



# COMMERCIAL FINANCING FOR PUBLIC HYDROPOWER PROJECTS

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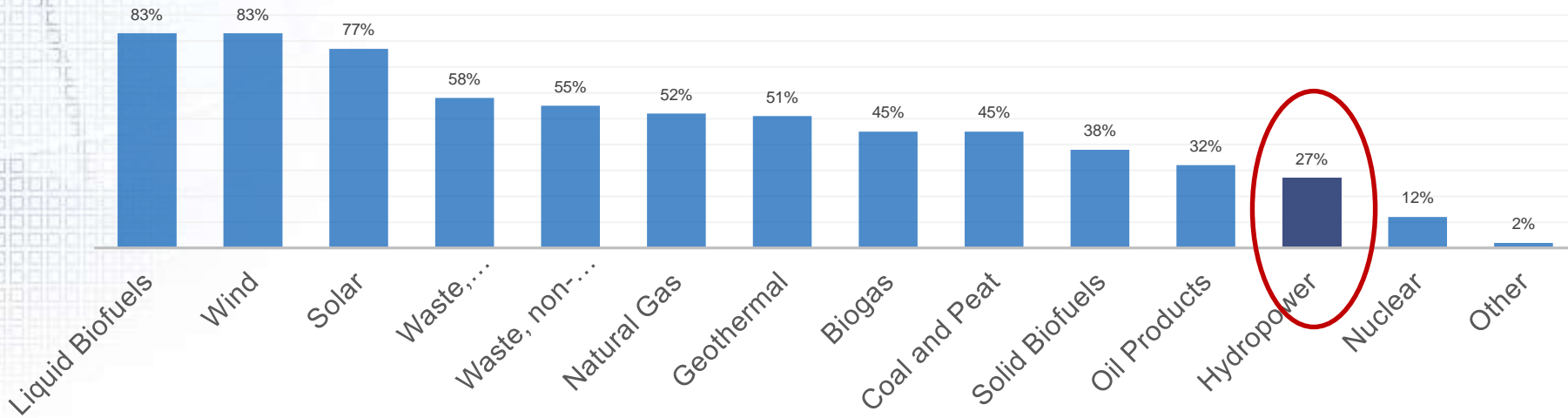




# Public financing is the normal

Only 27% of new hydropower developed the last two decades were by private investors

Private Sector Share of New Power Generation





# Staged public financing

## Almost all large hydropower were developed publicly through staged financing

- Three Gorges, China, 22,000 MW
- Itaipu, Brazil/Paraguay, 14,000 MW
- Guri, Venezuela, 10,200 MW
- Tucurui, Brazil, 8,370 MW
- Grand Coulee, United States, 6,809 MW
- Krasnoyarsk, Russia, 6,000 MW
- Churchill Falls, Canada, 5,428 MW
- Tarbela Dam, Pakistan, 4,888 MW
- etc.

## Reasons:

- Long gestation, which give very high Interest During Construction if funded upfront
- High risks, often leading to delays



Laholm Hydropower Station  
Construction year 1932

# Commercial funding has a role

## Case: Dasu Hydropower Project, Pakistan

### Project Background Info

<b>Project type</b>	Run-of-river hydro
<b>Size</b>	4,320 MW
<b>Total cost</b>	\$6 billion



### THE CHALLENGE

- Large capital requirements including up to US\$600 million in preparatory works;
- Technical complexity, large size, and long construction period (8 years) require capital provisions in sequences;
- Long term foreign currency (USD denominated) financing required;
- Political and contractual risks;
- Implementing entity never accessed successfully international capital markets.



