

## Chapter 4 — Factors affecting participation

4.1 A multi-faceted domestic goods and services capability has grown up around the development of Australia's oil and gas industry.<sup>1</sup> This support industry has matured, particularly over the last ten years, as shown by firms increasingly becoming internationally competitive. Characteristics of such firms are to be found later in the chapter (see p 54).

4.2 Participation by local industry is affected by:

- price, timeliness and quality;
- communication;
- international specifications and standards;
- design;
- employment and personnel issues;
- industrial relations;
- characteristics of local firms;
- availability of heavy engineering facilities (see Chapter 5);
- government activities; and
- overseas practices.

4.3 Major industry trends may also have a profound effect on local industry participation. These are discussed in Chapter 5.

### Price, timeliness and quality

4.4 The majority of persons and organisations which gave evidence to the Committee contended that a combination of price, timeliness and quality, and not mandated local content levels, should be the sole basis on which contracts are awarded.

4.5 Involvement in the NWS project has required and resulted in 'quantum leaps' in quality control and management practices from local firms. These enhancements are diffused through industry by personnel movement and other means.

4.6 Quality systems and quality goods are key elements in successful competition in this industry. Accreditation is an indicator of the implementation of quality systems, and, although not mandatory at this time, in the future a supplier's

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1 Hardcastle & Richards: *Review of the export potential of the Australian oil and gas equipment and services industry*, Perth, 1995, (Hardcastle), p 14. Appendix II of that report gives lists of such companies and their products.

lack of accreditation may render it ineligible to tender.<sup>2</sup> This is particularly relevant to firms seeking export markets. One witness stated that an Industrial Supplies Office (ISO) or other recognised accreditation does not guarantee a firm more work and indicated that his company carried out its own assessment of the quality of subcontractors' work.<sup>3</sup>

4.7 The Committee did not receive evidence indicating that quality of locally-produced goods is now an issue. However reference was made to the necessity to do remedial work on some equipment brought in from Asia.<sup>4</sup> Woodside acknowledged difficulties with the quality of South Korean work on Goodwyn A platform (GWA) processing modules, but stated that the cost of remedial work carried out at Jervoise Bay was 'relatively minor'. Woodside estimated that, even considering the premium paid for accelerating work on the jacket, it saved 30% of the estimated cost of local construction of the GWA jacket and modules.<sup>5</sup>

4.8 The 1989 IST Committee report noted that late delivery was an impediment to local industry being awarded work. It also noted some early completion of work. The present Committee is pleased to note Woodside's evidence of a reversal: during phase III deliveries of overseas goods were invariably late and Australian manufacturers had on a number of occasions outperformed their overseas competitors in terms of price and completion date.<sup>6</sup>

4.9 Aside from these successes, price could be a considerable disadvantage for Australian companies. In 1991, the Industry Commission reported construction costs as higher in Australia because of the high price of basic building materials and labour compared to overseas but this may be offset by increased productivity, for example, skill acquisition and management practices.<sup>7</sup> In 1993, the Australian Manufacturing Council, while agreeing price was an essential ingredient in competitiveness, stated that cost does not of itself provide a sufficient edge.<sup>8</sup> Woodside's evidence to the Committee confirmed that there is some latitude given to the cost factor where it perceives a future benefit as more important, for example, ease of access for maintenance.

## Communication

4.10 It became apparent early in the life of the NWS project that systems had to be developed to alert developers to the capabilities of Australian firms; to let firms

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2 Houston, B, Woodside: Tendering and purchasing processes, address at the seminar/workshop to review the Dench McClean report on the supply of goods and services to petroleum development projects, Melbourne, November 1993, p 2 (one of the papers contained in exhibit 13)

3 Harris, J, General Manager, Commercial and Business Development, United Construction: *Transcript of evidence*, pp 8 – 9

4 Ferguson, J, AMWU: *Transcript of evidence*, p 85

5 Woodside: submission 23, pp 29 – 30 and submission 23.02, p 2

6 Woodside: submission 23, p 29

7 Industry Commission: *Construction costs of major projects*, March 1991

8 Australian Manufacturing Council: *Emerging exporters*, (McKinsey report), 1993, p 19

know what plans, especially for major works, are in the offing and enable them to marshal a suitable workforce to be able to bid for that work. Early information allows Australian firms to invest in new technology or make arrangements for technology transfer or manufacture-under-licence.

4.11 Although lead times from exploration to capital investment can be two to three years for a small project and up to eight years for a large project, the interval between tenders being let and work commencing is brief. Woodside stated that it is not usual practice in the international arena for there to be a lengthy period before tenders close. Information flows are therefore critical to maximising industry participation.

4.12 Woodside stated that it gave potential tenderers for GWA fabrication 18 months warning to help them bid for work. After that experience, it had instituted a seminar program before tenders involving major work:

*... before we get involved in any major expansion we have in the past, and will do in the future, called a briefing for industry of what we intend to do. We have done that a number of times in the past preceding significant expansion. We also keep the Industrial Supplies Office apprised of what we are doing. We are aware that their practice is to keep the potential supply industry informed of what our plans are so that they are put in the best position possible to be able to respond ...<sup>9</sup>*

4.13 The Committee is aware that briefing sessions have also been held for projects developed by ESSO and BHP Petroleum.<sup>10</sup> The aim of these sessions is to ensure all potential tenderers are provided with equal information in a timely manner and that invitations to tender are under the same terms, standards and conditions.

