Two Financing Models

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FINANCING MODELS: 
HOST GOVERNMENT BACKED PPA
Host Government Backed PPA

• Both previous presentation and this deal with a host government assuming (some kind of) project risk
  – Direct loan guarantees are about reassuring lenders about the prospect of the project becoming uneconomic before loans are repaid
    1. Construction cost overruns
    2. Post commissioning economics

• Host government guaranteed Power Purchase Agreement (PPA) is about host assuming market risk
  – Inadequate demand, low prices
  – Guaranteeing a price (per MWh), quantity, or both
    2. Post commissioning economics

• Can address market risk via a variety of measures on the revenue side (e.g. price floors)
  – Will have benefits in terms of lower cost of capital
Host Government Backed PPA

• Policy objective: offer the developer *just* enough price support to make the NPP investment happen!
  – Key steps in setting fixed price or price floor:
    1. Benchmarking risk/return
       – e.g. Oxera (2011): 9%-13% (pre-tax, real)
    2. Obtaining accurate cost estimates
       – Source?
    3. Financial modelling
       – Solve for the (fixed) price that delivers a return in excess of – e.g. – 9% (pre-tax, real)
  – Price floor likely **below** fixed price
    • Developer gets the upside!

• Build acceptable performance into the financial model
  – Availability factors
  – O&M costs below 25th percentile
Host Government Backed PPA

A well designed host government backed PPA:

• Offers assurance to developer(s) and their lenders
  – Mitigates price and/or quantity risk (“take or pay”)
  – Avoids default risk

• Avoids “peverse” incentives
  – Simply guaranteeing a fixed price for all output could lead to indifference on outage timing

• Is politically credible
  – Comparison of “strike price” to existing wholesale prices

• Is flexible
  – Limited foresight may necessitate re-openers and/or indexation

• Avoids “windfalls”
  – “Gain sharing” mechanisms
## Host Government Guaranteed PPA

### Generic features

1. A guaranteed *price* – not a guaranteed *return*  
2. Take-or-pay - *but subject to plant availability*  
3. Model based “strike price”  
4. Contingent price adjustment mechanism  
5. Host government backed counterparty

### Rationale

1. Maintains pressure to minimize *costs*  
2. Maintains pressure to maximise availability  
3. Minimize cost of inducement to build  
4. Impossible to hard-wire future tariff escalation  
5. Guarantee only as good as the guarantor’s credit
FINANCING MODELS: VENDOR FINANCE
What is “vendor finance”?

- Comes in a variety of ‘flavours’...
  - **Vendor arranged** credit
    - Does not appear on vendor Balance Sheet
    - Vendor *facilitates* financing from sources such as relationship banks, Export Credit Agencies
  - **Vendor provided** credit
    - Often short-term (e.g. construction loans)
      - As of November 29, 2010, the TANE Credit Facility provided $500 million in a credit facility for NINA to support project activities for procurement of long lead materials and payment of EPC services.
  - **Vendor equity**
Flavours of vendor finance

- Vendor equity gives vendors – e.g. NSSS suppliers – a share in future net incomes generated by a project
  - From a risk perspective shareholding is a riskier proposition than lending, and much riskier than simply selling
- Then SVP GEH noted in late-2011 that “[I]t’s becoming more the norm that [customers] are asking for equity investments...”
Vendor equity

• Lithuania sought equity investors for Visiganis in early 2011
  – Westinghouse offered to take an equity stake

• UAE contract provides for equity shares for Enec & Kepco
  – On November 8, 2012, the board of directors of Korea Electric Power Corporation (“KEPCO”) resolved to invest US$1.04 billion in Barakah One Company in exchange for a 18.0% equity interest in the company
    • Actual capital contribution is scheduled to be made in April 2018

• Areva will have equity in Hinkley Point C (NNBG)
  – EDF 45%-50%; Areva 10%; China General Nuclear Corporation & China National Nuclear Corporation 30%-40%; Other ≈ 15%
Should you push for it?

• Look at vendors’ cost of capital
  – Cost of equity
    • CAPM
  – Cost of borrowing
    • Vendors may be “onlenders”

• Compare with cost of capital from other sources

• Vendor finance likely to be relatively expensive
  – May still be an advantage from “skin in the game”
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<th>Generic features</th>
<th>Rationale</th>
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<tr>
<td>1. Relatively small part of overall financing</td>
<td>1. Limited vendor balance sheet capacity</td>
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<td>2. Not cheap!</td>
<td>2. Vendor WACC typically exceeds - e.g. - ECA CoC</td>
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<td>3. Limited recourse</td>
<td>3. Vendors unwilling to “bet the farm”</td>
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<td>4. Credit enhancement by host government</td>
<td>4. Vendor risk aversion</td>
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<td>5. “Exit strategy”</td>
<td>5. Vendor unwilling to tie up capital long-term</td>
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