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**Tara Diamond, AMMA Executive Director Industry Services**

*"Skilling Australian resources through industry transition"*

**INTRO**

**SLIDE 1: ABOUT AMMA**

Good morning ladies and gentleman and thank you for the opportunity to present to you today. I am very pleased to be representing Australia's wider resource industry at an event that dissects and explores the skills and labour force requirements of our nation's future.

I say 'wider resource industry' because when we consider the challenges and opportunities that are emerging from the transitional phase of Australia's resource industry, it is not only the operators of our mining, oil and gas projects that will be impacted, but the wide range of service suppliers along the resources and related-construction supply chains.

AMMA, or the Australian Mines and Metals Association, is the national resource industry employer group and has been serving all of these sub-sectors since 1918.

**SLIDE 2: AMMA MISSION STATEMENT**

Historically, we are best known as the workplace relations specialists for the resource industry, both in practical service delivery to our members and in our policy lobbying and advocacy activities.

Today we also offer a diverse range of consultancy services including employee relations, training, HR, legal, and workforce development and diversity programs. Our mission for the past 96 years has been to ensure Australia's resource industry is an attractive place to invest, employ people and add value to the national wellbeing.

**SLIDE 3: PRESENTATION CONTENT**

My presentation today covers two distinct areas.

Firstly, I'll provide an overview on what's happening in the resource industry's investment and project landscape and how that is affecting employment trends and skills demand in our sector.

And secondly, I will expand on one particular area of skills attraction and retention that resource industry employers have embarked on in recent years, and for good reason – that of increased female workforce participation.

## **PART 1: RESOURCE INDUSTRY EMPLOYMENT OVERVIEW**

### **INDUSTRY TRANSITION**

#### **SLIDE 4: INDUSTRY IN TRANSITION**

Understanding the complex skills needs of the resource sector requires an understanding of what the 'resources boom' really means and how our nation is managing the transition into a more sustainable long-term production and export phase.

#### **SLIDE 5: THREE PROJECT PHASES**

The life-cycle of any resources project is split into three phases, each with very different skills demands. On screen is a representation of these three phases by Deloitte Access Economics.

Firstly, we have the feasibility or pre-commitment stage. This is basically the R&D part of our sector. Deloitte notes that the recent explosion in new project investment in Australia was driven by increasing commodity demand, lack of supply and thus high prices.

The next phase is construction, where we see huge capital investments into bringing these projects to life and labour workforces often many thousands strong.

The past decade or so has not really seen a 'mining boom', but rather a 'construction boom' driven by the sheer volume of unprecedented investment into resource new projects and existing mine expansions.

At its peak in around early 2013, Australia had 73 committed projects with a combined value of \$268 billion; while another 113 projects worth a combined \$332 billion were in various stages of feasibility.

If you counted all the arms and legs required to build these projects, there are more than 137,000 construction-related roles alone.

Of course, not all these projects come online at the same time and compete for the same labour pools, but if even half of these projects had some overlap and were active in the recruitment market – well you can see why only 18 months ago the resource industry was in the midst of a crippling skills shortage.

It is the transition into this final phase – the production phase – of Australia's new mega-resources projects where we are now seeing a great shift in our labour force trends and skills demand.

## THREE PROJECT EXAMPLES

### SLIDE 6: THREE PROJECT EXAMPLES

The transition into the long-term production phase creates a number of challenges that must be managed by our industry and our nation.

Workforce numbers required for the operation of mega-resources projects is typically much less than the peak construction workforces required building them.

For instance, the 137,000 short-term construction jobs required to build that \$594 billion worth of new projects would result in just 62,000 long-term production personnel required for project operation. And of course, in most areas the skills sets are very different.

On-screen there are three examples of well-known mega resources projects and their capital expenditure and workforce requirements. This is all pulled from data published by the federal government's Bureau of Resources and Energy Economics, or "BREE".

The Chevron-led Gorgon LNG Project offshore Western Australia is the largest resources development in Australia's history and one of the largest in the world at \$54 billion capital expenditure.

