

GREATER MEKONG SUBREGION

NAM THEUN 2 HYDROELECTRIC PROJECT

What

The Project includes the development, construction, and operation of

- a 1,070-megawatt trans-basin diversion power plant on the Nam Theun River;
- a 450-square kilometer (km²) reservoir on the Nakai Plateau;
- a 39-meter-high dam northwest of the plateau;
- a powerhouse 350 meters below the plateau;
- a regulating pond below the powerhouse; and
- a 27-kilometer (km) channel from the regulating pond to the Xe Bang Fai River Basin, also a tributary of the Mekong river.

The Project will

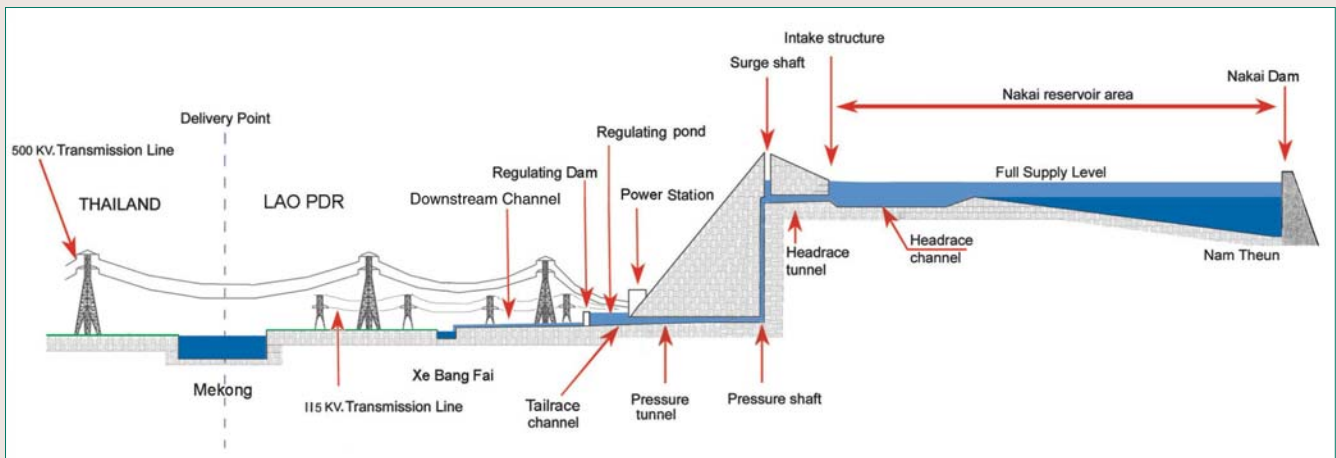
- export 5,354 gigawatt-hours (GWh) of electricity to Thailand,
- supply about 200–300 GWh of electricity to consumers in the Lao People's Democratic Republic (Lao PDR), and
- generate about \$1.9 billion of revenue for the Government over the 25-year operating period.

Who

The Project will be developed by a private company, the Nam Theun 2 Power Company Limited (NTPC), which is owned by a consortium comprising

- Electricité de France International (EdFI) of France (35%),
- Electricity Generating Public Company (EGCO) of Thailand (25%),
- Italian Thai Development Public Company Limited (ITD) of Thailand (15%), and
- Government of the Lao PDR (25%).

The Project is structured as a build-own-operate-transfer project. It has a concession period of 31 years, of which the operating period is 25 years. At the end of the concession period, the project facilities will be transferred to the Government free of charge.



Schematic diagram of the Nam Theun 2 Hydroelectric Project

International agencies are providing funding and support to the project, including

- Agence Française de Développement,
- Asian Development Bank (ADB),
- European Investment Bank, and
- World Bank.

ADB will support the project through

- a \$20 million public sector loan to the Government of Lao PDR to help fund its purchase of equity in NTPC,
- a \$50 million private sector loan directly to NTPC, and
- a \$50 million political risk guarantee to NTPC.

Where

The Lao PDR is a landlocked Southeast Asian nation bordered by the People's Republic of China and Myanmar to the north, Viet Nam to the east, Cambodia to the south, and Thailand to the west. The Project site is in the central provinces of Khammuane and Bolikhamxay, about 250 km southeast of Vientiane, the capital of the Lao PDR.

Lao PDR (as of 2004)

Population:	5.7 million
Age structure:	
0–14 years:	41.9% (male 1,277,152; female 1,265,761)
15–64 years:	54.9% (male 1,642,895; female 1,688,175)
65 years and over:	3.2% (male 87,995; female 106,139)
Land area:	236,800 km ²
Arable land:	3.8%
Natural resources:	timber, hydropower, gypsum, tin, gold, gemstones
Per capita gross national product:	\$310



When

Full construction of the Project is expected to begin in 2005 and to be completed in 2009. The reservoir will be inundated by 2008 and power generation is expected to begin in 2009.

Why

ADB is dedicated to helping its developing member countries reduce poverty. The economy of the Lao PDR is one of the least developed in the world with an approximate per capita gross national product of \$310 a year. Over the last decade, the Lao PDR has achieved stable economic growth and significantly reduced poverty. The share of the poor is decreasing rapidly, from about 45% in 1992 to around 32% in 2003. But still, some 70% of the population lives on less than \$2 a day, and about 80% lives in rural areas with little access to basic social services. The responsible development

Social and Economic Development in the Lao PDR

Households more than 8 hours away from a hospital	10%
Villages with access to electricity	20%
Contribution of electricity sales to export revenue	30%
Children with moderate to severe malnutrition	40%
Population without access to clean water	50%

For more indicators, see www.poweringprogress.com

of hydropower is one of the few options available to the country to accelerate economic growth and improve the quality of life.

Revenues generated by the Project will provide substantial funding for initiatives under the Government's National Growth and Poverty Eradication Strategy, the strategic framework in developing and implementing the Government's future growth and poverty reduction programs. The strategy's long-term development objective is to move the Lao PDR beyond the status of a least-developed country by 2020.

How

The Government and NTPC will implement the Project and take on the responsibilities outlined in the concession agreement. NTPC will implement the Project through a construction contract between NTPC and the head contractor. The contract covers the engineering, procurement, construction, and management of the Project, and most of the contractual risks of the subcontracts. The head contractor will subcontract the physical works, goods, and services to five principal subcontractors to undertake the civil works and to provide the electromechanical goods and services. The technical services and personnel management contracts will provide the operation and maintenance services to NTPC.

Watershed management will be undertaken by the Government's Watershed Management and Protection Authority, with technical advice from NTPC.

The Ministry of Industry and Handicrafts will be the executing agency on behalf of the Government. The Secretariat of the Lao National Committee on Energy under the Ministry, and the Watershed Management and Protection Authority will be the implementing agencies on behalf of the Government.

The Government, developers, and international organizations have developed four documents that provide detailed information on mitigation and management measures proposed to address potential social and environmental impacts of the Project in the project area. These documents are

- the Environmental Assessment and Management Plan;
- the Social Development Plan;
- the Social and Environmental Management Framework and Operational Plan for the Protection of the Nakai Nam Theun–National Protected Area; and
- the Summary Environmental and Social Impact Assessment. ■

For more information on ADB's involvement in the Nam Theun 2 Hydroelectric Project, contact Woonchong Um at wcum@adb.org or visit www.adb.org/Projects/Namtheun2