4.14 Attendance at these briefings is even more important with the downsizing of industry management and the consequent reduction in the ability of suppliers to seek out other local firms with relevant capability. Downsizing of industry management has also created difficulty for the ISO in collecting and disseminating information, a vital part of its role given the trend towards an increase in the size of tender packages.<sup>11</sup>

4.15 While it may not be advisable for developers to identify, just for manufacturers' benefit, specific project needs at the 'drawing board' stage, it should be reasonable for developers to keep industry informed of major trends in

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9 Agostini, D, Woodside: *Transcript of evidence*, p 63

10 Turner, J, APPEA: Opening address at the seminar/ workshop to review the Dench McClean report on the supply of goods and services to petroleum development projects, Melbourne, November 1993, p 3 (one of the papers contained in exhibit 13)

11 Chamber of Commerce and Industry of Western Australia: submission 7, p 3

their needs. Equally it behoves suppliers to be proactive in seeking out and acting on this kind of information.

4.16 The Committee also received evidence relating to ad hoc discussions between unsuccessful tenderers and either officers of the Department of Resources Development or Woodside. It would be beneficial to all parties for such discussions to be held regularly and that developers should offer a detailed debriefing as a matter of course.

### **Industrial Supplies Office**

4.17 In the 1989 report, the IST Committee reported that Woodside was reluctant to use the services of the Industrial Supplies Office (ISO), stating that it 'just did not require whatever the ISO could have done for' it.<sup>12</sup> The Committee considered Woodside's argument, that certain goods and services were not obtainable in Australia, would have been strengthened if it had used the ISO to come up with the same view of the lack of capability.

4.18 The Committee is pleased to note Woodside's change in attitude towards the benefits of using the ISO's services in terms of furthering local content:

*Woodside gave a commitment some time ago to utilise the facilities of the Industrial Supplies Office in Western Australia and nationally as a means of getting information out to the supply side of the industry. We do that. In fact, in recent times we have increased the number of resources that we are putting into that communication exercise.<sup>13</sup>*

4.19 Recently the State based ISOs have developed a more nationally-focused approach to increasing industry participation. The ISO of WA, under the aegis of that State's Chamber of Commerce and Industry, has targeted personnel involved in day-to-day decisions on purchasing. It is also playing a significant role through its development of an extensive capability database, for which DIST has recently agreed to contribute \$250 000.

4.20 The 1997–98 Federal Budget saw the announcement of the Supplier Access to Major Projects (SAMP) program. This program creates a formal link between the resources of the ISO network and a project's designation as a major project. It aims to increase opportunities for local firms to supply projects designated by the Minister for Industry, Science and Tourism as major projects. The program is expected to work in a similar manner to the three – person unit operating successfully in the WA bureaucracy. Across Australia, SAMP will fund the equivalent of five fulltime ISO specialists, who are expected to have input into

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12 1989 IST report, p 56

13 Wedgwood, G, Corporate Affairs Manager, Woodside: *Transcript of evidence*, pp 63 – 64.

20 projects in each of the next four years. These specialists will be chosen according to project – related expertise and knowledge of how ISO works. They will be assigned after the project is approved by the ISO Board.

4.21 These developments are particularly important given concerns expressed by smaller companies about the trends towards larger project packages and alliance arrangements. The ISO regards these trends as having the potential to deliver to suppliers reduced costs, certainty of future workload and capital investment.

4.22 In a 1997 review of business programs, Mortimer found that the organisation addressed an information gap in the ability of purchasers to identify local suppliers and as such considered that the organisation assisted investment activity.<sup>14</sup> The Committee received evidence that the WA Industrial Supplies Office was effective at increasing local industry participation *when it was consulted*. This is a very important proviso, given the trend by developers towards outsourcing of the engineering/ procurement/ construction/ management functions (EPCM) to large (overseas) firms and their subsequent sub-contracting to firms with which they have existing alliances or where vertical integration is a factor. This trend neatly cuts out any input the ISO might have had to maximise local content. (For an example of this see details of the Laminaria project in Chapter 5).

#### 4.23 Recommendation 4.1

**The Committee recommends that the Department of Industry, Science and Tourism conduct a regular marketing exercise to promote the activities of the Industrial Supplies Office and, in particular, its database of national industry capabilities established in January 1998.**

#### 4.24 Recommendation 4.2

**The Committee recommends that the Federal Government ensure that the Industrial Supplies Office aims, activities and achievements are regularly reviewed and that it is supplied with the resources it requires to maintain its capability database and its proactive role in promoting Australian industry involvement in major projects.**

#### Industry associations and bodies

4.25 The downsizing of many firms has affected their ability to gather intelligence about forthcoming projects and to lobby government agencies and petroleum developers. Industry associations and industry bodies can play an important role in gathering and disseminating such information and promoting the capability of local firms to developers, ISOs and government.

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14 Mortimer, D: *Going for growth*, June 1997, p 94

4.26 Such bodies can also strengthen linkages between firms and provide advice on matters such as industrial relations and market research. The role may include advice on export opportunities in concert with relevant business units of government agencies.

4.27 The Committee received evidence that firms are not sufficiently active in marketing themselves, that they expect work to 'fall into their laps'. Greater efforts are needed from firms to bring local capability and capacity to the attention of petroleum companies' management. This may require contact at various levels to minimise the effect of staff movements. Notwithstanding the downsizing of supply firms and peak bodies, it would appear a sensible strategy to make this contact, given that this is where many purchasing decisions are made. Hardcastle, a consultant who reviewed the Australian oil and gas equipment and service industry, stated that close to 70% of purchasing decisions are made by the developer's local office.<sup>15</sup> As reported previously, developers now have seminars specifically for major new work, so networking opportunities are available.

#### 4.28 Recommendation 4.3

**The Committee recommends that the Minister for Industry, Science and Tourism review in the next 12 months with industry associations and bodies the level of their involvement in:**

- **gathering and disseminating information about major projects;**
- **promoting the capabilities of their member firms to developers and the Industrial Supplies Office; and**
- **building linkages,**

**with a view to expanding the capability of such bodies in carrying out these activities.**

## Specifications and standards

4.29 In the beginning of the NWS project, Woodside used the international specifications of its technical adviser, Shell. This caused local industry to feel excluded from a reasonable opportunity to compete because of their unfamiliarity with these standards and lack of compatibility with local machinery et cetera. The difficulty with local industry was partly ameliorated by Woodside sending Australian personnel to The Hague to 'australianise' Shell's specifications.

