

NAM THEUN 2 PROJECT

Powering Development through Cross-Border Public-Private Partnership



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A strong regional rationale

- ❑ Population : 6 million
- ❑ Mountainous, landlocked
- ❑ GDP USD 3,5 billion (2006) - still poor LDC status
- ❑ Electricity exportation = 11% of export revenues



A cross border deal

- ❑ The Project is part of 5,000 MW electricity export program between Lao PDR and Thailand
- ❑ Long history of Lao-Thai cooperation in the electricity sector
- ❑ 1,070 MW capacity
- ❑ 95% of electricity sold to Thailand 5% to EdL
- ❑ EGAT will build a 500 kV transmission line in N-E Thailand

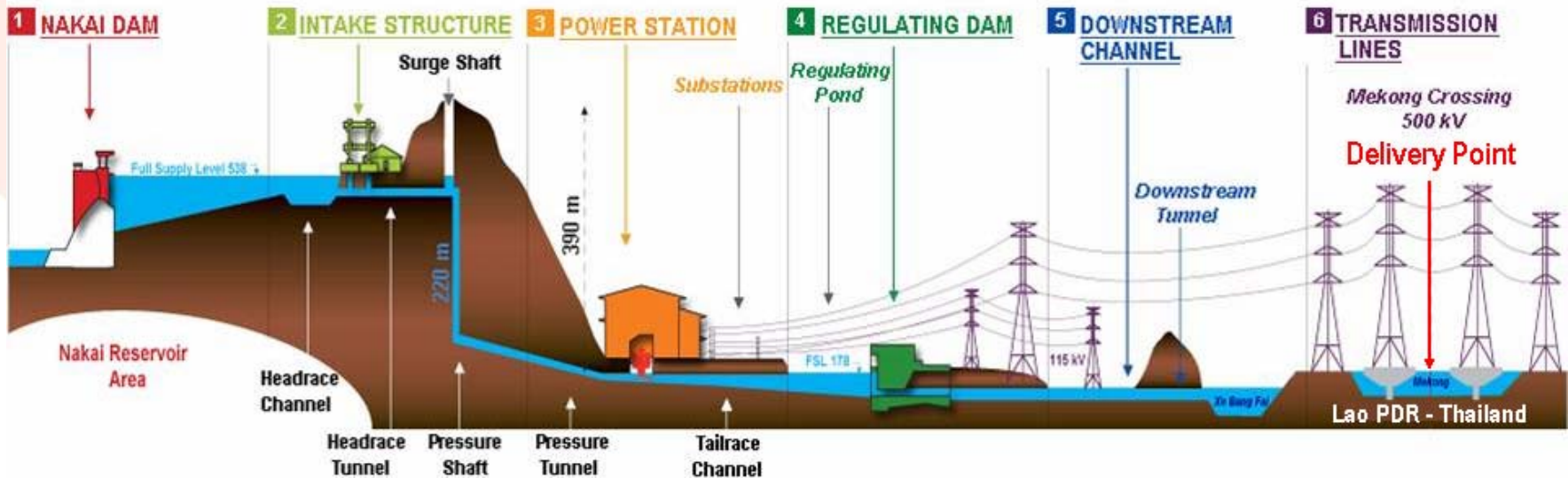


the project meets the local and regional market needs

A trans basin project



A unique topographical situation



- ❑ A small dam (40 m high) creates a 450 km² reservoir (at full supply level) on the Nakai plateau
- ❑ Water drops 350 m from the plateau through a tunnel down to the power station
- ❑ 6 turbines generate annually about 6,000 GWh of electricity
- ❑ 4.5 years of construction

When spillway gates are closed mid 2008,
the dam will create a reservoir of:

- 450 Km² at maximum level
- 70 Km² at minimum level
- 3 500 Mm³ of live storage

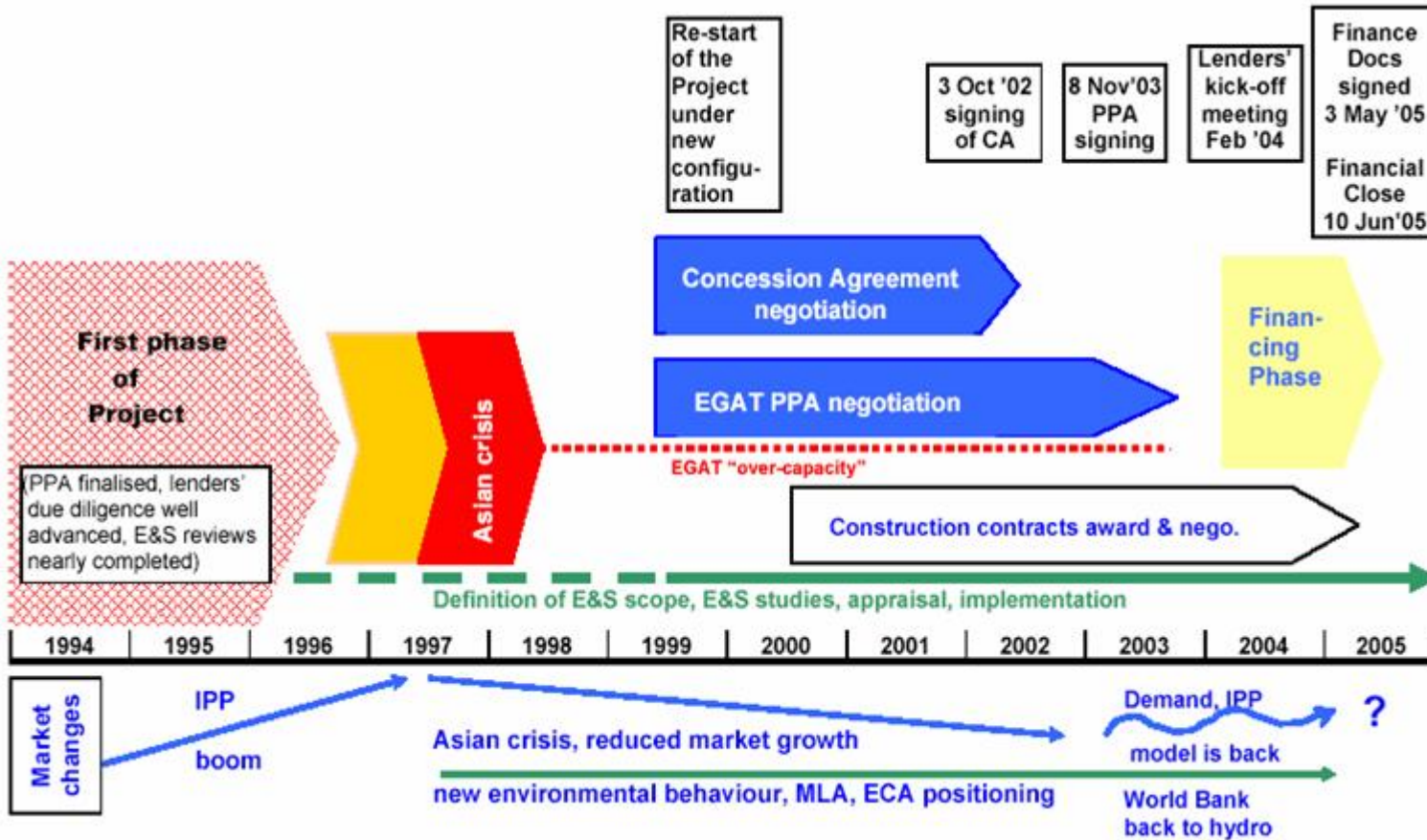


A lengthy maturation



10 years of preparation to reach financial close in 14 months

10 years through ups & downs

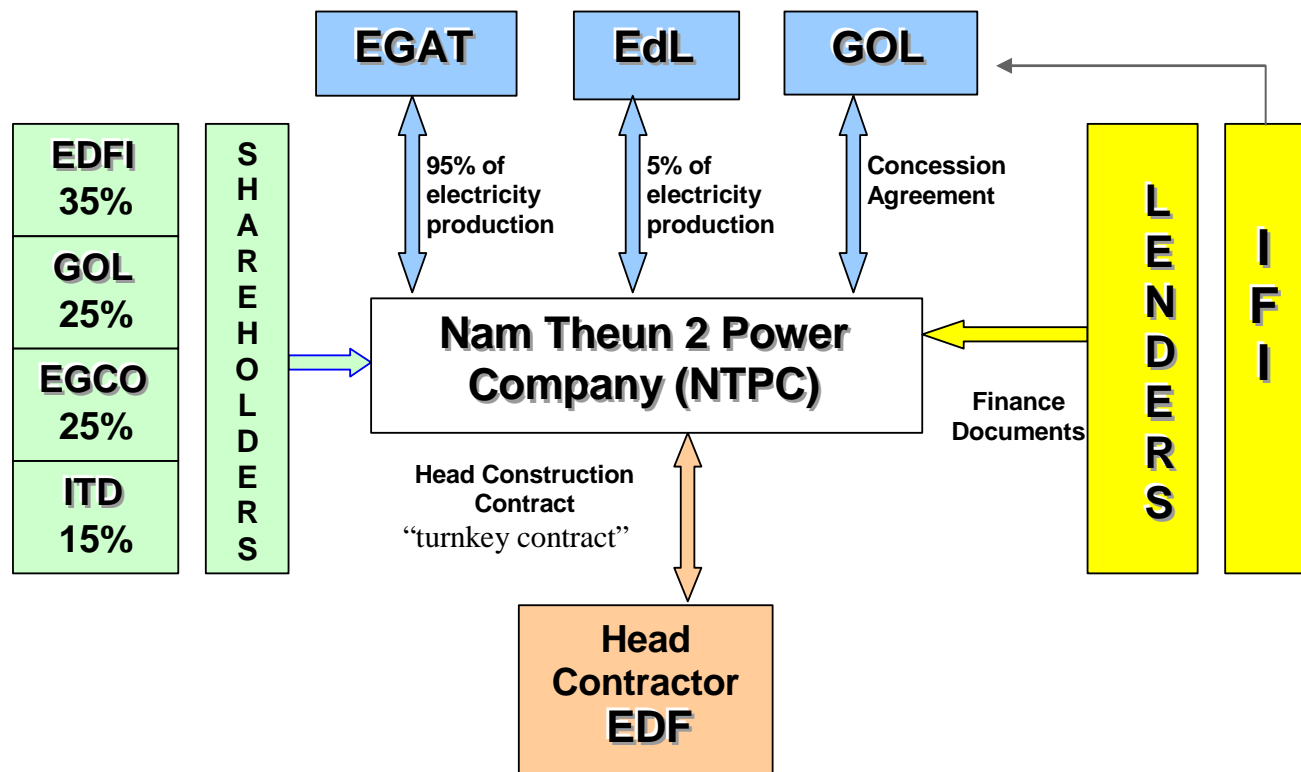


Comprehensive and well developed documentation enabled reaching financial close in 14 months.

all ingredients need to be available to launch the financing and close the project

A classical project structure

- Nam Theun 2 Power Company Limited (“NTPC”) is a Lao company established in Aug. 2002 by :
 - 35% EDF International (EDFI)
 - 25% Electricity Generating Public Company Limited (EGCO)
 - 25% Government of the Lao PDR (GOL)
 - 15% Italian-Thai Development Public Company Limited (ITD)



