New pipeline developments
Linking Australia’s gas markets for improved energy security

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About APA Group

APA is Australia’s largest gas infrastructure business

APA is an integrated operating business with direct management and operational control over its assets and investments

Core business areas

- **Gas transmission pipelines and storage**
  - Owning and operating two thirds of Australia’s onshore pipelines
  - Interconnected pipeline networks
  - Transporting approximately half the gas used domestically

- **Gas distribution networks**
  - Operating approximately a third of the nation’s gas distribution networks

- **Other related energy infrastructure**
  - APA has developed and acquired complementary energy infrastructure, including gas and wind electricity generation, gas processing and electricity transmission

### APA (October 2014)

<table>
<thead>
<tr>
<th><strong>Market capitalisation</strong></th>
<th>A$6.2 billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;P/ASX 50</td>
<td></td>
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<tr>
<td>MSCI All World Index;</td>
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<tr>
<td>FTSE All World Index</td>
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<tr>
<td><strong>Assets owned/operated</strong></td>
<td>Over $12 billion</td>
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<td><strong>Gas transmission</strong></td>
<td>14,100 km transmission pipelines</td>
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<td>Underground and LNG gas storage</td>
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<tr>
<td><strong>Gas distribution</strong></td>
<td>27,100 km gas network pipelines</td>
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<td></td>
<td>1.3 million gas consumers</td>
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<td><strong>Other energy infrastructure</strong></td>
<td>430 MW power generation (1)</td>
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<tr>
<td></td>
<td>239 km HV electricity transmission</td>
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<tr>
<td></td>
<td>Gas processing plants</td>
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</tbody>
</table>

| **Employees** | More than 1,600 |
| **Operator**  | Operator of APA’s assets and investments |
APA – Australia’s largest gas pipeline owner
APA in the Northern Territory and east coast

Northern Territory
- 2,000 km gas pipelines
- Long term presence in the Northern Territory – since 1980’s with NT Gas until 2011

East coast grid
- > 7,000 km across 5 states and territories
- Configuring pipelines to operate as single network system
NT link background

- Strategic initiative to connect NT to the East Coast Gas Grid
  - Flexible energy supply across the system, regardless of input/exit points

- Announced feasibility study for NT Link project and commitment of $2 million (Feb 2014)
  - Assessing various connection options, including environmental considerations and cost estimates, to determine the most efficient and commercially viable link
  - 3 key focus areas:
    - Gas resource in the NT
    - Demand in the East coast
    - Pipeline construction and enhancement requirements on existing infrastructure
Northern Territory gas resource

- >200 TCF\(^{(1)}\) of gas resources
- 3 primary potential supply zones:

**Offshore NT**
- Producing assets and staged developments in place
- ~60 TCF of identified reserves

**East NT**
- Unconventional gas under exploration
- >3 years for full development

**South NT**
- Small volumes of producing assets and unconventional gas
- >3 years for full development

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\(1\) NT Government media release 19 February 2014. Potential reserves of approximately 240 TCF across 6 basins

\[1 \text{ TCF} \cong 1,000 \text{ PJ}\]
NT Link – A Nation Building Project

- Encourages exploration & production to meet growing demand
- Opens new markets & supply competition
- Seamless transport between Timor Sea, Bass Strait, Sydney and Gladstone
  - Use of APA’s existing infrastructure means that a complete delivery solution can be offered by APA to meet customer requirements to deliver gas to the demand centres
- Significant additional security of supply
  - Existing east coast gas market and growth opportunities (eg. LNG exports)
  - APA is committed to support the development of the East coast gas markets which is likely to require gas from new sources as well as existing production areas
Feasibility study update

Infrastructure
- Preliminary assessment of several possible pipeline routes
  - evaluating environmental considerations
  - determining whole of project construction cost estimates
  - route flyovers undertaken
- Detailed engineering
  - 3 pipeline routes modelled, others being evaluated
  - infrastructure requirements in process of being defined

Commercial
- Determining minimum volume required for project to be viable
- Discussions with large downstream users on East Coast
- Discussions with major upstream producers & juniors/explorers

Government
- Ongoing dialogue with government (Fed, State and Territory) & other stakeholders
- NT Government process has been announced – details expected in the next month
A number of viable pipeline options ... each with its own challenges and opportunities.

Each option uses APA’s existing gas transmission infrastructure in different ways to deliver gas to ultimate end market – depending on where the gas resource is located.

<table>
<thead>
<tr>
<th>Location</th>
<th>Option A</th>
<th>Option B</th>
<th>Option C</th>
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</thead>
<tbody>
<tr>
<td>To Mt Isa</td>
<td>620 km</td>
<td>1,100 km</td>
<td>700 km</td>
</tr>
<tr>
<td>Water crossings</td>
<td>6</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Flood (1)</td>
<td>25,000</td>
<td>352,000</td>
<td>117,000</td>
</tr>
<tr>
<td>Rock/ outcrops</td>
<td>35-45km</td>
<td>25-35km</td>
<td>50-60km</td>
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(1) Susceptibility to flooding – km² catchment upstream
Development considerations

- Focused on identifying the most efficient and commercially viable link with the east coast grid
- Working with upstream and downstream parties to determine the most likely gas flow path
- Gas delivered to the east coast grid can be seamlessly delivered to any major delivery point
- Potential for additional LNG trains in the Northern Territory is an alternate market for gas resources developed
Development considerations

Potential pipeline option – RED

- Key gas sources – offshore and eastern NT
Potential pipeline option – BLUE

- Gas sourced from all three locations (offshore, eastern NT and southern NT)
Development considerations

Potential pipeline option – GREEN

- Key gas sources – eastern NT and southern NT
- Pipeline travels through existing producing fields
Conclusion

- Strategic initiative providing flexible energy supply between Timor Sea, Bass Strait, Sydney and Gladstone

- Feasibility study well underway – expected to be completed in 2015. Timing accelerated, pending the NT Government process

- Focus is to identify the most efficient and commercially viable link with the east coast grid that meets the requirements imposed by siting of the gas resources that would be committed to the project

- Infrastructure sized to meet demand

- Working with upstream and downstream parties to best understand the likely gas path

APA’s unique offering

- APA can deliver a whole of system approach, leveraging the network capability of the east coast. APA’s existing gas transmission infrastructure will form an integral part of the solution to get gas to the demand centres in the East Coast

- APA has appropriate capability, expertise and resources to fully develop this project in conjunction with NT Government
Delivering Australia’s Energy

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