Welcome to ICN’s national resources projects seminar

2012 FORMULA 1 QANTAS AUSTRALIAN GRAND PRIX
Friday 16 March 2012, 10.00am – 11.30am
Michael Fairbairn
Program Manager
Industry Capability Network (ICN)
Useful Websites

General Information -
www.icnvic.org.au
www.icnvic.org.au/resources

Opportunities and Registration
www.gateaway.icn.org.au
www.projectconnect.com.au

Groups –
www.linkedin.com/
• Victorian Mining Capability Team
• Victorian Oil & Gas Capability Team
David Roberts
National Sector Manager – Mining
ICN
Overview of mining sector

- Investment in the mining industry represents 46% of all investments projects under consideration or committed throughout Australia.

- Dominance is expected to continue between now and June 2014 due to healthy pipeline of projects awaiting approval.

- Investment pipeline of $430 billion in Australian minerals and energy projects.

- Capital expenditure figures show the mining industry will spend a record $83 billion in 2011 - 2012 on machinery, buildings and structures, up from $51 billion in 2010 - 11.
## Overview of mining sector – Coal

<table>
<thead>
<tr>
<th></th>
<th>Under Construction</th>
<th>Committed</th>
<th>Under Consideration</th>
<th>Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3.1 billion</td>
<td>$8.6 billion</td>
<td>$29.5 billion</td>
<td>$15.4 billion</td>
<td></td>
</tr>
</tbody>
</table>

- Projects under construction = work has commenced on the project
- Committed = decision to proceed has been announced but yet started
- Possible = projects announced but where no early decision on whether to proceed with the project is likely

Overview of mining sector – Metal Ore

<table>
<thead>
<tr>
<th>Under Construction</th>
<th>Committed</th>
<th>Under Consideration</th>
<th>Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>$25.1 billion</td>
<td>$7.8 billion</td>
<td>$56.3 billion</td>
<td>$14.2 billion</td>
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</tbody>
</table>

Projects under construction = work has commenced on the project
- Committed = decision to proceed has been announced but yet started
- Possible = projects announced but where no early decision on whether to proceed with the project is likely

### Overview of mining sector – Other

- **Under Construction**: $1.7 billion
- **Committed**: N/A
- **Under Consideration**: $669 million
- **Possible**: $555 million

- Projects under construction = work has commenced on the project
- Committed = decision to proceed has been announced but yet started
- Possible = projects announced but where no early decision on whether to proceed with the project is likely

Overview of mining sector – Oil & Gas

- Drawing resources from the mining sector
- Predominately in Western Australia & Queensland

<table>
<thead>
<tr>
<th>Under Construction</th>
<th>Committed</th>
<th>Under Consideration</th>
<th>Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>$103 billion</td>
<td>$40 billion</td>
<td>$29.5 billion</td>
<td>$15.4 billion</td>
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</table>

# Mining Sector – Advanced Projects

<table>
<thead>
<tr>
<th></th>
<th>Energy projects</th>
<th>Minerals projects</th>
<th>Infrastructure projects</th>
<th>Minerals and energy processing</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Cost ($m)</td>
<td>No.</td>
<td>Cost ($m)</td>
<td>No.</td>
</tr>
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<td>4102</td>
<td>4</td>
<td>2204</td>
<td>7</td>
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<tr>
<td>Victoria</td>
<td>2</td>
<td>4369</td>
<td>1</td>
<td>32</td>
<td>0</td>
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<tr>
<td>Queensland</td>
<td>14</td>
<td>54775</td>
<td>7</td>
<td>2390</td>
<td>8</td>
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<tr>
<td>Western Australia</td>
<td>10</td>
<td>105421</td>
<td>23</td>
<td>25512</td>
<td>6</td>
</tr>
<tr>
<td>South Australia</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>318</td>
<td>0</td>
</tr>
<tr>
<td>Tasmania</td>
<td>1</td>
<td>353</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Northern Territory</td>
<td>1</td>
<td>680</td>
<td>2</td>
<td>271</td>
<td>0</td>
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<tr>
<td><strong>Australia</strong></td>
<td><strong>37</strong></td>
<td><strong>169700</strong></td>
<td><strong>40</strong></td>
<td><strong>30727</strong></td>
<td><strong>21</strong></td>
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</tbody>
</table>