The project requires about 10,000 workers during construction and after its 2015 completion, around 3,500 personnel for the long-term production phase.

The Santos-led GLNG project – worth about \$18 billion and one of three concurrent onshore coal seam gas developments in Queensland – requires a peak construction workforce of about 5000 people, and a long-term operational workforce of about 1000.

And my final example is a very recent and very positive project to have achieved the 'go ahead' in Australia, Hancock Prospecting's \$10 billion Roy Hill iron ore mine in the Pilbara, which requires about 3,600 construction workers and about 2000 for long-term mine operation.

These are just three examples of mega-resources projects in Australia that have achieved final investment decision during what is called the 'mining boom' and are now well progressed in construction.

## CANCELLED PROJECTS

So there was always going to be a major skills transition as the record investment period moved into a longer term production phase.

While we could see this transition coming, the recent sudden drop-off in new project investment growth has taken us by surprise.

## SLIDE 7: EXAMPLES OF CANCELLED PROJECTS

On screen are some well-publicised examples of major resource projects that have been deferred or cancelled over the past two years.

This has occurred due to a mixture of declining commodity prices and international demand, new emerging global competitors for investment capital, and high domestic development costs and therefore increased capital risk in our country.

The \$5 billion expansion of BHP's Olympic Dam mine was deferred indefinitely in August 2012. In the same year BHP mooted's Port Hedland outer harbour expansion – worth about \$20 billion – was also canned.

In April 2013, Woodside Energy cancelled its onshore development at James Price Point for the Browse LNG field, preferring to instead explore the new lower-cost technology of floating LNG. With its cost estimates for the onshore project blowing out to \$50 billion, many in the industry saw the writing on the wall before the announcement.

In September 2013, Glencore Xstrata shelved its \$7 billion Wandoan Coal mine, while just last month rising costs saw Santos shelve its \$5 billion gas plant off the Northern Territory coast.

There are also very large question marks around Arrow Energy's proposed \$10 billion development of a fourth coal seam gas pipeline project in central Queensland.

So while we are on the verge of reaping the long-term national benefits of an unprecedented production boom, the cancellation of projects such as these have exacerbated the natural slow-down in new project investment.

We can no longer rely on a strong second wave of new projects in the investment pipeline to ease our industry from a record construction phase into the new production phase.

The skills transition from a construction based workforce to a production based workforce will therefore be more sudden, and more challenging.

## SLIDE 8: AWPA SKILLS TRANSITION DATA

If I could direct your attention to the data on screen, this is some very interesting modelling published in the Australian Workplace Productivity Agency's 2013 *Resource Sector Skills Needs* report.

Key things to note include that:

- Resource project construction will decline sharply from 2014, down from almost 119,000 workers to just 28,900 by 2018.
- Mining operations will growth relatively modestly from about 236,000 workers to 254,000 by 2018.

- Oil and gas operations will increase from about 39,000 jobs to more than 61,000 by 2018. This growth is driven mostly from the six new natural gas developments set to move into production from 2015/2016.

## SLIDE 9: TWO PART CHALLENGE

As an industry and as a nation, we are left with a two-part challenge.

The first is managing the large decline in the number of employment opportunities in resource industry construction work, driven by the sudden decrease in new project investment and cancellation of some key mega-projects in that second wave.

The second, and clearly the biggest skilling challenge for our industry in the short term, is preparing for our technical production workforce to grow by 57% in just four years.

Australia now suddenly requires thousands of skilled production personnel to operate projects never before seen in this country, and the question is how prepared are we.

## THE CONSTRUCTION CHALLENGE

### SLIDE 10: THE CONSTRUCTION CHALLENGE

Managing the construction implications of our industry's transition comes down to two key focus areas:

- 1) Ensuring other areas of the Australian construction industry are growing and offer new opportunities as resources construction employment demand declines; and
- 2) Prolonging the resources construction boom for as long as possible through re-booting our attractiveness for global investment opportunities, and thus re-booting a second and ongoing wave of new projects.

