THPC History

Mekong 2 Rio Conference 1-3 May 2012
On Transboundary River Basin Management

Phuket, Thailand
1 May 2012
In the Beginning

- 1993: Laos & Thailand MOU to develop 1,500 MW in Laos for export to Thailand
- THPC first project under this MOU
- First project under new Lao foreign investment policies
- First Independent Power Producer (IPP) in Laos
Initial Project Formation

Public sector project: support economic growth via foreign currency earnings
• 1992 Feasibility Study began
• 1993 Foreign Investors joined
• Nov 1994 Project Start
• 31 March 1998 Commercial Operation date
Shareholders

- 60% EDL
- 20% MDX Lao (owned by GMS Power of Thailand)
- 20% Nordic Hydropower (50:50 owned by Statkraft of Norway and Vattenfall of Sweden)
A Symbol of National Pride
Technical Details

- Located in central Laos
- 210 MW installed capacity
- 1,550 GWh annual energy production
- 1,250 GWH annual energy production post-NT2
- Transmission line from site to Thakhek and then to Thailand
Trans-Basin Run-of-River Design

- No storage reservoir
- Diverts 110 cubic metres of water per second from the Nam Theun River (annual inflow is 460 cubic metres per second)
- Discharges are via a tailrace canal & regulating pond, then to Nam Hai, a tributary of the Nam Hinboun River
Project Financing

• First major IPP project financing in Laos following the government decision in 1989 to open the hydropower sector to foreign investors.

• Also the first financing for a green-field power project of any sort in the Indochina region.
In April 2002, the refinancing of the existing THPC debt marked the second major project financing in the Lao PDR:

- **First** occasion following the 1997 Asian financial crisis that the Central Bank of Thailand allowed a non-Thai company to borrow Baht from Thai commercial banks.

- **First** new IPP project financing anywhere in South East Asia to be closed *without* the requirement of political risk insurance.
THPC Expansion Project

- Optimize water resource in the catchment area
- Increase generating capacity in wet and dry seasons
- Establish an upstream storage dam and hydropower facility on the Nam Gnouang
- Address impact from NT2
- Use existing PPA, License & Shareholders Agreement
- Provide power to EDL
Project Location & Development Timeline

- **2006**
  - Technical Feasibility Study

- **2008**
  - Concession Agreement
  - ESIA, EMMP, and RAP
  - Construction Begins

- **2012**
  - Commercial Operation
Location

1. NG RCC Dam
2. Intake
3. NG Power Station (60MW)
4. NG Switchyard
5. Thasala Substation
6. Intake (Kengbit)
7. Headrace Tunnel (Existing)
8. Headrace Tunnel (New)
9. Power Station (Existing 220MW)
10. Switchyard (Nahin)
11. Power Station (New 220MW)
12. Tailrace Canal
13. Regulating Pond
14. 230 kV transmission line to Thakek
15. 115 kV transmission line to Kongsong
16. Thakek Substation
Project Details

Capacity

- Total Additional Capacity: 280 MW
  - One unit at THPP (220 MW)
  - Two units at NG1 (60 MW)
- Total Existing Capacity: 220 MW
- Total Capacity: 500 MW

Annual Generation (GWh)

- Generation for EGAT: 2,685
- Generation for EDL: 300
THPC’s approach to mitigation for social and environmental impacts has changed over time.

- Changes follow development of national and international standards to address impacts.
- EMCO → EMD → SED
EMCO

- Initial EIA was undertaken at then standards for the hydropower industry.
- EIA was approved by GOL and ADB.
- During construction, THPC established:
  - Environmental Management Committee Office (EMCO)
  - Local staff to address mitigation and compensation issues.
  - Okay with initial activities, but more was needed.
Initial EMCO Activities

• THPC provided over US$2.5m towards mitigation of environmental and social impacts
• Conducted in full consultation with the Lao Government
• Fulfilled all contractual obligations
• THPC also volunteered assistance in a number of other provincial and district projects
Early initiatives included:

- Financial support for schools, plus establishment of new school on the site for families of employees and surrounding communities
- All-weather bridge crossings
- Ferry boat for National Road No. 1 in Bolikhamxay Province
- Fully equipped medical clinic for employees and villagers living near the hydropower plant
After several years of operation, THPC identified additional environmental and social impacts not addressed in the early mitigation program.

In 1999 the ADB was requested to review measures to date and make recommendations for moving forward.

THPC engaged international consultants to prepare a comprehensive program to address all project impacts.
Towards an MCP & EMD

• In 2000, THPC adopted a 10-year Mitigation and Compensation Plan (MCP), further developing activities to address social and environmental impacts.

• THPC was the first private company in Laos to implement an environmental management action plan.
Environmental Management Division

- Responsible for implementing the MCP
- First step was creation of a logical framework outlining policies and guidelines, plus target goals and activities for the MCP
- THPC provided US$4.5 million for the implementation of the MCP
Social & Environmental Division responsible for implementing all mitigation and compensation activities for the Expansion Project.

EIA, RAP, and EMMP approved by GOL per Lao laws and regulations and by international lenders complying with Equator Principles.

Experienced international management (expats and Lao nationals) with Lao national specialists.
SED Program

**Main Program**
- Resettlement- NG dam reservoir (12 villages)
- Relocation- downstream Nam Hai & Hinboun (22 villages)
- General TH Reservoir program
- Social development program
- Environment Management and Monitoring Program
- Thasala relocation
SED Activities

Main Activities

- Consultation and Public Involvement
- Support food security (rice), food for work, health care during transition period
- Compensation and Grievance
- Resettlement and relocation Infrastructure development
- Livelihood restoration and improvement program
- Health, education and support for vulnerable families
- Community development