Plans

- All unaware of the plans
- Understood as practical exercise for capacity building
- Low interested by investors
- Biomass is not really a good idea
- Nakay District is almost electrified, no or small needs for further electrification
- Boualapha District needs more power. 60 MW plant to be installed at Xeneua River
- Not yet been integrated into [National Rural Electrification Plan](#)



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3. Bottlenecks for Hydro

- Matching energy demand with potential
 - Some hydro systems supply may exceed local demand
 - Low demand versus high supply is not economically viable for private investors
 - High initial investment costs
- Sustainability
 - Impact on conservative areas, biodiversity and lives of local people
 - Local operation and maintenance (can require high technical capacity)
 - Risks of high repair costs for some components that are not initially funded (e.g. governor, civil works)



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4. Bottlenecks for Biomass

- Unsecure Biomass supply
 - Many small rice mills which doesn't operate the whole year
 - Most of the medium-large scale rice mills are connected to the grid
 - Dependency of the gasification operator from biomass suppliers
- Limitations for rural electrification
 - Limited electricity consumption



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4. Bottlenecks for Biomass (Cont.)

- Operating the gasifier on a small load demands more Biomass for electricity production
- Gasifier should be operated with stable load (e.g. irrigation purposes)
- Unstable supplies of feedstock materials
- **Operational limitations**
 - Highly skilled technicians with full commitment is required
 - High investment and transportation costs and low revenues due to low price expectations (heavily subsidized electricity tariffs)



5. Bottlenecks for hydro & biomass (transversal)

- Lack of detailed feasibility studies
- Unsecure economic feasibility - long term investment
- No systematic integration of project plans into national & provincial development plans
- Staff rotation – high turnover of skilled persons
- Difficult Logistics – some areas hard to reach due to low road accessibility
- Difficult payback of collection fees (monthly bills)
- Communications with local people (ethnic)
- Access to financial resources: Public expenditure or donors or local bank?



6. Requirements for successful implementation

- **Technical Assistance**
 - Feasibility study by project owner
 - Mobilization of villagers (Extension service)
 - Presentation and explanation on Feasibilities and plans (objectives, implementation, production & sale plans) – *to whom: private sector? – where: in province and/or in Vientiane capital*
- **Capacity Building**
 - Biomass Training
 - Village participation



6. Requirements for successful implementation (Cont.)

- **Financial Support – facilitate access to financial resources**
 - Funding from the govt
 - Fund from international donors
 - Govt to be warrantor for private sector when applying for local bank loan
 - Govt policies to lower interest rate for local bank loan
 - Joint venture with international company
 - Access to micro finance



7. Other Recommendations by stakeholders

- Feedstock materials like rice husks should be allocated for renewable energy purpose only (for biomass projects)
- Renewable Energies should be integrated into the current policy development
- Clear responsibilities and assigned resources



8. LIRE Proposal: Informed choice for renewable energy

- **Objectives:**
 - Tackle information bottleneck
 - Increase rate of access to energy by speeding up assessment and planning stages
 - Equip communities and SMEs to review their energy needs and local resources
 - Enable communities/SMEs to choose appropriate (affordable) energy solutions, and then know who to contact



8. LIRE Proposal: Informed choice for renewable energy (Cont.)

- ❑ Short list viable potential sites for private investors – saving time and money
- **Concept:**
 - ❑ Informational document guiding end-users and stakeholders for decision making
 - ❑ Energy Demand-Based Approach
 - ❑ Consider energy use and not just electricity (e.g. lighting and cooking)



8. LIRE Proposal: Informed choice for renewable energy (Cont.)

- **Dissemination:**
 - ❑ Extension service approach – for example based on **Lao Extension for Agriculture Project 'NICE' approach**



9. Open for discussion

- ❑ **Discussion Items**
 - Content – e.g. legal, financial, technical
 - Target group – communities, SMEs, DDEM field technicians
 - Format – leaflet, radio campaign, road show
 - Implementation agency – coordination with hardware suppliers, construction and installation companies