### SLIDE 11: CONSTRUCTION LABOUR FORCE MOVEMENT

Regarding how we can manage the construction labour force movement.

#### **A) Industry efforts to facilitate labour movement**

The resource industry is doing its part through partnerships with other industry associations and employer groups, national training bodies and skills organisations to better facilitate transfer of skilled labour between the various sub-sectors of the construction industry, catering for fluctuations in demand.

For instance, AMMA's own Skills Connect project was developed in response to a federal government recommendation in 2010 that our national construction labour forces should be more mobile.

The work of these industry-led programs, government skilling initiatives and employer-directed programs has helped many skilled trades people take up roles in the resource industry as our construction growth has demanded, but has also ensured they are in a strong position to move back into residential and public infrastructure construction industries as demand fluctuates.

It's all about construction skills mobility, and there is much work still needed to be done.

## **B) Growth in non-engineering construction works**

### **SLIDE 12: GROWTH IN RESIDENTIAL CONSTRUCTION**

The slide on-screen shows why preparing resource construction workers for the transition back into residential construction is critically important.

It shows that in the medium term, investment in private housing projects is forecast to largely absorb a decline in commercial and engineering construction.

You can see on the left-side graph the sharp decline in private commercial construction from 2012/13 and the medium term uptake in housing construction. Our labour forces also follow this mirroring trend in demand and it is good to see growth in other construction areas as ours declines.

Thankfully, as demonstrated on the right, Deloitte's long term outlook shows both sectors of the construction industry steadily growing over the long term, from this point.

### **SLIDE 13: JOE HOCKEY BUDGET QUOTE**

## **C) Public infrastructure investment**

It is also very encouraging to see private investment does not need to go it alone in managing the shifting construction skills outlook.

Joe Hockey noted in his Budget speech that investment in new public infrastructure projects will not only form the pillars for increased national productivity, but also assist in the managing the decline in private resources construction works.

With many of the states following this investment mantra, we expect the increase in skills demand in private housing investment to be matched by that in new public infrastructure projects.

## **Prolonging the resources construction boom**

### **SLIDE 14: PROLONGING THE CONSTRUCTION BOOM**

Of course another main area of interest for AMMA is prolonging the prosperity of Australia's resources investment and construction phases for as long as we possibly can.

This requires us to have the right political leadership and policy framework behind us. Our sector is one of the most globally engaged Australian industries, but we are also among the most heavily exposed to increasing global competitive pressures.

In recent times, a raft of poorly thought-out and executed economic and taxation policies, as well as an inflexible, unproductive and combative workplace relations system, has seen our country lose much of its attractiveness in the competition for global project investment.

To provide context about Australia's increasingly uncompetitive cost structure, McKinsey and other economic firms have compared the cost of building a mega-resources project in a comparable OECD country like Canada or offshore the US Gulf Coast – the consistent result is that Australia is about 30% more expensive.

We will never be able to compete with new global competitors like West Africa or South East Asia in areas like labour costs, but we do need to be looking to those domestic policy areas within our control to ensure we have a platform to seize new global opportunities.

These areas include:

- Greater focus on industry policy areas such as stimulating the exploration sector.
- Removing unnecessary barriers to competing at our best for global investment, such as the carbon and mining taxes which have contributed to a perceived increased sovereign risk.
- Restoring some stability and practicality to Australia's workplace laws, particularly in areas that directly affect the productivity, approval times and labour force flexibility for major resource projects.

And of course, enterprise will also need to play its part by pursuing efficiency, building internal capacity, finding enterprise-level productivity gains and continuing to engage with global best practices and Australian-driven innovation.

AMMA is heavily involved in all of these areas, both at the policy and practical side of the fence.

## **THE PRODUCTION CHALLENGE**

### **SLIDE 15: OIL AND GAS OCCUPATIONS GROWTH**

Let's now look at our industry's most immediate workforce challenge - managing the unprecedented level of new production skills required to operate this wave of newly-completed mega hydrocarbons projects.

Remember we are looking at an increase of 22,000 jobs in a highly skilled technical area of project operation that is still relatively new to Australia's workforce.

