Session:

Hydropower investment
How can risk and reward be balanced?

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The Risk Response of Hydropower Investment in Developing Countries

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21 May, 2015
1. Hydropower development should be given priority in developing countries
The installed capacity per capita of a country is an important indicator reflecting the economic development level. By 2010, the installed capacity per capita was 3.65 kW in the U.S., 2.23 kW in Japan, 1.31 kW in Europe, 0.78 kW in China, while only 0.05 kW in Myanmar. The development rate of hydropower in developing countries is usually at a low level, as just around 25% in Asian countries, and generally 11% in the African countries. While only 3% in Myanmar.
Power industry is one of national basic industries, which is closely linked with national economy and the people's life.

As a major energy sector, power industry shall fit the needs of national economy and social development and develop in advance appropriately.

With the improvement of economy and industry in developing countries, the demand for power is becoming greater and greater. Thus, it is urgent to develop power industry to meet the economic growth goal.
Why Hydropower?

- **Rich resources**
- **Low cost**
- **Clean and renewable**

- **Coal resource and production**
- **High cost of gas-fired power**
- **High pollution, non-renewable**

Hydropower (Priority)

- **High technical standard**
- **With rigid criteria**
- **Not available now**

- **High requirement for wind and solar resources**
- **High requirement for grid**
- **High cost of construction**

Hydropower is a good choice for economic development, industrialization, environment conservation and improvement of people’s livelihood in developing countries.
2. Risk of hydropower projects in developing countries
(1) Political Risk
- Political instability caused by government leader’s change
- The party places “political” at first issue, while the people’s livelihood is not crucial for them.

(2) Legal Risk
- Laws and regulations are not perfect
- Personal opinions of government officials will disturb the execution of laws

(3) Religion and Culture Risk
- Example: Myanmar has vast ethnic diversity comprising a majority Myanmese and minority groups such as Shan, Kachin..., Myanmar is also a multi-ethnic society with diverse indigenous cultures. The majority, 89%, of people are Buddhist. Thus, the ethnic and religious issues are important and complicated.
(4) Public Cognition

- Public cognition of rivers, hydropower, dam safety etc. is limited.
- Due to some NGO’s incitement and distorted messages, some people would have a cognitive bias.

(5) Environmental and Ecological Risk

- Due to the long-term lag of economic development, many people in the country live in the most primitive condition. Some of them do not want to develop while prefer the present status of natural and social environments.
- Lack of environmental laws and systems.
(6) Conflict between Current Interest and Long-term Development

- Comparing with the living standards in developed countries, the public have high expectations that the projects could bring benefits immediately.

(7) Less Supporting Facilities

- Due to the supporting facilities around the project sites, the upfront investment costs will be very high, while the local affordability of electricity price is limited.
3. Response of the Risk
1. Political Risk

- **Hydropower plants** are the infrastructure projects with great investment, long construction and operation periods. Through inter-government strategic and cooperation agreement, the project can be raised up to a **national major strategic cooperation**, to withstand the impact of government leader’s change.

- **Bilateral or multilateral investment protection agreements, international conventions**;

- **Project insurance** — **China Export & Credit Insurance Corporation**;

- The concession was awarded by government to implement the project by **JVA/BOT mode**.

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China and Myanmar governments signed a cooperation agreement to develop hydropower.

China and Myanmar Electric Power Cooperation Committee holds regular coordination meetings.
The Board of ACHC meets regularly.

Cooperation diversification: shareholders, financing, contractors are allowed participation by the host country or internationals.

Discuss cooperation in Myanmar projects with international partners.

Strengthen political communication, seek for multi-understandings.

Report to the Government

Communicate with Parliament

Talk with the leaders of 88 Generation Students Group
2. Legal Risk

- **Legal first.** Make sure the details of risks can be reflected in the terms of the contract.

- Before the project construction, make sure all technical and legal documents complete.

- Any matter that is not covered by the law shall be involved in the agreements or regulations.
Memorandum of Myanmar Ayeyawady hydropower projects agreement was signed

Joint venture agreement of Myanmar Ayeyawady hydropower projects was signed

Myanmar government granted legal documents

The JV company completed the registration as the law requires and inaugurated
3. Religion and Culture Risk

- Highly value local customs
- Respect local religion and culture

Comparison between the new and old temples

Refreshed religious facilities

Religious facilities improve obviously in the resettlement village of Myitsone Dam
During the immigration process, respect the views of religious leaders, held a grand relocation ceremony.
Before the projects started, we had carried out extensive social investigation to solicit opinions from local people and respect the people's views on the project.
Solicit the views of local ethnic chiefs

Invite ethnic leader to the project site

Invite representatives to the project sites

Communicate with social elites
5. Environmental and Ecological Risk

- In the absence of legal and environmental systems, draw on international advanced concepts and technologies for environmental assessment work, such as China EIA standards, the World Bank standards, IHA guide of sustainable development, promote Myanmar improve environmental laws.

- Cooperating with international and domestic renowned NGOs, work together to promote regional ecological environment protection.

- In the project planning stage, try to avoid environmental sensitive areas, reduce the land acquisition and flooded area.

- Disclose EIA report to public.

The EIA report of Ayeyawady projects approved by Myanmar government is published online.
6. Conflict between Current Interest and Long-term Development

The Ayeyawady projects should first meet domestic economic development and people's living needs. Help Myanmar gain international electricity market shares, export domestic excess power to earn foreign exchange.
Formulate and implement the **development plan for region personnel**

- 20,000-40,000 job opportunities directly created.
- Immeasurable job opportunities created indirectly.
- Training of a large number of professionals with skills and management knowledge.
- Myanmar will have a large reserve of professionals, ranking among the top in the world.

**Recruitment plan of Ayeyawady projects**
Public-spirited, achieving harmonious development of communities
Local student participates in the company's community activities

Help local people to develop service industry

Send care and love to the orphanage on Children’s Day

Clinic for surrounding people, publicize knowledge of disease prevention
Chipwi Nge HPP

① The power resource station for Ayeyawady projects, which began construction in April 2007, and was ready for power generation in September 2013.

② Now Chipwi Nge HPP has supplied electricity to nearby residents.
The supporting facilities of hydropower projects will balance local people’s needs.

- 800km road network, power wiring will fully consider the convenience of local people in the circumstances to meet construction.
- Complete seismic network, hydrologic network. The data can be shared with local, to promote the development of local industry and agriculture, and be important to the disaster reduction.
Undertaken resettlement work in accordance with international standards, promote resettled people’s living standards and let them have the capacity of sustainable development.

- Respect the residents wishes, and they have willing to move.
- Development resettlement, maintain a stable life for them.
- Help them have capacity for development in the future.

Significant improvement in the living conditions of the resettled people of Ayeyawady hydropower projects
The medical and educational conditions improve significantly.
4. Experiences in dealing with risks
1. CPI carried out the risk analysis in the early stages of Myitsone project, but currently Myitsone project is encountering a lot of resistance, risk analysis and management need to be constantly enhanced.

2. Political risk is the greatest risk: the enterprise should gain insight into all sorts of information, circumstances and relationships, fully communicates with government, opposition parties, experts, NGOs and medias. Generally, for people in developing countries, everything can be solved well if communicating in advance.

3. Risk may be accompanied with foreign investment, we should initiatively advocate legal awareness and contract spirit, which are the keys to prevent risk. Mutual benefit and win-win awareness, social responsibility, improving transparency are also important factors to guarantee the smooth progress of the project.
Thank you!

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