



# Infrastructure in Southern Mongolia

The Challenges of  
Possible Private Financing



# Overview

1. Private investment could play a role in financing Southern Mongolia's infrastructure
2. International experience indicates the challenges of private investment
3. If Mongolia wants to attract private investment, then it will need:
  - Clear policy directions; and
  - Capacity development



# Financing Challenge

*Infrastructure for OT and TT will require more than \$1 billion over the next five years*



# Electricity for Oyu Tolgoi

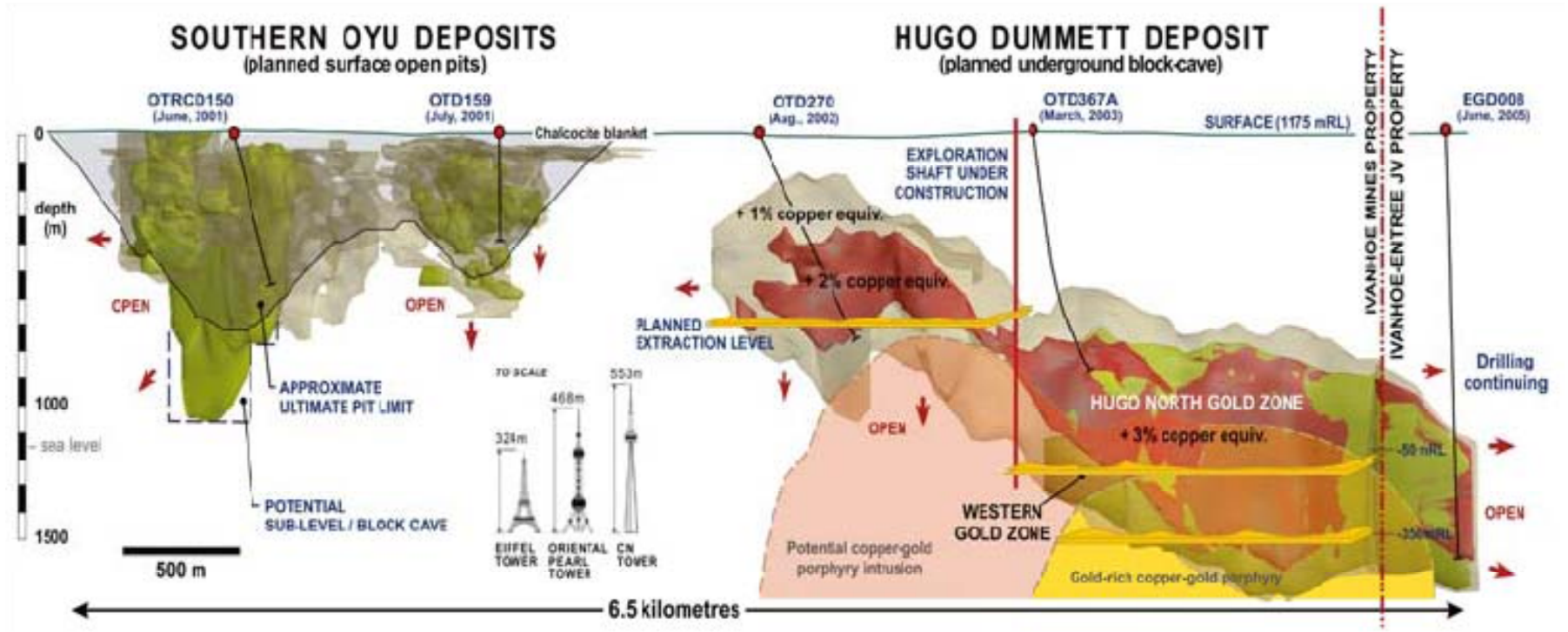


Diagram Source: Ivanhoe IDP

- Mongolian workers 1.3 km underground will need reliable electricity
- System integrity requires at least two reliable sources of power supply, desirably three sources