*Australian Government Bureau of Resources and Energy Economics October 2011*
Overview of mining – Considerations

- Even in “non traditional” mining states or states not currently in a boom they each have their own pressures.

- Northern Territory has recently had an LNG project approved. Government over the last five years been in Asia attracting investment.

- Potential for close to a dozen mines to be expanded or developed putting additional pressure on scarce resources.

- South Australia in a similar position with Olympic Dam could potentially be a $30 Billion investment. There are additional mines that could all come online in quick succession.
Management drivers, decisions & risk

- Mining has a relationship based culture which is unique compared to any other industry

- Mining companies are traditionally risk adverse nobody wants to pioneer a new company

- Four main drivers in decision making:
  - Making money
  - Saving money
  - Saving lives
  - Social licence to operate
Management drivers, decisions & risk

- Mining has to be separated into two groups and managed differently.

- Initial infrastructure – Project with a beginning and an end with a different management style traditionally run by a project manager.

- Operating Mine – No definitive end date, need companies in close proximity to the asset to prevent down time.

- A fifty cent fuse can cause a $5,000,000 problem.
Management drivers, decisions & risk

- Study in 2010 into important issues for integration of products or services into Australian Supply Chains
  - Long term customer relationships – 78%
  - Preferred supplier status – 75%
  - Responsiveness to customer needs – 69%
  - Building and developing new customer relationships – 68%

- The service component of the product or service is as valuable as what you are supplying. If you can service it quickly leads to reduced downtime, saves money from loss of production.
Future of the mining sector

- Australia faces a shortage of skilled workers that is projected to become more severe in the future.

- By 2015 according to BAE Economics a shortage of 70,000 workers nationally. 45,000 in Western Australia & 15,000 in Queensland.

  - Has already started to affect production at some mines.

- Led to innovations throughout the industry like automation – Driverless trucks, control rooms.
Future of the mining sector

- The centre has been designed to control and monitor on a real-time basis the entire operations across the Pilbara.
  - 14 mines
  - 1,400 Km of rail
  - Three ports and power generation facilities

- In coal mining it is becoming computerised, it used to be 14 people on a long wall now there is only 3.
Tips for accessing resource projects

- Mining is about the *relationship*

- Mining companies are *risk adverse* if you have not supplied a mine before it is unlikely you will be successful

- Companies have to start developing relationships in key mining regions with companies already supplying the sites.

- ICN and the Victorian Government can assist in introductions but it is on you to maintain and strengthen the relationships, face to face is always better
Tips for accessing resource projects

- Think long term – 80% of mining expenditure is spent over the lifecycle of the mine and production.

- Understand your value proposition – where are you competitive? e.g. labour costs could be lower in Victoria than in Mackay

- Education – through programmes like Enterprise Connect. Also get a good understanding of the drivers in the industry

- ICN has appointed a mining specialist in each state, collectively they have a fantastic cross section of skills that cover all facets of mining and production
Contact Details

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Mining & Resources
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INPEX’s Ichthys Project &
Other NT Resource Projects
- 4.2% unemployment rate
- Approx. 1/6th Australia’s Land Mass
- Total population approx. 230,000
- Australia’s gateway to Asia