4.30 Section 12(1) of the *North West Gas Development (Woodside) Agreement Act 1979* provides that:

*... when preparing specifications, calling for tenders and letting contracts for works, materials, plant equipment and supplies ensure that Western Australian*

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15 Hardcastle, p 70

*suppliers, manufacturers and contractors are given reasonable opportunity to tender or quote.*

4.31 Local content policies enunciated since then at the two levels of government also clearly state that developers should give a fair and equitable opportunity to internationally competitive local suppliers (see Chapter 3, Federal and WA governments' policies). However, local firms continue to feel that it is an impost to express standards in international rather than Australian terms. As stated in APPEA's code of practice, developers operate in the international context and feel that if local companies are to be internationally competitive in bidding for local, or indeed for overseas work, they need to become familiar with relevant international specifications and standards.

4.32 Differences in standards between Australian jurisdictions (and between countries) complicate construction, increase costs without apparent benefit and have prevented local industry maximising its opportunities. While the Committee viewed the August 1997 announcement of an in-principal agreement by relevant State and Federal Ministers towards implementation of a national construction industry building code as a step forward, this agreement covers only some of the standards applicable to the oil and gas industry.<sup>16</sup>

4.33 Persistence in using non-internationally recognised standards by Australian firms who tender for domestic or overseas petroleum contracts may be considered a barrier to local industry growth. It may be appropriate for Australian governments and peak industry bodies to undertake a review of this matter.

#### 4.34 **Recommendation 4.4**

**The Committee recommends that the Federal Government vigorously pursue with State Governments the establishment of construction industry standards across Australia to conform with internationally accepted standards, to the maximum extent possible.**

#### 4.35 **Recommendation 4.5**

**The Committee recommends that the Federal Government continue to pursue in international forums the harmonisation of petroleum industry standards and contract specifications.**

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16 Australian Maritime Industries and Sciences Council: *Marine Industry Development Strategy*, January 1997, p 27 and DIST: *Annual Report 1996-97*, pp 32 – 33. This building code is based on performance: firms are free to use any material or technique which will meet the required standard. The building code does not apply to offshore structures.

## Design

4.36 The 1989 report by the IST Committee noted that project management and design are crucial to increasing Australian industry participation ‘as it is in these areas that specifications, standards, scheduling and tender procedures are determined’.<sup>17</sup>

4.37 Evidence to the current inquiry indicated design is a key access point for local industry participation:

*There is a lot of technological change, there is a lot of activity in areas like modularisation, there is a lot of impact coming from the internet, for instance: design work that might have been done here ... is possibly done in India and put on the internet, and it is here for the cost of a local phone call. There are a lot of technological changes in the heavy fabrication area, in the design area, in the consultancy area, in equity and participation in projects, in alliancing for projects.*<sup>18</sup>

4.38 Although the Committee did not receive evidence relating to use of the internet to any great degree, it believes that it is inevitable that design will commonly be delivered in this manner.

4.39 In evidence to the Committee, the Institution of Engineers stated:

*The major drawback in engineering an Australian project from the offices of an overseas-based contractor with non-Australian engineering personnel is the unfamiliarity of the persons involved with Australian manufacturing capabilities. Time and/or distance make it difficult for Australian suppliers to actively promote their capabilities.*<sup>19</sup>

4.40 If developers are serious in their assertions of commitment to allowing domestic firms to have every opportunity to participate, they should develop procedures to alert any overseas design contractors, or indeed domestic designers, to their own and governmental expectations that Australian firms be given full and fair opportunities to perform construction and fabrication work, et cetera.

4.41 The Committee has viewed with some interest recent media reports on the \$1.25 billion development of the Laminaria and Corallina oil fields near Darwin. The engineering, procurement, construction and management (EPCM) contract

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17 1989 IST report, p 46

18 Suttie, G, DRD: *Transcript of evidence*, p 44

19 Institution of Engineers: submission 18, p D1

has been assigned to Kvaerner, a Norwegian company.<sup>20</sup> This company took over Davy John Brown, an Australian firm which has long been associated with the domestic petroleum industry. An important issue is: will this be counted as local content?

4.42 Design work for the next three years for systems to produce these fields will be carried out by Kvaerner. The Committee has been informed that personnel from United Constructions, another Australian firm having a long association with the local petroleum supply industry, have been sent to Norway by Woodside to ensure the design staff are sensitive to a positive outcome for Australian content levels. The Committee takes this to mean that the outcome will be specifications and standards which will enable Australian firms to participate in tender processes.<sup>21</sup>

4.43 Nevertheless, the Committee believes it to be naive to leave this important matter to developers' personnel, who may be overseas secondees unaware of Australian capability, keen to continue using the overseas suppliers they are familiar with or middle level purchasers unaware of governments' expectations.

4.44 DIST must play an active role in developing, implementing and then monitoring a mechanism to ensure overseas designers are aware of Australian industry capability. The Committee does not agree with the view that this amounts to intervention in commercial matters: it is merely a proper role of bureaucracy to inform participants of the government's expectations.

4.45 In assessing the goods and services provided to the oil and gas industry, the Hardcastle report found that the most successful services are those of the engineering design firms. Success was measured by design contracts won by Australian designers in Australian firms for Southeast Asian facilities. It went on to state that this success could be built on by the provision of an expert service to increase participation in opportunities in Southeast Asia and the Middle East by facilitating cooperative arrangements between Australian designers.<sup>22</sup>

#### 4.46 Recommendation 4.6

**The Committee recommends that Austrade provide expertise and information services to facilitate participation in petroleum development opportunities in Southeast Asia and the Middle East by Australian design firms.**

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20 This contract now includes management of the hull design and construction contracts which was awarded by Woodside without a tender process to Samsung, South Korea in late 1996.