# Southern Mongolia

## Electricity Investment

- Minimum financing: \$390-500 million
  - 220 kV UB – Mandalgovi - Oyu Tolgoi double circuit transmission line
    - \$150-200 million
    - Also need spare capacity in CES (extra \$100 million)
  - 300 MW coal-fired air-cooled plant in South Gobi
    - Cost: \$240-300 million
    - Could invest in 1000-2000 MW for power exports
  - Trade power with China
    - 220 kV transmission line (100 km) - \$50-100 million
- Uncertainty over timing of demand in South Gobi
  - Eg. One year delay in demand for 100 MW of capacity - annual debt service cost at least \$5 million
  - Risk of unused generating capacity could be best managed by mine operators



# Efficient rail is required for a world class mining industry



- Example: Mount Newman Railway, Australia
  - over 400 km
  - Only used for transporting ore
  - Privately operated by BHP Billiton
  - Average trains have 230 ore wagons, each carrying 106 tonnes
  - In 2001, longest train ever: 7.4 km, 682 wagons
  - Very high productivity, single driver, efficient maintenance
  - Keeps cost of transport low



# Rail Links



- TT - trans-Mongolia railway (400 km) - \$375-400 million
- TT – Chinese border (100 km) - \$75-100 million



# Who Will Finance South Gobi's Infrastructure?

- 2008 Public Investment Program (10% of GDP)
  - Budget – Tg 336 billion (\$290 M)
  - Development Fund – Tg 235 billion (\$200 M)
  - In addition, foreign-financed projects are not included in the PIP
- Mongolia, China, Vietnam invest about 10% of GDP in infrastructure
  - Most other countries invest in range of 2-5%
- Electricity and rail infrastructure (\$1 billion) for South Gobi will amount to about 3% of GDP over next 5 years
  - And more finance will be required for towns, roads, water
- Financing options include:
  - Public borrowing
  - Private investment

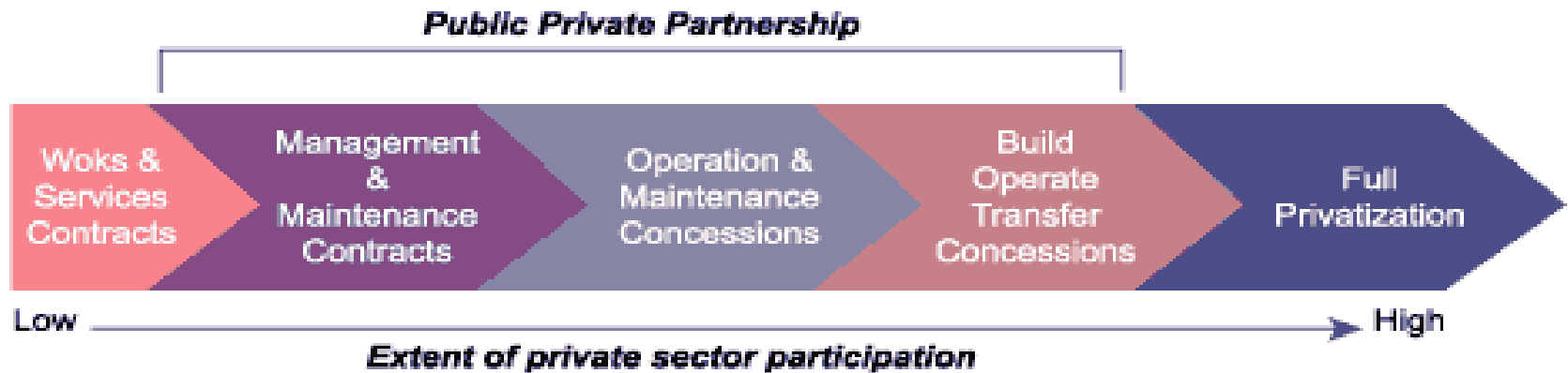


# International Trends in Infrastructure Public-Private Partnerships

*Mongolia's PPP potential is large  
compared to existing international  
transactions*



