



# Investment risk in hydro projects in the Mekong region

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PROPARCO



- **Why would PROPARCO finance dams ?**
- **Are dams different ?**
- **PROPARCO's experience with dams in the Mekong**
- **Our evolving approach**

## Why would PROPARCO finance dams ?

- **Cons :**
  - High **impact on the environment** : reservoir, modification of hydrological regime ;
  - **High social impact** : involuntary resettlement, but also downstream impact ;
  - **High financial costs** ; often underestimated, for a limited life
  - Reputational risk
- **Pros :**
  - **Low carbon**, competitive source of energy
  - **Water resource** management tool
- **Dams : valuable tools but impacts to be managed**



## Are dams different ?

- **No** : most risks are very similar to other power projects
  - Offtake risk
  - Operational risk
  - Country risk
- **Yes** : some specific risks;
  - Construction risk
  - Hydro risk
  - Environmental & social impacts



# Nam Theun 2



## Theun Hinboun (Laos)

**Type :** Renewable Energies/  
Hydro Power

**Country :** Laos

**Year :** 2005

**Project Cost:** USD 1450 m

### Sponsors:

- Electricité de France
- EGCO (Thailand)
- Ital Thai Development
- Government of Laos



## Context

- Increasing power demand and dropping reserve margin (- 2% in 2007)
- 92% of electricity production coming from fossil fuels (natural gas, coal)
- Willingness from the Government to diversify fuel sources and increase hydro power contribution by 2021
- A 450 km2 reservoir- a large resettlement program

## Financing

- Financing the construction of the Nam Theun 2 hydropower project (1070 MW )
- **Co-financing :**
  - International commercial banks under ECA or WB cover.
  - AsDB, NIB, ..
- **PROPARCO/AFD Financing :** USD 60 m Senior Loan – 17 years

## PROPARCO's role

- **Contribution to the diversification of power generation sources of Laos and Thailand**
- **Positive impact of the project on the country economy:**
  - Generating of incremental revenues for the Laos Government (USD 40 m per year)
  - Significant jobs creation

# Theun Hinboun



## Theun Hinboun (Laos)

**Type :** Renewable Energies/  
Hydro Power

**Country :** Laos

**Year :** 2009

**Project Cost:** USD 733.3 m

### Sponsors:

- Electricité du Laos
- GSM Laos Co Ltd
- Nordic Hydropower AB



## Context

- Increasing power demand and dropping reserve margin (- 2% in 2007)
- 92% of electricity production coming from fossil fuels (natural gas, coal)
- Willingness from the Government to diversify fuel sources and increase hydro power contribution by 2021

## Financing

- Financing a capacity upgrade of Theun Hinboun Hydro Power plant (500MW )
- Co-financing :
  - BNPP, ANZ, KBC, Thai EXIM, Kasikorn, Bank of Ayudhaya, SCIB, Thanachart bank.
  - FMO (USD 40 m), DEG (USD 32.5 m)
- PROPARCO Financing: USD 40 m Senior Loan – 15 years

## PROPARCO's role

- Contribution to the diversification of power generation sources
- CO2 emission avoided: 775,000 teq per year
- Easing access to electricity for about 200,000 inhabitants
- Positive impact of the project on the country economy:
  - Generating of incremental revenues for the Laos Government (USD 40 m per year)
  - Significant jobs creation: 4,000 during project construction

# An evolving approach to mitigating E&S risks associated with dams

