Australian LNG – Cost myths and truths
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Headlines indicating the high cost of Australian LNG

other parts of the world could deliver LNG projects 20 to 30 percent cheaper than Australia.
Is it true, and what are the contributing factors?

A number of factors have been highlighted as contributing to the high cost of Australian LNG projects, including:

- Foreign exchange rates
- Australian labour costs
- Project delays and productivity

RISC has analysed these factors, and also looked at 2 others

- The impact of decisions and assumptions made early in the project
- Collaboration
Foreign Exchange Rates

- Projects generally assumed a weaker AUD than was experienced
- Revised budgets in 2012 indicated FOREX as a major factor
- Estimated overall impact ~10%
- A bigger impact for East Coast projects than for West Coast
  - Onshore vs. Offshore
Labour Costs

- For ~50% Local Content
  If we assume ~50% of LC is labour

  20% increase in Australian labour costs = 5% increase in total costs

- East coast projects higher local content than West Coast projects

Source: Bechtel, Bechtel Copyright
## Project Delays and Productivity

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Like for like comparison (or close to it)

**Australian East Coast Projects**
- Greenfield location
- Small Jetty into sheltered water
- Island location (Sheltered Channel)
- Near industrial area (but no road access)
- 2 Trains
- 2 Storage Tanks
- Lean gas - no liquids

**Corpus Christi**
- Greenfield location
- Small Jetty into sheltered water
- River location
- Industrial area with good road access
- 2 Trains
- 2 Storage Tanks
- Lean gas - no liquids
- No upstream content

- ~US$20 bln Total
- ~US$10-12 bln Downstream (in a period ~parity)
- ~54 months from sanction to first LNG
- Most significant delays pre-sanction

- US$11.5 bln
- Planned 42 months execution
- Significant approval delays pre-sanction
Decisions taken early in the project cycle

- Pluto invested in infrastructure for 2 trains, but has not expanded beyond 1 train

- Gorgon
  - Remote Island
  - Class A Nature Reserve
  - CO₂ injection

- CSG-LNG projects assumed lower number of wells than now planned

- Prelude, new technology

- Wheatstone on a site, previously not chosen for Pluto or Gorgon, suitable for up to 5 trains

- Ichthys LNG plant 900km away from fields
  - Longest subsea pipeline in the southern hemisphere
The results of lack of collaboration
Possible collaborative outcome?
Estimated cost of lack of collaboration
Conclusions

- It’s difficult to support that FOREX and labour costs have had significant impact on project costs.

- Delays clearly have impacted projects:
  - But not all delays are due to lack of/low local Australian productivity.

- Decisions taken early in project life cycle have had significant impact on projects.

- Better collaboration would have resulted in significant capital expenditure savings across the projects:
  - Australia is not unique in this aspect.

- How can the industry do better?
  - How can we encourage real collaboration?