21 Further discussion of this development with respect to the effect of alliances may be found in Chapter 5.

22 Hardcastle, p 17

## Post – phase III opportunities

4.47 The majority of literature on the NWS deals with local industry participation in the capital works for the first three phases. Attention needs to be given to planning for the work which will result from ageing equipment, the need for refits and so on. In terms of the domestic market, it is the high value long term maintenance and support contracts which sustain parts of the industry between construction phases. The WA Government's 1992 white paper on Australian industry participation predicted \$10 billion would be spent for ongoing procurement over the first 20 years of the project's life.<sup>23</sup>

4.48 In general the supplier of basic components for work determines who carries out this work. This reinforces the need for local industry involvement at the earliest stage of a project to ensure it has the ability to perform later work.

4.49 As stated elsewhere, it is suppliers' responsibility to promote to developers local industry capabilities.

## Employment

4.50 The traditional wisdom is that the Western Australian economy has shown high employment growth during its periods of major capital investment in resources development. The Clements report rejected this view: it predicted the order of job generation to be just 6 000 during a 'typical' construction year but that it would rise to 80 080 jobs in the production stage each 'typical' year throughout Australia.<sup>24</sup> However, as noted in Chapter 1, the latter employment figure appears to have been revised down to 60 000.<sup>25</sup> The emerging trends towards offshore processing methods and developers' alliances with preferred overseas firms would be expected to further decrease employment prospects.

4.51 Clements noted that, although the NWS project enhances the productivity of the economy, it does so by *reallocating* jobs rather than creating new ones.<sup>26</sup> The report stated that most of the jobs were located in WA:

*Job creation in WA exceeds that for Australia as a whole reflecting job losses in other export-oriented states (such as Queensland and NSW) because of the higher exchange rate resulting from project exports.<sup>27</sup>*

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23 WA Government: *Australian industry participation in major mining and energy projects*, White Paper dated December 1992 (exhibit 17)

24 Exhibit 10, pp 69 - 70

25 Woodside: NWS project internet page, as at September 1997

26 Exhibit 10, p 69

27 Exhibit 10, pp xv – xvi

## Skill shortages

4.52 The ability of firms to deliver goods and services to the oil and gas industry and to survive in the longer term is dependent on their ability to recruit and retain people with appropriate skills and a willingness to look beyond the domestic market for contracts. The intermittent nature of large scale construction has historically been a problem:

*One of the big difficulties that we have at the moment is that we do not know where the people are who worked on the John Holland job two and a bit years ago. Certainly, they have not been exposed to the state of the art technologies, because there has been no continuity of the work. We have to bear in mind that it is not just the work. It is the technology transfers that take place and the capacity to keep your work force at peak, which is all part of this as well. If we are going to remain truly competitive, it is going to be a skills equation as well.<sup>28</sup>*

4.53 A peak in employment is expected in 1998, with expansion of this project. Together with the number of projects unrelated to the oil and gas sector, there will be considerable pressure on meeting needs:

*With a large number of development projects, including downstream processing projects currently on the drawing board in Western Australia, there is likely to emerge a disparity between the local demand and the available supply of professional engineering and fabrication trade resource skills. In order to ensure reliable access to the required skills, some engineering and fabrication work may have to be performed outside Western Australia or, for that matter, even Australia.<sup>29</sup>*

4.54 Although current requirements for skilled labour are being met, there was broad agreement that labour shortages are expected during 1998.

*On the skills shortage front, it does depend quite significantly on the number of projects that are in operation simultaneously with any development that Woodside may be going into in an expansion sense. If there are a number of developments occurring simultaneously, I doubt very seriously that the local*

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28 Cooke, T, Secretary, WA Trades and Labour Council: *Transcript of evidence*, p 83  
29 Agostini, D, Woodside: *Transcript of evidence*, p 61

*market can supply either the engineering skills or the trade skills to meet them.*<sup>30</sup>

4.55 Several witnesses made reference to the Worley report on the labour situation, and in particular, predicted labour shortages for upcoming work.<sup>31</sup> An update of this report in 1997 encompassed the design, construction and operational stages of resource development projects. It found that:

*The surge in resource development and construction projects identified from [the 1996 study] appears to have flattened out, yielding a lower peak, but more sustained additional demand for skills in ... management, engineering, drafting and trades. [The 1997 update found] the peak labour demand expected to be generated from committed and likely projects will be for an additional 6 000 — 7 000 persons during the years 1998 to 2000.*<sup>32</sup>

4.56 It then discussed the ease with which these skill requirements could be met, largely in isolation from projects commencing in other States. It stated that:

*While some of these additional skill requirements will be relatively easy to meet, a number of these have the potential to severely affect the quality, cost and timing of the projects and specific strategies should be developed urgently to minimise any effect. **If this is not done, one other real possibility is that the design, management and/ or fabrication will be done outside Australia.***<sup>33</sup>

4.57 In particular, the report identified as most urgent the need for the following:

- designers with 5 – 10 years experience;
- engineers with 10 – 15 years experience;
- dual ticketed instrument/ electrical tradesmen;
- boilermakers and coded pipe and plate welders; and
- mechanical fitter and plant/ process operator.

4.58 In the first two categories, considerable experience is a requirement: it will not be possible to meet the demand in the timeframe by training. Some may come

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30 Agostini, D, Woodside: *Transcript of evidence*, p 63

31 Worley Ltd: *Skill requirements of WA resource development projects — Executive summary*, dated 13.5.96

32 Worley Ltd: *Skill requirements of WA resource development projects — Executive summary*, dated 21.2.97, (Worley 1997), p 17

33 Worley 1997, p 17 (author's own emphasis)

from interstate migration and the remainder from persons entering Australia on skilled specialist temporary residence visas.