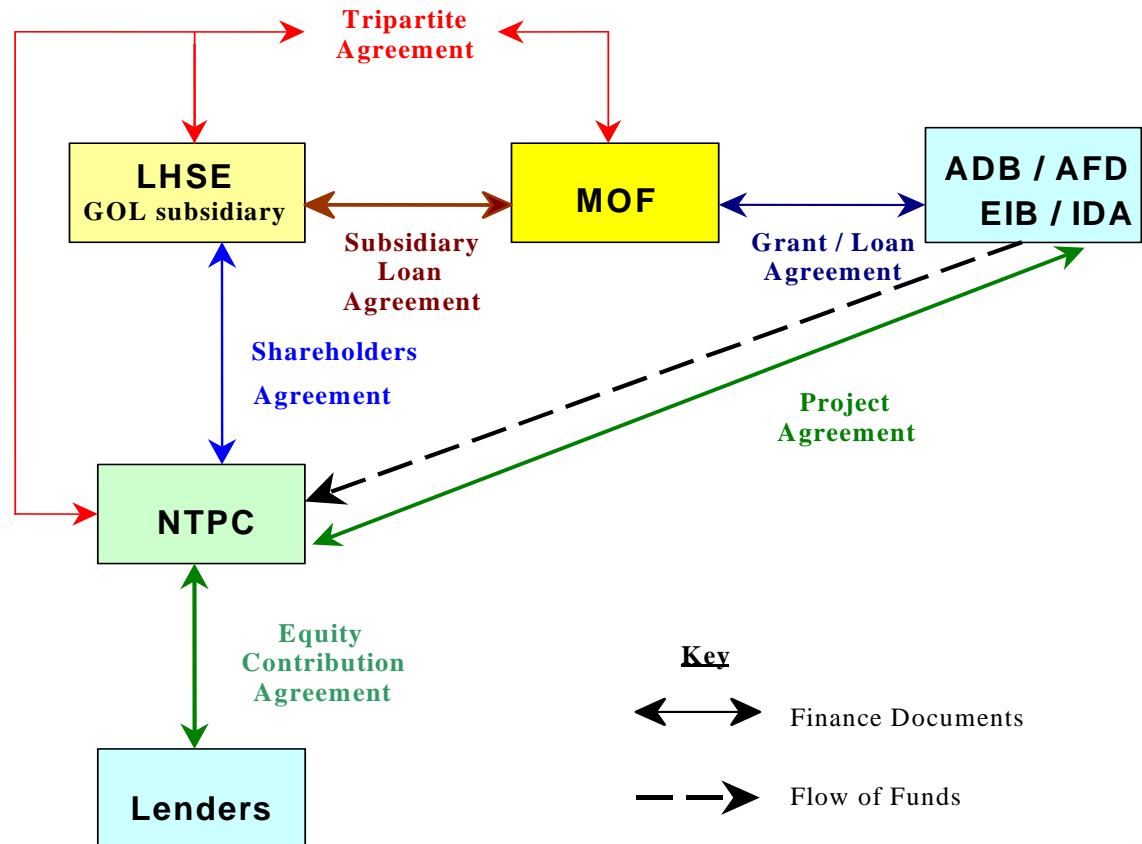
- EDF is acting as Head Contractor, managing three Civil Work subcontracts and two Electromechanical Works subcontracts.
- EDF & EGCO are also providing personnel & technical assistance