On screen now is a table drawn from Deloitte Access Economic modelling showing demand levels of specific occupations across the oil and gas sector. Note solid growth across the board, but particularly in the top three categories of managers, professionals and technicians.

### SLIDE 16: FIVE KEY RESPONSE AREAS

The current slide outlines five of the key areas across education, government and industry, in which our nation is responding to this impending skills challenge.

1. Encouraging greater school-level participation in science, technology, engineering and mathematics. This will greatly assist in building the next generation of the resource industry workforce.
2. At the workplace level, employers are focusing on the retention of their existing skills and talent through best practice HR management and maximising their employer brand and value offer.
3. Again at the workplace level, employers are utilising the growing range of technical training and upskilling programs to bolster their existing internal capabilities and workforce capacity. Coupled with the previous point, the goal is to build their own prepared workforce and have strategies to retain them.
4. Active campaigns to connect with broader skills talent pools and underrepresented worker demographics in our industry. This includes targeted employer-driven recruitment campaigns, as well as industry and government initiatives to attract more women to our industry; or to directly promote resource careers to school-aged and university students.
5. The fifth point in this area is facilitating greater labour mobility among Australia's skilled workforce. For instance, there might be a dozen geotechnical engineers living in metro Sydney looking for work, but who aren't too keen on moving into the middle of the Pilbara. This area is also where the small, but vitally important role of temporary skilled migration comes into play.

### **PART TWO: FEMALE PARTICIPATION**

To go into detail on each one of these response areas would require five additional presentations, so the final part of my address today will focus on just one of them – point three on attracting and retaining more women in our workforce.

### SLIDE 17: WHY FEMALE PARTICIPATION?

On screen are a few quotes detailing why increased women's participation has been found to be critical to national productivity and economic growth across all industry sectors.

I hope the first part of my presentation has clearly shown why our industry can no longer afford untapped pools of skilled workers sit idly by and not consider the resource industry as a viable career option.



And it is also simple logic that those industries that have the most to gain from increased female workforce participation rates are those with the most dismal existing numbers.

### SLIDE 18: MINING STATISTICS

You can see from this graph that although women's participation is increasing in the 'mining' industry – defined by the ABS as including mining, oil and gas - women are still vastly under-represented at just 15% of the total workforce.

This is despite women comprising over 46% of the total Australian labour force.

### SLIDE 19: CONSTRUCTION STATISTICS

In the construction, and remember 119,000 construction workers are building resource projects currently, these numbers are even worse at 12.6%.

### SLIDE 20: NOT WHY – HOW

All stakeholders to this skilling process moved on from analysing 'why' we should focus on female participation rates many years ago.

For instance, the Australian Government identified women as an underutilised pool of labour and skills back in 2010 as part of its National Resource Sector Workforce Strategy.

Since then, there is no denying that the resource industry has made great progress in raising awareness of our diverse career opportunities and attracting women to them.

The focus is on 'how'.

We have seen some employers truly recognise the need to attract greater diversity and skills in order to remain competitive, thus bringing about some of the most innovative and progressive workforce diversity strategies ever seen in Australia.

I'll briefly take you through four of these best practice case studies, from different sub-sectors of the resource industry.

### SLIDE 21: ANGLO AMERICAN COAL

The first example is Anglo American Metallurgical Coal, which won AMMA's 2013 Industry Award for Most Creative Recruitment Campaign.

Anglo American saw their existing approach to diversity and inclusion as a competitive advantage in sourcing talent for its Central Queensland coal mines.

Advertisements like the one on screen were part of a national recruitment campaign which featured real women working in non-traditional resource industry roles.

I say 'non-traditional' because the women already involved in resource organisations are too heavily geared towards administration or professional office roles. We need to get their skills at the coal face.

This advert features Simone Forbes, an underground mine worker who previously won Queensland's 'Tradesperson of the Year'.

The campaign generated a lot of interest and combined with its broader strategy saw results including:

- A 'pipeline' target of 75% females among new recruits was created. The recruitment team achieved 50-70% females across various parts of business.
- In three years, females represented 38% of superintendents (traditionally underrepresented).
- Now growing pipeline of female talent for higher-level roles.