# Forms of PPPs

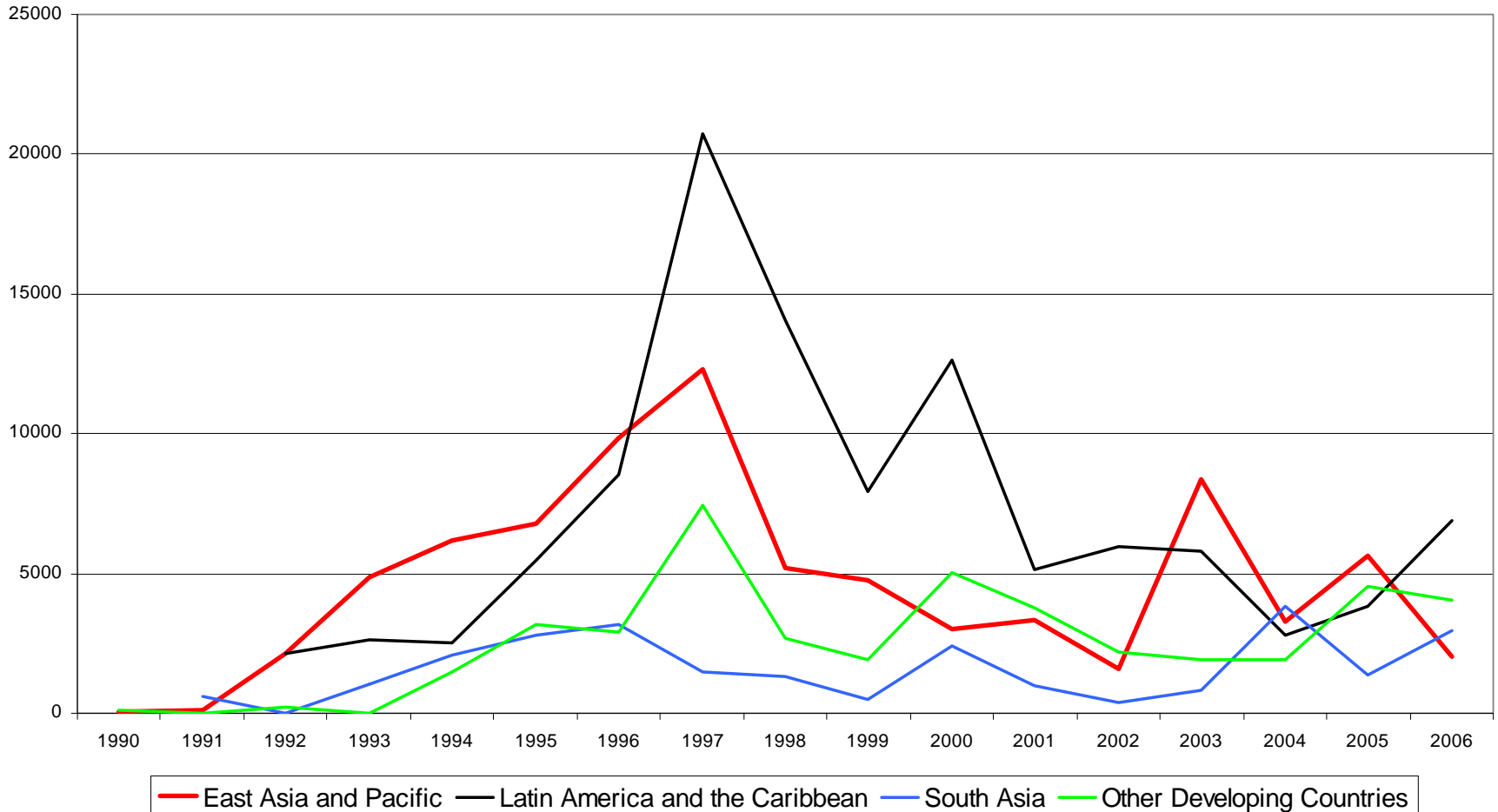


- Higher levels of private sector involvement provide stronger incentives for cost minimization