4.59 All relevant government agencies (State and Federal), developers and other bodies should consider the strategies required to fill the demand for each type of skilled employee and develop an overall system for avoiding impediments to industry participation.

4.60 A range of strategies should be implemented including increased training provision in high demand skill areas, accelerated trade training and skills upgrading programs and the promotion of apprenticeships and traineeships.

4.61 Industry can no longer expect to hire skills that have been paid for by someone else. Traditionally the publicly-run utilities have provided this training ground; but with considerable downsizing this source is drying up. It is reasonable for industry to expect to employ a workforce equipped with the basic skills on which the specialist knowledge can be built but also for industry to pay for the training needed.

4.62 In the longer term, closer links need to be developed between industry and the education system, to ensure that not only are gaps forecast, but that steps are taken to fill them before they become impediments to major projects.

#### 4.63 **Recommendation 4.7**

**The Committee recommends that the Minister for Schools, Vocational Education and Training pursue through the Ministerial Council the provision of sufficient skills training in Australia to meet the projected needs of the oil and gas industry.**

#### **Overseas recruitment**

4.64 The 1989 report on the NWS expressed concern about the number of key positions, which were occupied by overseas project managers. The staff occupying such positions are crucial to increasing local industry participation. The Committee's concern then was that these managers did not have a sufficient knowledge of local capability and capacity and therefore tended to use established international suppliers with whom they were familiar.<sup>34</sup> Where overseas staff perform design work, it has the potential to decrease local content levels throughout the project life, including the provision of plant and capital equipment, and with maintenance and refit work.

4.65 Such views were presented during the 1996 – 97 inquiry as well:

*In one case cited in a submission received by the Institution, for other disciplines, such as piping design*

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34 McLachlan, D, Chairman, ISONET: *Transcript of evidence*, pp 149 and 150

*and insulation, American (Contractor) and Dutch (Client) expatriates were first utilised in the Yokohama design office, because of the supposed need for 'previous LNG experience', then later transferred to Perth or Karratha because, of course, they were now 'intimately familiar with the project'. In some instances, expatriate engineers were permitted entry into Australia in the latter stages of the NWS on the grounds that their specialist knowledge was required, which may well have been true at the time. Later, however, their role became more general, and their position in the project more senior.<sup>35</sup>*

4.66 It would appear to the Committee quite logical and beneficial from the point of view of developers that personnel involved in design should follow through to the site and that such experience would lead to a more senior position in the project.

4.67 The Institution of Engineers stated:

*By not aggressively promoting Australian engineers (even as understudies) to fill slots in the early phases of the NWS LNG project, the future necessity for utilising expatriate engineers in extensions to the existing plant, or another grassroots facility in the same area, has been guaranteed.<sup>36</sup>*

4.68 This ignores the spin-off benefits to local industry of the most recent adaptations of technology which overseas personnel can bring and integrate into the local industry. It also does not sit well with evidence given by the Institution that local engineers are reluctant to fill positions in remote locations:

*There is a problem with attracting senior engineers to remote sites for extended periods (1– 4 years) for a variety of reasons. Remoteness from family, limited education, professional isolation, and limited opportunities for partner to work are reasons given.<sup>37</sup>*

4.69 The Committee attempted to discover whether this is a sizeable and still existing problem. The Allen report claimed that the number of overseas engineers employed remained static at approximately 2.3% of the project workforce from 1989 to 1992, when the report was published. The Department of Immigration and Multicultural Affairs (DIMA) records do not give figures on the extent of temporary entry of personnel for the NWS project. However, as a guide, 8 590 temporary entry visas were issued Australia – wide in the specialist category

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35 Institution of Engineers: submission 18, p D1

36 Institution of Engineers: submission 18, p D1

37 Institution of Engineers: submission 18, p D2

(which covers employers' requirements for trade, technical or professional persons) in 1994–95.<sup>38</sup>

4.70 Where demand for skills and experience cannot be met in the timeframe and to the required level of expertise, arrangements have been put in place between DIMA and DEETYA to check requests from sponsoring firms. These ensure appropriate applications for temporary residence visas in the specialist skill category are fast-tracked so that impediments to major projects are avoided.

4.71 The Committee believes there may be merit in seeking the assistance of industry as assessors to ensure a match between the needs of the project and the applicant.

4.72 The Committee concludes that the use of overseas personnel assists technology and skills transfer and should not be considered as a barrier to local industry participation in major projects.

### **Project management skills**

4.73 The Committee notes that the complex and intermittent nature of major projects in Australia has provided limited opportunities for acquiring project management skills and that the Industry Commission<sup>39</sup> reported this as a widespread problem across industry:

*The final level of impediment is at management level in local participant corporations. If the Australian corporation has not been involved in world scale projects before or not for a period of time it is unlikely to have at the key project management level adequately experienced staff .... There is a learning curve both for such staff and organisations that is costly not only for the corporation itself but also to the economy as a result of the quality of decisions made affecting local industry.<sup>40</sup>*

4.74 The problem of lack of experience can be addressed to some extent by companies' existing staff rotation policies, and personnel themselves seeking opportunities to obtain management experience overseas, which has the spin off effect of promoting technology transfer.

4.75 There is evidence that the tertiary education sector, and in particular, engineering, has been slow to adapt to industry requirements. The Committee notes changes are slowly being made to improve the ability to compete for jobs which increasingly require management skills.

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38 Department of Immigration and Multicultural Affairs: Factsheet 7 — *Temporary residence in Australia*, revised 11.3.96.