#### SLIDE 22: THIESS EXAMPLE

The next example is from leading mining construction and services contractor Thiess, which has embarked on a number of complementary initiatives to increase and promote employment opportunities to women in non traditional roles.

The company runs programs for flexible work arrangements; it has achieved a target of 50% female mining engineering graduates and was also one of the first employers to introduce female Personal Protective Equipment.

In 2011, Thiess set a target of 17% female participation by the end of 2015, and 20% by 2020. That's an ambitious target considering its workforce is 4000-strong.

The development of a 'Women in Mining Strategic Plan' is putting a greater framework around strategies of cultural inclusion, training and retention initiatives.

Outcomes have included a considerable improvement in female participation rates from 4.7% in 2011 to 13.1% by end of 2013. It appears Thiess is well on-track towards its 17% target.

#### SLIDE 23: CALTEX BABY CARE

You may have already heard about Caltex's BabyCare initiative, our oil and gas example, due to the range of mainstream media coverage it achieved.

This initiative was developed and launched in late 2012 after an internal review found that turnover was more prevalent in the 12 months after women returned to work, compared to women failing to return from maternity leave.

In response to this business problem, Caltex's Baby Care initiative was launched and features:

- 3% bonuses paid each quarter to a primary carer once return to work;
- Paid-for emergency childcare – up to 5 times per year;
- Help in locating the right childcare service provider; and
- Nursing mothers' facilities.

This certainly is an example of an employer addressing a range of practical needs of new parents. It will be interesting to see the tangible benefits for Caltex over the long-term.

#### SLIDE 24: FARSTAD SHIPPING

For my final example I've also chosen to highlight shipping company Farstad, which provides a range of maritime services to offshore oil and gas projects.

Farstad are still at the beginning stages of their diversity journey and it is little wonder why, given worldwide, just 2% of seafarers across all maritime industries are female.

This figure was representative of Farstad's 650-strong seafaring workforce, so the company was determined to make real changes and get the message out there that it had a lot of offer women in the way of career opportunities.

So Farstad Shipping became the first organisation to complete the Australian Women in Resources Alliance "Recognised Program".

I will explain what AWRA is all about in a moment, but what Farstad essentially did was allow a comprehensive assessment of its gender diversity capability and from this was able to build a roadmap for improvement.

Farstad's rating indicated it was at the 'awareness and building' stage of their diversity journey, and its management is now in the process of developing a diversity vision and strategy.

Important steps have been to:

- Introduce a values workshop for all staff to meet and discuss vision and direction;
- Establish a diversity committee to help develop a formal program and action plan;
- Hiring a corporate liaison officer to improve connectivity between office and seagoing staff; and
- Focused on recruiting women at every level, and hired their first female trainee engineer.

Farstad Shipping has committed to being assessed again this year and hope to make it to the next level where they will embark on a new round of diversity initiatives.

### SLIDE 25: ABOUT AWRA

So what is this Australian Women in Resources Alliance, known as “AWRA”.

I mentioned the government’s National Resource Sector Workforce Strategy, back in 2010, recommended increased female participation rates as a key strategy for our skills challenges.

Well AWRA is the industry’s coordinated response to this recommendation.

While managed by us at AMMA, it is an ‘alliance’ because it was developed as a partnership between government, industry, academia and existing state-based women’s groups.

The focus is on assisting employers in the greater attraction, retention and development of women in the resource industry workforce.

Our goal is to increase the female participation rate in the resources sector from 15% to 25% by 2020. It’s an ambitious goal – but we like to aim high in the resource industry.

### SLIDE 26: WAY FORWARD GUIDES

One of our first initiatives was to develop a suite of ‘Way Forward Guides’ that would form the basis of an industry-wide national education campaign, complete with employer workshops.

These guides assist employers across 9 important steps in a diversity journey, from establishing a business case and gaining buy-in from leaders, to building an employer brand that appeals to women and developing innovative recruitment strategies.