Experienced private sponsors have brought their development expertise

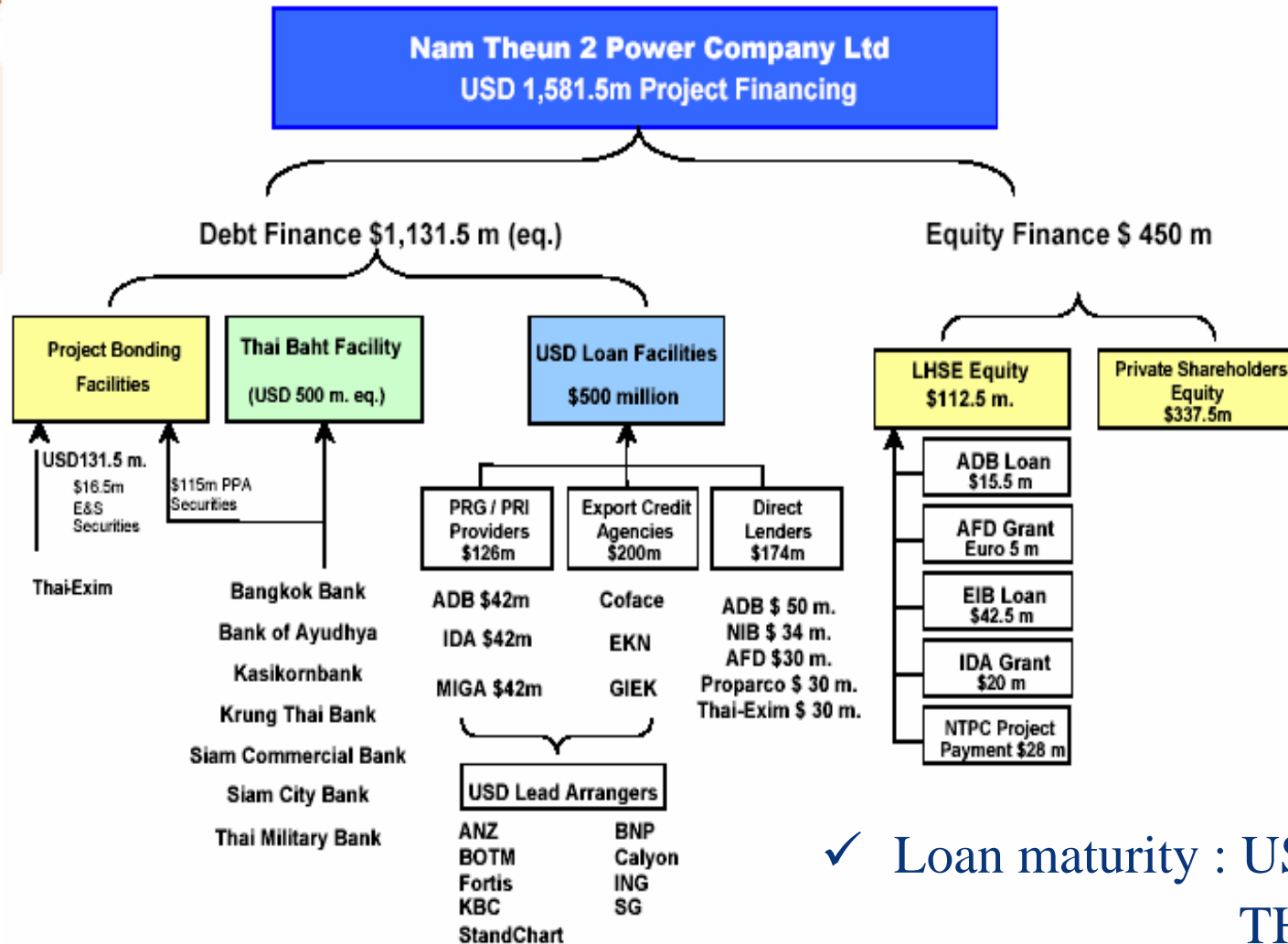
An innovative Gov^t of Laos equity funding structure

In excess of USD 100 m. of financing is raised in favour of the Govt of Laos (GOL) to finance its equity stake in a country with no commercial indebtedness history and consistent with the Project finance documents

- About US\$ 85 m. of GOL equity is funded by loans or grants from ADB, AFD, EIB & IDA.
- The borrower is MOF which on-lends to LHSE.
- Funding is disbursed directly to NTPC which is party to the documentation.



A resulting complex financing structure



The finance plan comprises 27 financial institutions:

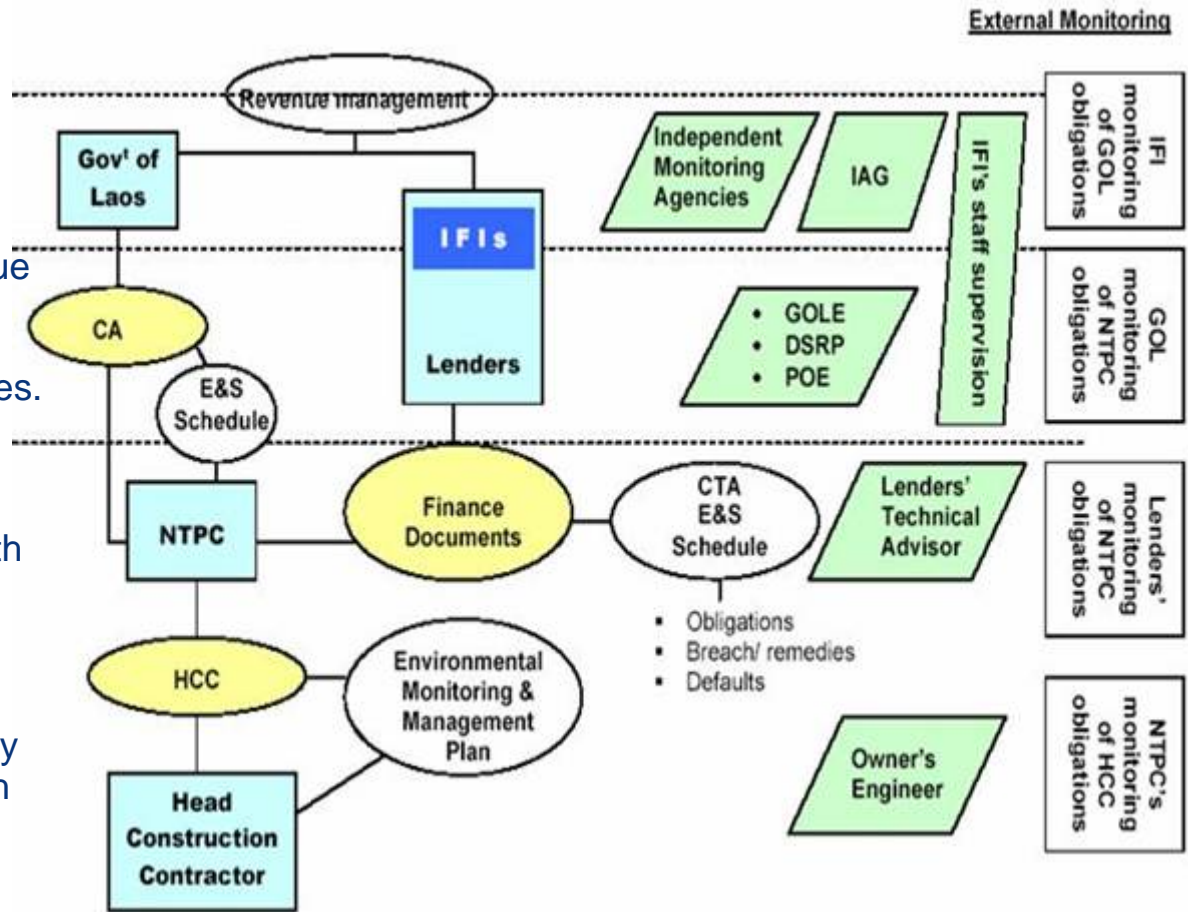
- ✓ 5 MLAs;
- ✓ 4 ECAs;
- ✓ 2 BLAs;
- ✓ 16 Thai & international commercial banks.

- ✓ Loan maturity : USD 16.5 yrs
THB 15 yrs

Common terms agreement regulates all the financing conditions

A joint implementation under close monitoring

- In a Government Letter of Implementation Policy, the Govt of Laos is committed to implement development programs through allocation of NT2 revenues, revenue management and public expenditures obligations and detailed monitoring and evaluation measures.
- The E&S programs will go beyond a simple offset of negative impacts, and will be coordinated with other development programs implemented by IFIs.
- A progressive and adaptive joint implementation will be carried out by the Govt of Laos and NTPC through coordination with the IFIs.



Monitoring applies to all actors : government, project company, constructors

A contribution to Laos' sustainable development

- ❑ The Project is at the center of the National Program for Growth and Poverty Eradication.
 - ✓ It will contribute revenues to finance Laos' poverty reduction and sustainable development strategy whilst promoting biodiversity and protecting ethnic minorities.
- ❑ The Project is a sustainable alternative to extensive logging and export of tropical wood.



- ❑ The Project will contribute to the protection of 4,000 km² of a unique forest ecosystem (the Nakai-Nam Theun National Protected Area) as one offset of the Project impacts.