39 Industry Commission: *Construction costs of major projects*, March 1991, pp 29 – 30

40 Project Development Consultants: submission 3.01, p 2

#### 4.76 Recommendation 4.8

**The Committee recommends that the Federal Government encourage closer links between industry associations and bodies and the tertiary education sector to facilitate more rapid forecasting of, and response to, changing industry needs.**

#### 4.77 Recommendation 4.9

**The Committee recommends that the Federal Government sponsor a system of overseas secondments to petroleum companies to assist young Australian graduates to acquire the experience required by Australian industry.**

4.78 The Mortimer review stated that firms engaging in three or more management improvement programs had significantly superior performance to non-participants.<sup>41</sup> Although Government programs exist to address this gap in skills, the review suggested that the programs did not match what firms require. The Committee suggests that the appropriateness of alternate service delivery methods be investigated in the wider context of reforms suggested by Mortimer (see Chapter 3).

#### 4.79 Recommendation 4.10

**The Committee recommends that the Federal Government review within 12 months the delivery of skills training aimed at improving the performance of firms and investigate the appropriateness of alternative delivery methods.**

## Industrial relations

4.80 Fluctuations in construction activity and the temporary nature of construction sites have traditionally encouraged an adversarial approach to industrial relations.

4.81 An oft-cited example is the construction of the Goodwyn A platform (GWA) at Jervoise Bay in Western Australia. It was the source of considerable controversy, and has already been fully discussed in a number of reports.<sup>42</sup> The Committee does not intend to revisit that evidence to any great degree. It was lauded by some as an example of Australian industry proficiency in design, engineering and construction. Woodside's comments, on the other hand, dwell on difficulties caused by the lack of effective enforceability of industrial agreements, which it says were largely to blame for problems with construction of the platform.

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41 Mortimer, D: *Going for growth*, p 115

42 For examples, see footnotes at p 42 of the 1989 IST report

4.82 The lack of a steady, skilled workforce and the historical industrial relations difficulties at Jervoise Bay have been identified as major problems by a broad range of organisations. As the Trades and Labour Council stated:

*It is really a case of overcoming this project based mentality, where you struggle to get a project and there is no prospect of you getting another on any sort of continuing basis, because each time you do get a project you have to put in new infrastructure, a new work force and new management. And when the project is finished, all of it goes to waste in terms of the skills that have been accumulated on that project.<sup>43</sup>*

4.83 Woodside also stressed the importance to local industry participation rates of an improved industrial relations record:

*... the industrial relations issue ... has the potential not only to make projects fail to cross the threshold but also to drive work overseas. It has the potential, for instance, to have people thinking of building equipment in modules overseas and bringing those modules in, as opposed to putting it together here locally, to try to escape that problem. Reform in that area would be fairly important, if we were going to achieve the objectives that you are aiming at.<sup>44</sup>*

4.84 On the other hand, evidence was presented that contracts awarded to South Korean firms had also suffered quality problems and industrial relations discord.<sup>45</sup>

4.85 The WA union movement stated it has recognised the need for a ‘culture change’ from the ‘construction mentality’ if it is to play its part in preventing more work from going overseas.<sup>46</sup>

4.86 It was suggested to the Committee that development of an integrated site with a permanent and skilled workforce would lead to greater productivity. However, APPEA also observed that the success of this option would depend on firms tendering for a diverse range of work rather than relying on domestic oil- and gas- related construction (see also section on a marine heavy engineering facility in Chapter 5).

4.87 Significant benefits may result from changes to work practices, union amalgamation, more flexible workplace arrangements and the Workplace Relations Act. The benefit to all parties of an improved industrial environment

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43 Cooke, T, TLC: *Transcript of evidence*, p 87

44 Agostini, D, Woodside: *Transcript of evidence*, p 76

45 Ferguson, J, AMWU and Cooke, T, TLC: *Transcript of evidence*, pp 84 and 85. Noted in passing in DRD submission 33.01, p 6

46 Ferguson, J, AMWU and Cooke, T, TLC: *Transcript of evidence*, pp 80 and 81

would be a sustainable and modern support industry for the resource sector and Australian industry as a whole.

## Characteristics of local firms

4.88 The Dench McClean report and the Hardcastle report list size of local companies as a factor influencing participation in major projects and long term viability.<sup>47</sup> Evidence was received which related to the number of firms which have become defunct over the last few years.

4.89 It was suggested to the Committee that some of the firms which have collapsed may not have been viable to start with, that is, they were propped up by the project and they failed to take into consideration the intermittent nature of the oil and gas industry and therefore the need to diversify. It was also suggested that those companies which have thrived have done so because they are market-oriented, have been prepared to form cooperative 'alliances' to take on work for which each has expertise and have become internationally competitive.

4.90 The Hardcastle report stated that domestic companies providing goods and services to the Australian oil and gas industry typically:

- achieved total sales greater than \$20 million per annum, including export sales of less than \$1 million;
- employed more than 100 people;
- had no overseas ownership;
- were dominated in the goods area by the heavy engineering and fabrication sector, which produce many goods that could be readily exported as a result of superior quality and efficiency of manufacture;
- were dominated in the services area by engineering design services; and
- were more likely to be successful if they became approval-listed by developers.<sup>48</sup>

4.91 Small to medium size firms can be successful in filling niche markets; however, depending for survival on local niche markets which are intermittent is a dangerous strategy. The experience gained must be used to build export sales. The building of cooperative arrangements would help small firms achieve critical mass.

4.92 The same handful of major developers operate throughout the Australian region, and a satisfactory performance increases the likelihood that a firm will be

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47 Dench McClean Associates: *A study of the supply of goods and services to meet the scientific and technical requirements of petroleum development projects*, Melbourne, 1993 (exhibit 12), p 13

Hardcastle & Richards: *Review of the export potential of the Australian oil and gas equipment and services industry*, Perth, 1995

48 Hardcastle, p 5

invited to tender on other occasions. The development of a successful relationship between these firms could be used as a springboard to provide contacts for further work both domestically and internationally.