Photo source: seaaoc.com
Greater Darwin Population Projections

<table>
<thead>
<tr>
<th>Year</th>
<th>Baseline scenario</th>
<th>High migration scenario</th>
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</thead>
<tbody>
<tr>
<td>2010</td>
<td>127,254</td>
<td>127,254</td>
</tr>
<tr>
<td>2015</td>
<td>138,202</td>
<td>142,417</td>
</tr>
<tr>
<td>2020</td>
<td>151,762</td>
<td>164,665</td>
</tr>
<tr>
<td>2025</td>
<td>166,359</td>
<td>188,951</td>
</tr>
</tbody>
</table>

Source: NT Treasury
- INPEX (Ichthys, Abadi)
- ConocoPhillips (Bauy Undan DLNG)
- Eni (Kitan, Blackwood & Heron)
- GDF SUEZ/Santos (Petrel, Tern, Frigate)
- Shell (Prelude)
- MEO Australia (Heron & Blackwood)
- PTTEP (Montara)
- Woodside (Greater Sunrise)
- Falcon Oil and Gas (Beetaloo Basin)
- Central Petroleum (Pedirka and Amadeus Basins)
- ERA (uranium oxide)
- HNC (Copper cobalt, nickel, lead & zinc)
- BHP Billiton (Manganese)
- McArthur River Mining (zinc)
- Territory Resources (Iron Ore)
- OM Holdings (Manganese)
- Emmerson Resources, West Gold, Excalibur
- Peko Resources (Magnetite Tailings)
- Minemakers (Phosphate)
- Arafura Resources (Rare Earths)
- Sherwin Iron (Iron Ore)
- Western Desert Resources (Iron Ore)
- Vista Gold (Gold)
- Alcan (bauxite)
**Darwin Marine Supply Base**

Will provide support to drilling and operational
- platforms, the establishment of new projects and
- RORO facilities for a range of strategically

Will provide berths and laydown areas for supply
- vessels servicing offshore oil & gas platforms and
- also refuelling and victualling services

**Defence Upgrades**
- Three projects approx $352million underway
- New strike fighter facility upgrade
- Northern Australian Defence upgrades
- Approx 2,500 US Marines stationed on a rotation basis in Darwin by 2017

**Northern Territory New Secure Facilities PPP project (NTSF)**
- $495m
- 1000 bed prison

**Darwin Airport Expansion**
- $40m terminal and apron expansion
- Anticipated construction mid 2012
US$34b Ichthys Project
During 2000-01, three exploratory wells resulted in the discovery of an extremely promising gas and condensate field.

Resource estimates: 12.8 trillion cubic feet of gas and 527 million barrels of condensate.

In 2006, INPEX transferred a 24% participating interest in the Ichthys Project to Total. INPEX remains the Operator of the Project.

Source: inpex.com.au
Gas from the Ichthys Field will undergo preliminary processing at the offshore central processing facility (CPF).

Condensate will be pumped to a floating production, storage and offloading (FPSO) facility anchored nearby.

The gas will be transported from the CPF through a subsea pipeline approx 885km’s to the onshore LNG processing plant.

Initial capacity to produce 8.4m tonnes of LNG per annum and 1.6m tonnes of liquefied petroleum gas (LPG) per annum, as well as approximately 100,000 barrels of condensate per day at peak.

Source: inpex.com.au
Onshore facilities will include:

- Two LNG trains with a capacity of 8.4 million tonnes per annum
- LPG and condensate processing plants
- Storage tanks for LNG, LPG and condensate
- Administration facilities
- Utilities and services
- Power generation infrastructure
- Product offloading jetty

Source: inpex.com.au
Key offshore facilities will include:

- Semi-submersible Central Processing Facility (CPF)
- Floating Production Storage and Offloading (FPSO) unit for condensate treatment and storage
- Umbilicals, risers and flowlines (URF)
- 885km export pipeline to Darwin Semi-submersible Central Processing Facility (CPF)

Source: inpex.com.au
Status

- Front End Engineering and Design (FEED)
  - Onshore FEED contractor JKC Joint Venture (JGC Corporation, KBR and Chiyoda Corporation)
  - Offshore FEED contractor