The catchment area



- ❑ 4,000 Km2 of unique biodiversity and primary forest
- ❑ 6,000 ethnic minority villagers
- ❑ US\$ 1 million per year contributed by NTPC during the entire concession period for development and conservation activities by a GOL entity (WMPA)

A unic environmental offset opportunity

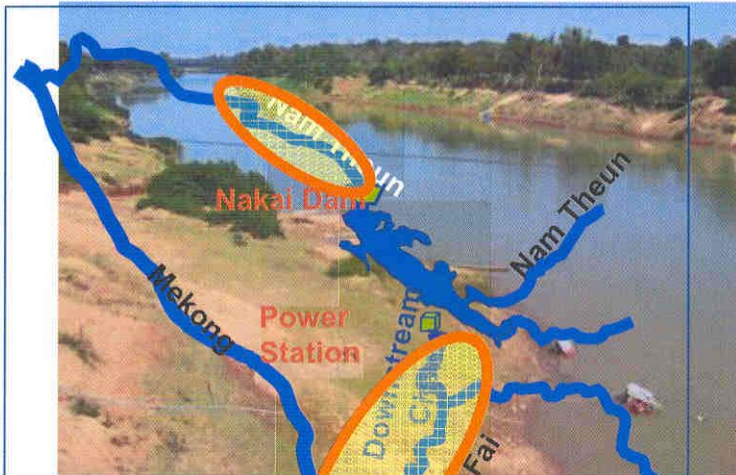
The Nakai plateau



- ❑ The Nakai Plateau is sparsely populated and composed wetland degraded forest agricultural land
- ❑ 6,200 villagers resettled (currently living below the Lao poverty line)
- ❑ Extensive consultation and participatory process
- ❑ Affected people will be relocated on the plateau close to their previous villages

Considerable improvement of livelihood
Joint GOL-NTPC responsibility

The downstream areas



Xe Bang Fai River and hinterland

- The existing Xe Bang Fai riverbed, which can accommodate flow of 2,000 to 3,000 m³/s will receive the additional flow of 220 m³/s released from the power plant.
- Some impact for the riverside population but no resettlement

Nam Theun River below dam site

- From Naki dam to existing Theun Hinboun Reservoir Headpond (32 km): no villages nor permanent settlements.

- Minimum guaranteed water release



**US\$ 16 million rural development programme – financed by NTPC – covering 200 villages in 3 provinces
Joint GOL-NTPC responsibility**

A valued model of project finance ?

- Place for sustainable hydroelectricity (renewable energy, much limited GHG, water resource management, ...)
- Detailed preparation enables timely financial close
- A private-public partnership model
 - strong project preparation by Government and IFIs for easy access to private sector
 - need to involve
 - experienced private sponsors with high development expertise
 - reliable electricity buyer(s)
 - not too prescriptive and too constraining agreements
 - beneficial to all stakeholders



Thank you for your attention

More information is available on NTPC's website @

www.namtheun2.com

and also on World Bank and ADB websites

BACK UP

A requirement for MLA support

- ❑ Early market sounding has shown expectations from ECAs and commercial banks for a strong IFI / World Bank involvement in the Project
 - ✓ to ensure compliance with highest E&S standards
 - ✓ to share political risk
 - ❑ **Involvement of the World Bank Group from 1995**
 - ❑ **Involvement of the ADB from 2002**

ADB and MIGA provide pioneering dual-country PRI to accommodate the cross-border nature of the deal



Diverse ECA, MLA and BLA participation

□ World Bank Group and ADB were joined by **ECAs** upon selection of the electro-mechanical equipment suppliers

- ✓ Coface (France)
- ✓ EKN (Sweden)
- ✓ GIEK (Norway)

Coface is fronting the insurance for EKN and GIEK under a reinsurance scheme

✓ and a MLA, ✓ Nordic Investment Bank

□ and by other institutions to complete the finance plan

- ✓ AFD (French Agency for Development)
- ✓ Proparco (subsidiary of AFD)
- ✓ Thai Exim

✓ All these institutions act as either PRI providers (PRI and commercial risk cover from ECAs) or direct lenders.