# Investment in Electricity PPPs

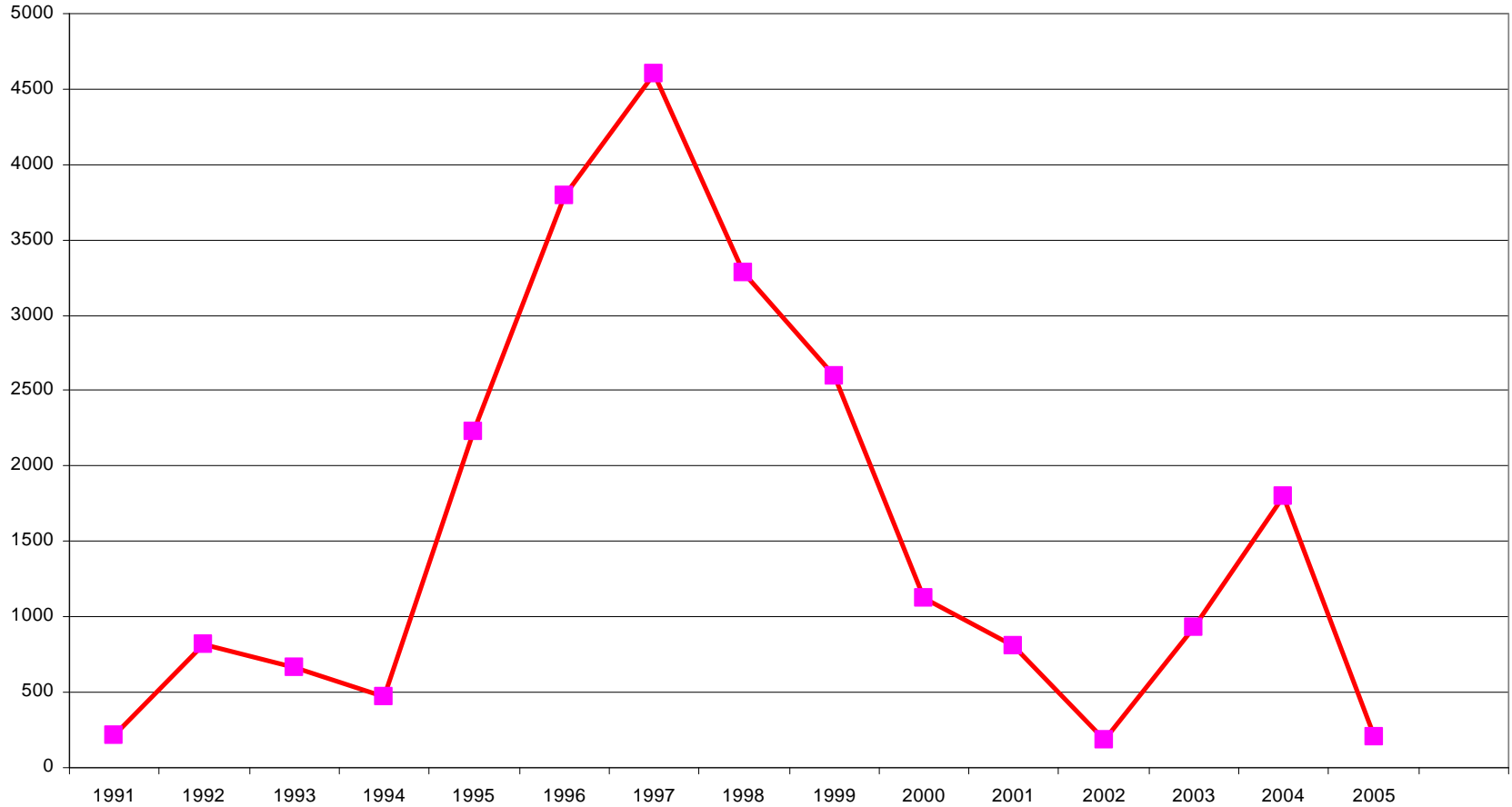
In Developing Countries (US\$ million)