The guides build on existing tools and information available to employers, and have been utilised widely by employers to help fill gaps in their existing strategies.

### SLIDE 27: PAY EQUITY SURVEY

This year AWRA undertook the first ever industry-wide pay equity survey among resource employers. When HR personnel were asked if their organisation had a formal policy or strategy for remuneration, 52% said yes, 48% said no.

That’s about half that don’t have a pay equity survey. Some felt restricted for various reasons or were in the process of implementing a strategy, while others didn’t have the in-house capability or felt it wasn’t essential.

Significantly, 59% did not have specific targets or goals to ensure pay equity.

These statistics don't paint the most optimistic picture, but this is a journey. Remember - the industry's female participation rate is sitting at just 15% - we have plenty of work ahead of us.

### SLIDE 28: AWRA E-MENTORING

One of the stand-out programs under the AWRA banner and one we are very proud of is our innovative e-Mentoring Program, launched in 2013 to support the career development of women in resources.

Many resource organisations have very successful in-house mentoring programs, but in our industry, it is not unusual for a woman to be the only, or one of just a few women working on a mine site or oil rig.

This work is also characterised by non-traditional work hours and rosters so on-site, face-to-face mentoring arrangements are near impossible for these women.

The AWRA e-Mentoring Program matches a female mentee with an experienced male or female mentor, anywhere in the country, location is not an issue.

It facilitates a nine-month online mentoring relationship using its own online software, internet-based communication like Skype and of course, the humble telephone.

More than 150 professionals have been connected through the AWRA e-Mentoring Program including the two people on screen.

Shauna is a geological database engineer who spends a lot of time on a mine site in mid-west WA, while Scott is a commercial manager working in Sydney.

Shauna was particularly looking for a mentor to help with strategies to build her confidence and develop pathways to achieve career goals. Scott was matched due to his diverse professional history and mentoring experience.

Last month, the federal government announced it will continue joint-funding the e-Mentoring Program for another two years, also giving us broader scope to target demographics of women which are particularly under-represented, such as Indigenous women and recently qualified trades and technical graduates.

### SLIDE 29: AWRA RECOGNISED

Finally, I touched on AWRA Recognised earlier when talking about Farstad Shipping.

On screen are the AWRA Recognised™ stamps, which indicate an organisation's commitment and development towards a gender diverse workforce.

To be able to utilise an AWRA stamp, organisations undergo an assessment of their workplace policies, procedures and, most importantly practices, to assess the

organisation's *capability maturity* against best practice management of workplace gender diversity.

The assessment outcome provides concise feedback on the organisation's current diversity strategy, and assists to plan the changes necessary.

Although this is still a relatively new program, it is one that has gotten off to a really promising start, with a number of organisations approaching us to take part. We are very excited about where it will lead.

Importantly it encourages organisations to look at areas they may be neglecting and provides steps on how to address shortfalls. It raises awareness about why, as just one example, a gender pay gap analysis would be beneficial.

### SLIDE 30: WRAP-UP & CONCLUSION

Thank you for listening to my presentation today.

Due to the broad-ranging nature of the content, I did have to skim over some very complex areas of workforce and skills challenges in our industry.

If any of you are interested in discussing some of these areas in more detail or learning about our work in assisting resource employers through our industry's transition, please don't hesitate to get in contact with me at AMMA.

If I could have given any key takeouts from my presentation, it would be that:

1) Resource industry construction employment is set to sharply decline from almost 119,000 workers to just 28,900 by 2018, meaning our industry and our nation must both maximise any future growth opportunities, while also managing the transition of skills back into residential construction.

2) While mining operations employment will grow modestly, our skilled oil and gas production workforce will increase from about 39,000 jobs to more than 61,000 by 2018. This presents a very real and unprecedented skills challenge for Australia.

3) And finally, connecting with all skills and talent pools in our broader community is essential for the future of our resource industry workforce. One key area of this is addressing our industry's poor female participation rates, and all sub-sectors of our industry are tackling the challenge.

Thank you and good afternoon.