✓ Commercial facilities were allocated to 7 Thai banks and 9 international banks on a club-deal basis.

coface[®]

ekn

NiB

AFD

PROP/ARCO

EXIM
THAILAND

edf

A financing structure to match the Project economics

Equity Commitment

US\$ 450 million

USD Debt

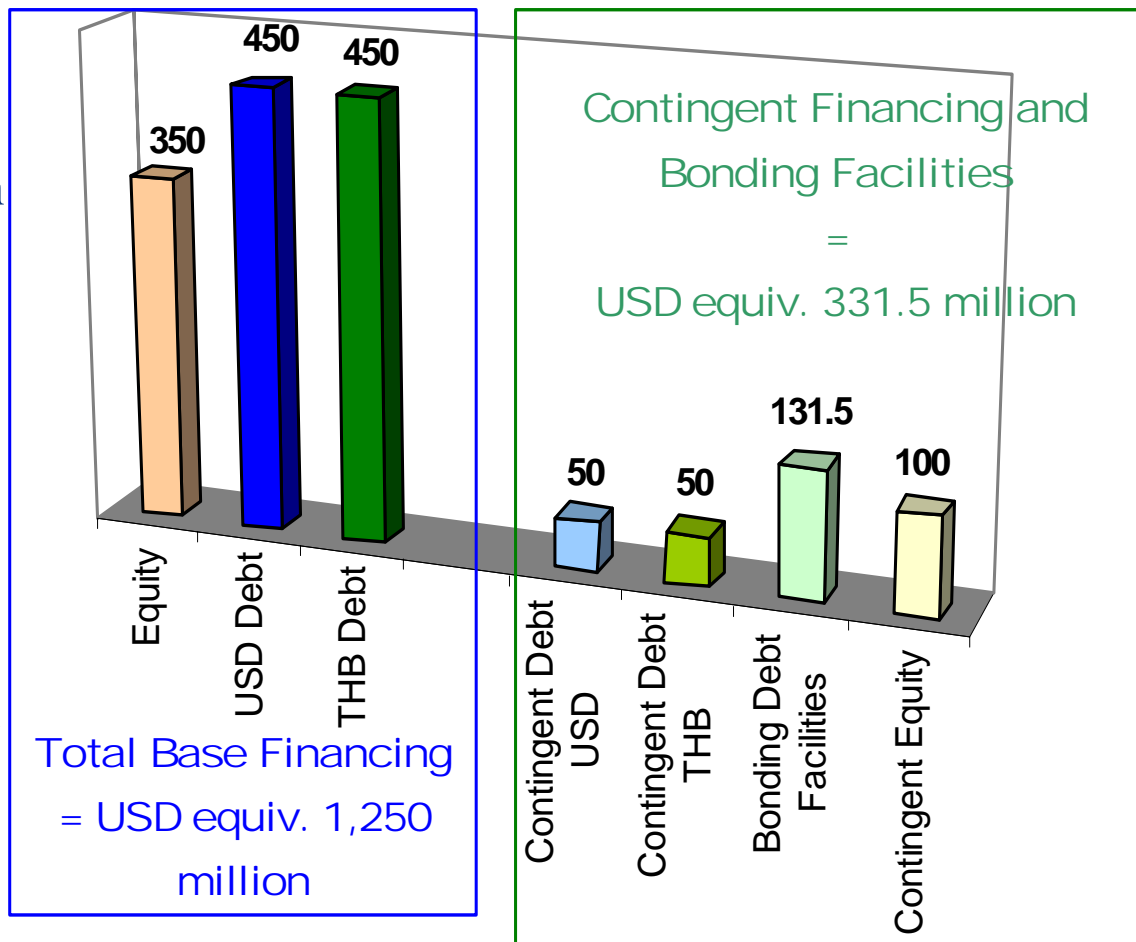
US\$ 500 m.

THB Debt

THB 20,000 m.
(USD 500 m. equiv)

Bonding Debt Facilities

USD 131.5 m.



Contingent debt & equity funding can cope with a 12-month delay scenario

The funding structure matches the cost and revenue profiles (1/2 THB - 1/2 USD)

a natural hedge is provided against foreign exchange risk