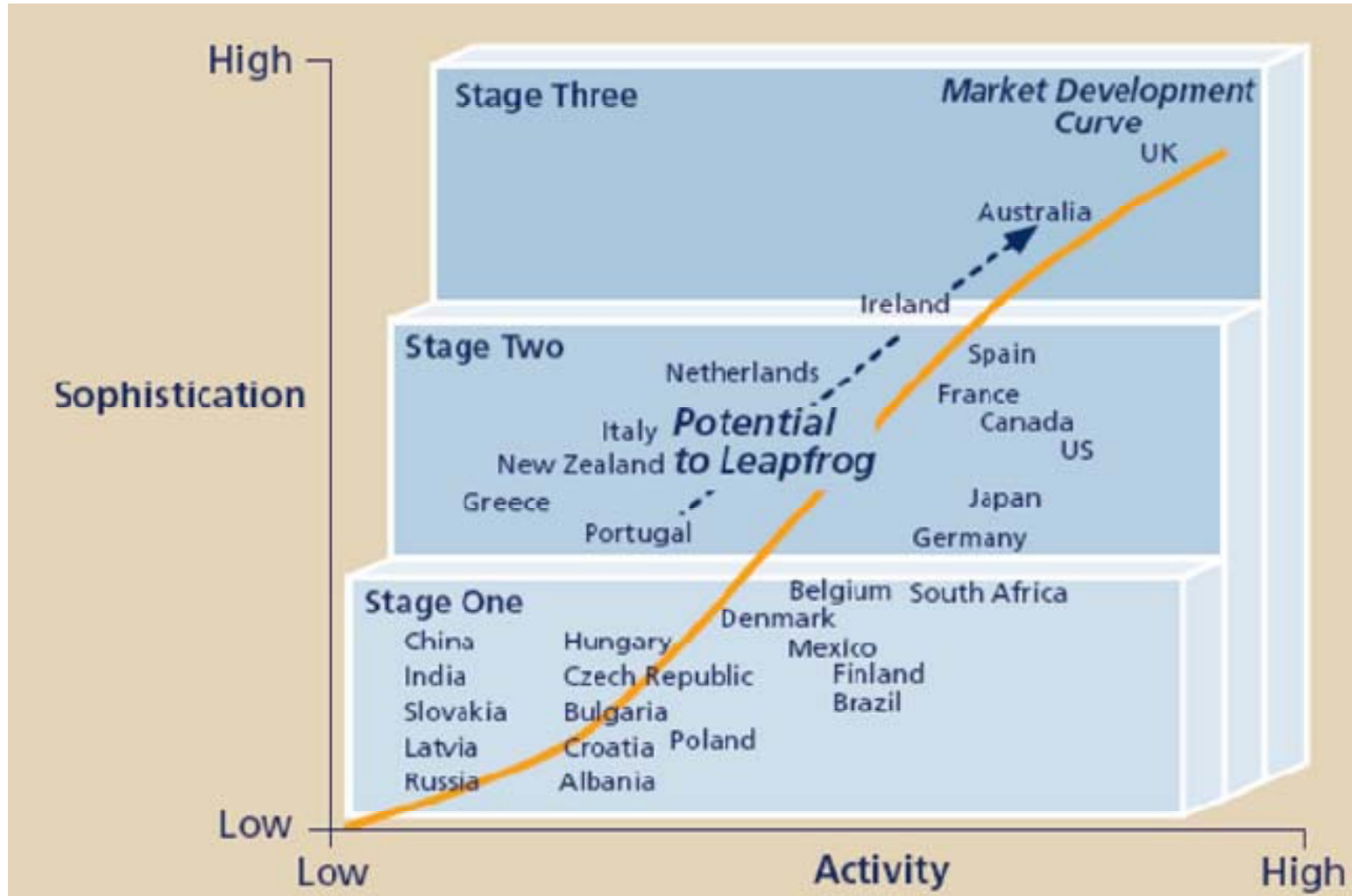
# Investment in Rail PPPs

In Developing Countries ((US\$ million)





# PPP Market Maturity





# Infrastructure PPP Trends

- Investors have become more cautious since the mid-1990s
  - Greater priority to sectors where consumer prices fully cover costs (eg telecoms)
  - Increased focus on development of new facilities, rather than concessions of existing facilities
  - Trend to greater use of management contracts and leases (without private investment)



# PPPs – Common Mistakes

- Before Tendering
  - Unclear message to private investors
  - Long negotiations
  - Inadequate information
- During Tendering
  - Lack of competition, transparency
- After Tendering
  - Renegotiation; renegeing on deals



# Infrastructure PPPs

What needs to be done?