### **Risk and cooperative arrangements**<sup>49</sup>

4.93 Woodside argued that if international trends are followed here, alliance arrangements will increase.<sup>50</sup> These arrangements are necessary to spread the risk of work undertaken in the oil and gas industry. Woodside stated that there is a:

*need for contractors and suppliers to accept arrangements that provide increased reward with commensurate higher risk, whilst having an incentive for continuing strategic roles with operators.*<sup>51</sup>

4.94 The solution proposed by Woodside to industry's concerns was for local suppliers to establish cooperative arrangements for the scale of the developments planned, prior to the developer finalising the contracting strategy. Although Woodside conceded that pursuing such arrangements can have difficulties, it cited advantages in terms of reduced costs and maximised returns to the parties involved.

4.95 Woodside has in the past provided assistance with alliance arrangements to Australian companies where new technology was involved. It gave as an example the award of an integrated technical services contract in the form of an alliance or joint venture of two Australian contractors, to carry out exclusive ongoing engineering and maintenance services at both its onshore and offshore facilities. It stated:

*The lead-time necessary to establish potential alliancing partners and to resolve issues of scope and responsibility for this major long-term contract was substantial and has implications for the future use of such arrangements.*<sup>52</sup>

4.96 A 1995 Bureau of Industry Economics (BIE) report stated that firms without cooperative arrangements formed a substantial proportion of Australian industry. It stated that while not necessarily a failing, not forming cooperative arrangements may result in lost opportunities.<sup>53</sup> This suggests there is some validity to comments previously made about the ability and willingness of Australian firms to tender for large contracts.

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49 In this report the terms: alliances, joint ventures, partnerships and cooperative arrangements are used synonymously.

50 Woodside: submission 23, p 41

51 Woodside: submission 23, p 43

52 Woodside: submission 23, p 42

53 Bureau of Industry Economics: *Beyond the firm — an assessment of business linkages and networks in Australia*, AGPS, 1995 (BIE), p 53

4.97 The BIE report discussed a number of government policies and programs aimed at increasing inter-firm cooperation and found they are not reaching or affecting these firms.<sup>54</sup> The BIE report suggested the provision of a largely self funded consultancy service to assist targeted firms to realise the benefits of forming cooperative arrangements.<sup>55</sup>

4.98 The Committee believes more assistance could be provided by existing industry associations without the need for a one-on-one government assistance package. Industry associations could encourage firms to develop solutions to common problems beyond their individual capabilities.

4.99 It would appear an information campaign is warranted to increase firms' awareness of assistance provided by Government, and that DIST should review the outcomes of programs related to increasing the effectiveness of firms.

#### **4.100 Recommendation 4.11**

**The Committee recommends that the Department of Industry, Science and Tourism and Austrade, where appropriate:**

- review the effectiveness of its programs aimed at increasing inter-firm cooperation;**
- review the effectiveness of the provision of information about the existence and operations of such programs; and**
- encourage industry associations and the Industrial Supplies Offices to increase their efforts at promoting cooperative arrangements between Australian firms to tender for large scale development projects.**

## **Government activities**

4.101 Projects of this size require a regulatory framework which is conducive to foreign investment and assurances that governments will not make regulatory or other changes which have the potential to damage the project's cash flows or ability to deliver a competitive product.

### **Enforced local content**

4.102 Woodside claims considerable pressure was brought to bear on it, through the National Liaison Group, to increase local content levels in the Goodwyn A platform and that this resulted in the awarding of contracts to uncompetitive domestic firms. In return for import duty and development concessions from government, tender price reductions and certain undertakings from unions, the joint venture partners agreed to pay a \$10 million premium to award contracts

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54 BIE, p 235

55 BIE, p 264

domestically. Woodside stated that this pressure ultimately resulted in an increase in cost of \$46 million.<sup>56</sup>

4.103 From the comparative data in Chapter 2, it would appear that this policy did not result in increased levels of local industry participation. The level of local participation achieved for Goodwyn A platform was 60% against 65% for the phase I (North Rankin A) platform.

4.104 These percentages are only part of the picture. The WA Government submission identified the benefits of local industry involvement in Goodwyn A as extending far beyond the direct impact of the original contract — for example: induced production and consumption of \$182 million and 2 586 jobs, enhancement of skills and capabilities, technology transfer and stimulus to R&D.<sup>57</sup>

4.105 The Industry Commission report on construction costs of major projects found that economic efficiency would not be enhanced by policies which increase the local content of major projects in a manner not based on purely commercial decisions. Such policies increase costs and reduce the competitiveness of many projects.<sup>58</sup> They may also retard innovative practices in local engineering.

4.106 The Committee believes there is a role for ISOs, peak bodies and local firms to play in minimising contracts which are being let overseas simply as a result of lack of knowledge of local industry capability. The WA Government, in concert with that State's ISO, seeks to discuss a new project with the developer early in the design stage. The aim is to maximise the chances of local industry involvement at all stages of the project, rather than to achieve a target percentage of local content.

4.107 The Committee believes that the approach advocated by the WA Government is preferable to setting targets for local content.

## **Taxation**

4.108 Taxes are one of the biggest cost elements of an LNG project. The Government may offer various concessions, such as extended tax holidays and royalty exemptions. In the case of the NWS, such inducements had the effect of encouraging the establishment of the project and later played a role in improving LNG's marketability.

4.109 Australian petroleum production companies are subject to general taxes levied at State and Federal levels, including payroll tax, stamp duty, corporate income tax as well as those applying to the petroleum extraction industry.

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56 Woodside: submission 23, p 26

57 WA Government: submission 11, pp 1 – 2

58 Industry Commission: *Construction costs of major projects*, AGPS, Canberra, 1991, p 6

4.110 Remote projects pay higher wages and provide more fringe benefits to attract staff and also use more fuel. They therefore pay more tax than projects in less remote locations.