# Commercial funding has a role



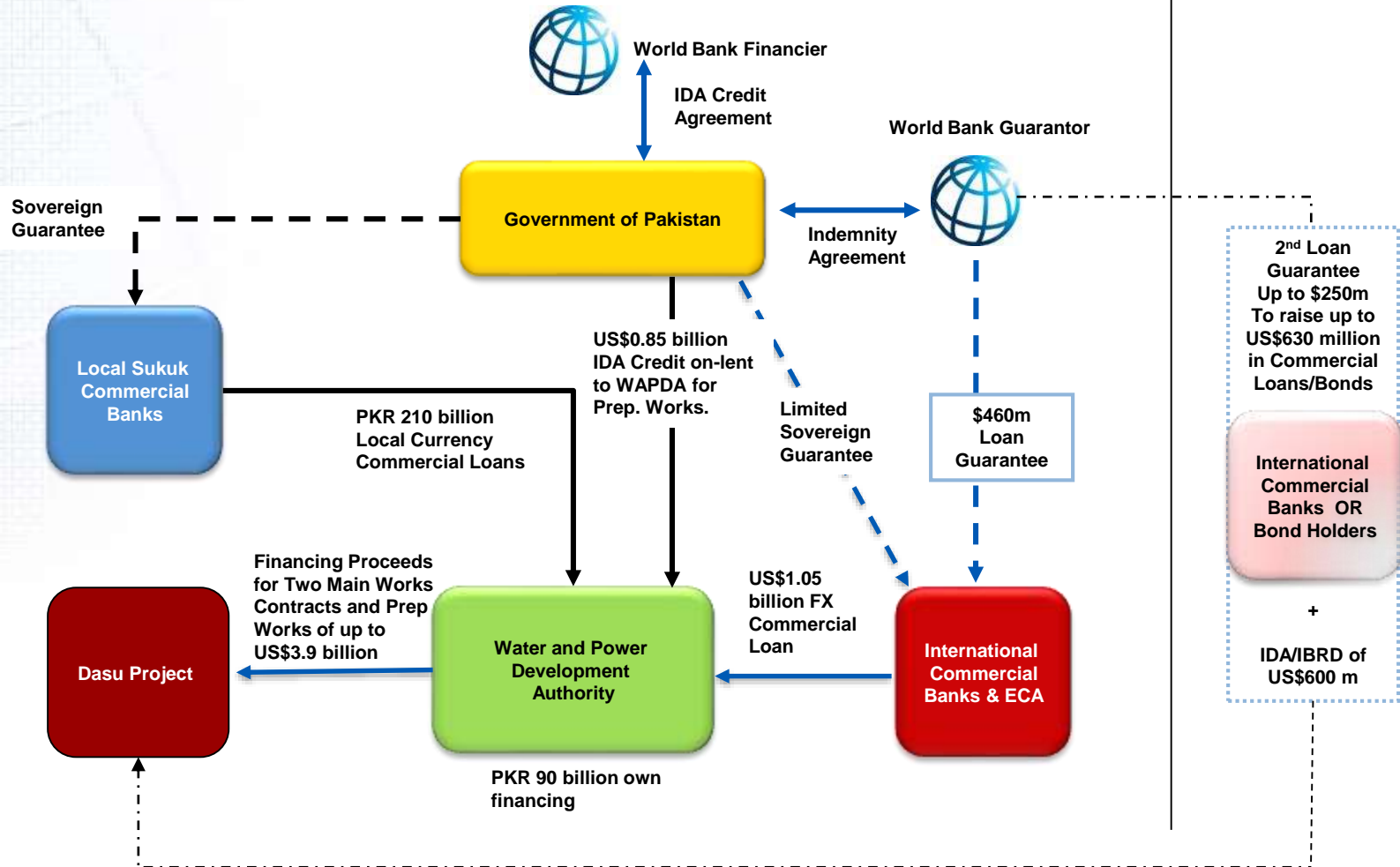
## THE SOLUTION

- **Public Corporate financing structure chosen (instead of private) to allow for slicing approach for capital mobilization;**
- **Sequenced financing package following the principle of raising capital when needed;**
- **Using a mix of concessional and commercial financing given important preparatory works' costs and CAPEX needs;**
- **IDA Credit to start preparatory work and 'de-risk' the project;**
- **Using IDA/Sovereign Guarantees to leverage large amounts of capital borrowing in local and international markets.**

# Blended financing structure

## STAGE 1 FINANCING 2015-2023 (without Transmission Line)

## STAGE 2 FINANCING 2022





# Can be replicated

- The same principle can be applied for most large water infrastructure. Key are:**
- **Financially sound projects**
  - **De-risking with public/concessional funds**
  - **Tailor commercial funding to available markets**