# Formulating Policy

- Criteria for determining whether to use public or private investment
- Will infrastructure investment be bundled with mine development?
- Forms of PPPs permitted
- Types of risks the Government will accept
- Regulatory arrangements
  - Prices to cover costs
  - Technical standards
- PPP Legislation
  - Procurement rules
  - Institutions
- Stakeholder involvement



# Formulating Policy

## Skills Required

Scope the project	Identify the options	Appraise the options	Choose preferred option
<b>Lead</b>			
Economic	Economic	Economic	Economic
<b>Supporting</b>			
Technical	Financial Legal Technical	Financial Legal Technical Environmental PR HR	N/a



# Establishing the Legal and Regulatory Framework

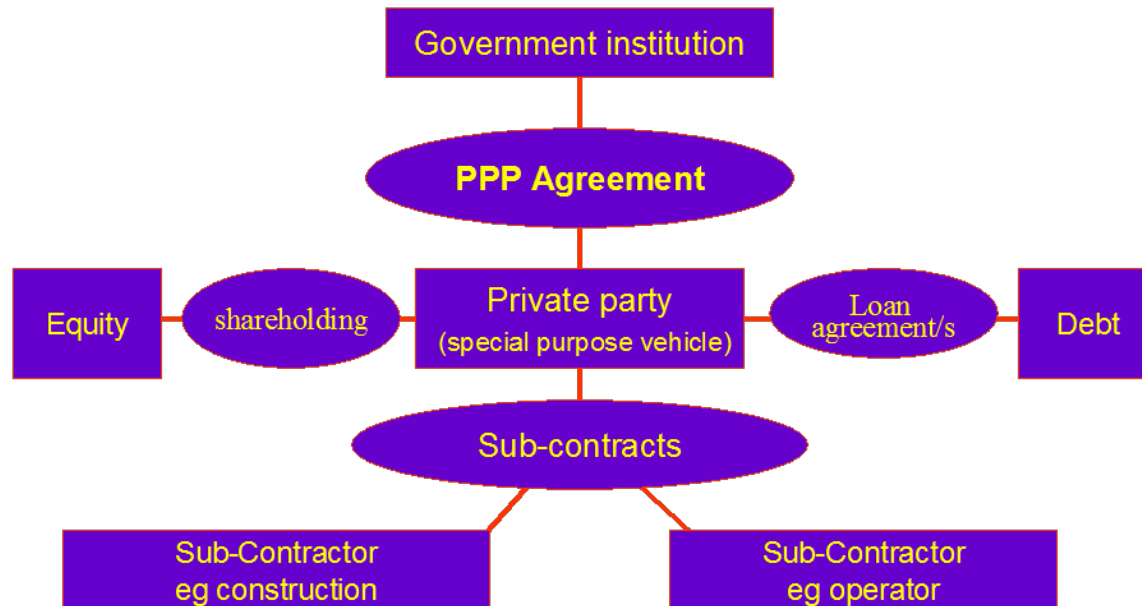
- Design of market structures, regulatory systems, contract structures

Initial and detailed design	Legislation and other legal instruments	Institutional development	Preparatory steps*
<b>Lead</b>			
Economic/Financial	Legal	Economic	Economic/Financial
<b>Supporting</b>			
Financial Legal Technical	Economic Financial Environmental Pension	Financial Legal Technical Pension HR	Financial Legal Technical Environmental Pension HR PR
* asset valuation, establish regulatory system, set initial tariff			



# Tendering a Transaction

- Typical project finance contract structure





# Tendering a Transaction

- Financial advisors often lead the selection, negotiation and transaction finalization

Alert potential bidders	Draft IM*/ establish data room/issue RFP	Prequal/ shortlist/ finalise and issue RFP	Evaluate/ negotiate/ award contract
<b>Lead</b>			
Financial/PR	Financial/Legal	Financial	Legal/Financial
<b>Supporting</b>			
Procurement	Technical Environmental HR PR	Legal Technical Environmental PR HR	Economic Technical Environmental PR HR Procurement
*IM: Information memorandum			



# Managing a PPP Transaction

- Success of the project depends on the Government
  - Select and manage advisors, listen to their advice, decide
  - Set realistic timetables
  - Set realistic project preparation budget
- Many governments establish specialist PPP Units to manage these processes
  - May provide technical skills, quality control, policy coordination, promotion and marketing
  - Good examples include South Korea, South Africa, Victoria (Australia), United Kingdom



# Questions

- Will Mongolia consider private investment in infrastructure for the South Gobi region?
- If so,
  - What criteria will be used to prioritize public and private investments?
  - Who will lead policy formulation for PPPs?
  - How will Mongolia obtain the necessary skills to manage PPP transactions?