- Invitation to Tender (ITT)

- Final Investment Decision (FID) announced 13 January 2012
  - Onshore Engineer, Procure & Construct (EPC) contractor JKC Joint Venture signed 9 February 2012
ICN’s goal is connecting supply chains to ‘local’
Expressions of Interest

Ichthys Onshore Facilities

Project Owner: JKC Joint Venture (INPEX Onshore Plant 'FEED' Contractor)
Project Value: n/a
Project Status: In Progress
Location: NT, Australia

Contact Details
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Mobile: 0417 855 094
Email: [click to email]

Associated Projects:
- Ichthys LNG Project
  - Ichthys Onshore Facilities
  - Ichthys Offshore Production Facilities
  - Ichthys Development Drilling Campaign

The gas will be processed through a two train 8.4 t/a LNG processing plant. This production rate represents the average rate over the life of the Project. Total annual production will vary from year to year depending on factors such as the composition of the gas from the reservoir and the duration and frequency of maintenance activities.

The onshore processing plant will also produce approximately 1.6 million tonnes per annum of LPG and 15 000 barrels per day of condensate which is carried to the plant with the gas stream.

Work Packages

Currently Listing 195 Work Packages:
Tier 1: Complete package or service for this work package required. Tier 2: Partial package or service for this work package allowed.

<table>
<thead>
<tr>
<th>Work Package</th>
<th>Status</th>
<th>Applications Open</th>
<th>Tier 1 Closes</th>
<th>Tier 2 Closes</th>
<th>PDF</th>
</tr>
</thead>
<tbody>
<tr>
<td>* PROJECT NOTICES *</td>
<td></td>
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<tr>
<td>SUPPLIER'S PRE-QUALIFY QUESTIONNAIRE</td>
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* COMBUSTION EQUIPMENT

[LINK TO COMBUSTION EQUIPMENT INFORMATION]
<table>
<thead>
<tr>
<th>Project Description</th>
<th>Status</th>
<th>Start Date</th>
<th>End Date</th>
<th>Close Date</th>
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</thead>
<tbody>
<tr>
<td>TRAYS &amp; PACKINGS (AUD $5 - $10m range)</td>
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<td>25 Jun 2010</td>
<td>1 Jan 2015</td>
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<td>VANE SEPARATORS (AUD $1 - $5m range)</td>
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<tr>
<td>SUBCONTRACTS</td>
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<tr>
<td>Construction Management Accommodation</td>
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<tr>
<td>Integrated Freight Forwarding Service</td>
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<td>EPC Accommodation Village</td>
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<td>1 Oct 2010</td>
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<tr>
<td>EPC Administration Complex Buildings (AUD $50 - $100million range)</td>
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<td>18 Dec 2009</td>
<td>12 Jan 2010</td>
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<tr>
<td>EPC Cryogenic Tanks Works (+ AUD $100 million range)</td>
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<td>EPC Non-Cryogenic Tanks Works (AUD $50m - $100million range)</td>
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<td>EPC of Combined Cycle Power Plant (+ AUD $100m range)</td>
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<td>EPC Plant Site Buildings (AUD $10 - $50million range)</td>
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<td>EPC Temporary Site Facilities Works (+ AUD $100 million range)</td>
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<td>Site Access Road Construction (AUD $5 - $10million range)</td>
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<td>Site Development Civil Works (+ AUD $100m range)</td>
<td>Open</td>
<td>18 Dec 2009</td>
<td>12 Jan 2010</td>
<td>1 Feb 2015</td>
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</tbody>
</table>
Check Yourself

- Register against the Project and follow ICN Gateway
- Keep information up-to-date!
- Get accredited – QA, WH&S, OH&S
- Be competitive
- Do not wholly rely on the ICN, we are not the ONLY avenue for you to win work for these projects
Contact Us

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Elena Tsangari, Administration Support (ICN Gateway)

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