4.111 Clements estimated that payroll tax payable over the life of the project would be \$81 million.<sup>59</sup> The FBT contribution was \$10 million in the construction phase; \$5.88 million in 1995–96, of which 19% related to living away from home allowance, 28% related to company health care and insurance and 12.8% was payable on housing provided in Karratha.<sup>60</sup>

4.112 In its report on construction costs of major projects, the Industry Commission stated that it did not consider that remote location tax relief should be provided by lower taxes on particular components of income as it would distort the decision on whether to pay workers in the form of money or benefits.<sup>61</sup>

4.113 The FBT cost is certainly substantial. However, it reflects the high level of compensation required to induce people to work in harsh conditions in remote locations. The Government needs to bear in mind the tax regime imposed in other countries in evaluating whether FBT is a disincentive to resource development.

4.114 Woodside has pointed to the significant contribution made to Karratha's social infrastructure. In its report on construction costs of major projects, the Industry Commission discussed such infrastructure as normally being provided by State governments, but also stated that it was reasonable to expect firms operating in remote locations to make some contribution towards its provision.<sup>62</sup>

4.115 Against this, the Committee also notes the significant concession made to the NWS developers to get the project started: petroleum resource rent tax (PRRT), currently set at 40% of net project incomes, does not apply to NWS production licences and associated exploration permit areas.<sup>63</sup>

4.116 The above matters have widespread application across industry.

#### **4.117 Recommendation 4.12**

**The Committee recommends that the Government or an appropriate parliamentary committee review the impact on the oil and gas industry of State and Federal taxes and the various concessions which might operate in the context of overall tax reform.**

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59 Exhibit 10, p xvii; Woodside stated that \$6 million was payable in 1995–96 (submission 23.02 dated 1.4.97, p 1)

60 Woodside: submission 23.02, pp 1 and 2

61 Industry Commission, p 115

62 Industry Commission, p 8

63 Australian Bureau of Agricultural and Resource Economics, *Net economic benefits from Australia's oil and gas resources*, Canberra, 1996, p 13 (exhibit 33)

## Tariffs

4.118 Tariff barriers on equipment for the oil and gas industry have been low, by world standards, in Australia for some time.

4.119 Australia has promoted the removal of tariff and non-tariff barriers to trade, especially in WTO and APEC forums. A number of submissions argued the removal of tariffs too quickly creates an impediment to local industry having a fair and reasonable chance to compete internationally.

*Australia is playing the clean-shaven kid on the block expecting the big boys to play by rules which were never the rules of any actually-existing game.*<sup>64</sup>

4.120 A 1996 change to the Customs Act has tightened the requirement for tariff concession applicants to prove equivalent goods are not produced in Australia prior to seeking a concession. Previously all equipment was exempt.<sup>65</sup> The Australian Customs Service assesses applications by referring them to prescribed organisations capable of undertaking research into local manufacturers' capacity. Where there is no local manufacturer, the import duty rate of 5% is waived. Woodside stated its concern about these changes.

4.121 Woodside gave an undertaking to discuss its capital equipment requirements with the Industrial Supplies Office.<sup>66</sup> In the case of this industry, ISONET appears to be the only organisation capable of determining whether there are Australian suppliers who have appropriate capabilities.

4.122 The Committee received evidence indicating considerable confusion about the operation of the policy by-laws and the stringency with which they are applied. Although no hard evidence was available as to the effectiveness of the system, DIST stated the policy by-laws had now become a tool to increase local industry participation. The Committee believes an evaluation of this program by DIST would be useful to assess its benefit to industry.

### **4.123 Recommendation 4.13**

**The Committee recommends that the Australian Customs Service conduct an information campaign to clarify the changes in 1996 to policy by-laws affecting the oil and gas industry.**

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64 Jones, E: submission 21, p 2

65 Schedule 4 of the *Customs Tariff Act 1995*. See also s 271 of the Customs Act.

66 Wedgwood, G, Woodside: *Transcript of evidence*, pp 63 – 64

## Overseas policies and practices

4.124 The Committee received some evidence on the policies and practices of south east Asian governments in relation to assistance for their indigenous industries. This evidence which was largely anecdotal, referred to government-funded provision of infrastructure, subsidies to power, application of tariff barriers to protect fledgling industry, et cetera. One witness noted that developers accepting overseas tenders don't insist on the same safety standards as would be required if work was carried out in Australia.<sup>67</sup> In short, if those in our region are protectionist, 'the level playing field does not exist'.<sup>68</sup>

### 4.125 Recommendation 4.14

**The Committee recommends that the Federal Government continue to pursue, through bilateral contacts and multilateral forums, the harmonisation of safety standards in the construction industry, particularly as they relate to work on oil and gas projects.**

4.126 Malaysia and Indonesia, two of Australia's major regional competitors in the construction of offshore structures, were said to have the following:

- lower labour costs;
- minimal government costs imposed on employment — payroll tax, superannuation, et cetera;
- government restrictions on imports in the form of either import duties or government requirements to manufacture locally; and
- government subsidies on exports or government subsidies on facility development.<sup>69</sup>

4.127 A disadvantage for Australian firms is their inability to purchase raw materials such as steel at world competitive prices. Mr Harris of United Construction stated the steel price could be as much as \$150 per tonne lower in Malaysia or Indonesia than in Australia, which represents a 15% discount to Asian based firms.<sup>70</sup>

4.128 The Hardcastle report stated that many governments in countries with oil and gas industries have adopted interventionist policies to maximise local content levels. These include:

- setting a minimum level of local employment involvement;
- insisting equipment and material is supplied through local agents;

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67 Harris, J, United Construction: *Transcript of evidence*, pp 4 – 5

68 United Construction: submission 19, p 2

69 United Construction: submission 19, p 1

70 United Construction: submission 19, p 1

- requiring professional service firms to be licensed in that country;  
and
- requiring local fabrication of steel.<sup>71</sup>

#### **4.129 Recommendation 4.15**

**The Committee recommends that the Federal Government continue to pursue, through bilateral contacts and multilateral forums, the elimination of import barriers and export subsidies affecting the oil and gas industry.**

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71 Hardcastle, p 67