Proposed Iran to India Overland Gas Pipeline: Project Overview

India Oil & Gas Conference
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Outline

- The Fundamentals
- The Project
- The Benefits
- The Risks
- Possible mitigations
- Critical success factors
- Competitors
- The Value Proposition
- What needs to happen?
- Summary
The Fundamentals

- Abundant low cost supply - Iran
  - 200 years of India’s energy demand
  - Condensate rich, large scale gas development

- Existing, growing energy demand
  - India (and Pakistan)

- Technically simple
  - High pressure pipe – tried and tested, local capabilities
  - Compression phased with growth in demand

Simply the lowest cost supply of large volumes of gas for the decades to come...
The Project

- **Throughput:**
  - 1.5 to 3.0 BCFD
  - 3.8% pa growth

- **Class:** 900, x80
- **MAOP:** 2220 psig
- **Pipe Diameter:**
  - 44” to border
  - 36” from border

**Length:** 2775 km
**Total Cost:** $4.16b

**Key Points:**
- **Length:** 2775 km
- **Total Cost:** $4.16b
- **Throughput:** 1.5 to 3.0 BCFD
- **Growth Rate:** 3.8% per annum
- **Class:** 900 x80
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**Map Details:**
- **Length:** 2775 km
- **Total Cost:** $4.16b
- **Key Locations:**
  - Assaluyah
  - South Pars
  - Tehran
  - Karachi
  - Delhi
  - Bombay
  - Hyderabad
  - Lahore
  - Arabian Sea

**Cost Breakdown:**
- **1115 km:** $1.86b
- **760 km:** $1.20b
- **900 km:** $1.10b

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**Notable Points:**
- **20°N 60°E**
- **44” Compressors**
- **1-2 36”**
- **IRAN**
- **PAKISTAN**
- **CHINA**
- **NEPAL**
- **UAE**
- **SAUDI ARABIA**
- **OMAN**
- **INDIA**
- **QATAR**

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**Footer:**
- **bhpbilliton**
The Benefits

India:
- Affordable, unlimited supply
- Economic growth
- Diversity of supply

Iran:
- Diversification from oil revenue
- Long term foreign exchange earnings

Pakistan:
- Affordable, unlimited supply
- Internationally benchmarked compensation for transit

Regional Stability ???
The Risks

- **Reserves** – 100+ years supply of the 2010 unconstrained demand
- **The market** – infrastructure, ability to pay
- **Politics** – can commercial imperatives prevail over politics?
- **Security of supply** – some real, some perceived
- **Finance** – will only be available if all of the above are mitigated
Possible Mitigations

POLITICAL:
• Government guarantees
• Understanding
• Acceptance
• 2 x bilateral agreements
• Energy Charter

PHYSICAL:
• Motion detectors
• Gas storage
• Fuel back up
• Satellite monitoring
• Mutual dependence

CONTRACTUAL:
• T o P
• S o P
• Sovereign guarantees
• 2 Contracts

FINANCIAL:
• MLA covenants
• Escrow accounts

A combination of these will be required...
Critical success factors

- Gas delivered to customers at **competitive AND affordable price**
- Credible supply
  - Creditworthy buyers
  - Co-paced development of receiving & distribution infrastructure
- Strong sponsors
- Sound economic fundamentals
- Flexible customer tailored value proposition
  - Mutual dependence to minimise concerns over security of supply and…
  - *Shared will to address political issues to allow mutual commercial benefits to prevail !!!*
Co-opetition = Security and Low Cost

- Iran Pipeline
- Qatar LNG
- Oman LNG
- S. Africa Coal
- Australian LNG
- Australian Coal
- Bangla Pipeline
- Dom Gas
- Indian Energy Market
The Value Proposition - $10 billion saved over 25 yrs

Delivered to Delhi @ $18/bbl oil price

- Current gas market prices
- LNG
- Pipe Bangladesh
- Pipe Iran
- GAIL Retail

Indifference point with imported coal for 1200MW baseload power generation based on US$30/tonne coal price
What needs to happen?

• Explicit Government(s) support
• Two bilateral treaties or best one trilateral
• Establish regulatory framework
• Integrated participation of key sponsors from source to market
• Complete feasibility study
• Set up sponsors leading to consortium
• Arrange financing
• Execute

• First gas to Indian border: 36 months from financial closure
• Project **fundamentals are strong**

• Provides long term **affordable energy** supply

• Political hurdles can be overcome – economic incentives

• Pre-feasibility results are encouraging

• There are a few visionary companies believing in the project
Role of BHPBilliton

- BHPBilliton - world’s leading diversified resources company
- Servicing India’s energy needs for the past 15 years
- Has been promoting gas exports from Iran since 1993
- Completed feasibility study from Iran to Pakistan
- BHPB mandated by NIOC to lead the study and execution
- Pre-feasibility work nearing completion