

## Chapter 5 — Trends

5.1 Trends in inter-company arrangements and technology are the major matters discussed in this chapter.

### Alliances and tendering

5.2 Since the 1989 Committee report, a trend has developed towards alliance arrangements. Through these arrangements, partners in a project have a special interest in supplying key components or services to the project. The current Committee identified two types of alliance arrangements:

- those which preclude Australian firms from tendering; and
- those which have the potential to increase overall local content.

#### Alliances between the developer and an overseas firm

5.3 This symbiotic arrangement is very common in the LNG industry because of the need to tee up long-term customers and the vast sums required to start a project. Typically the developer's partner is an overseas company which, as part of the alliance arrangement, provides capital equipment such as LNG ships or modules, without submitting to the usual tender process in the domestic arena. By making a financial investment in the project, the partner companies gain special treatment in supply contract decisions.

5.4 This process, while 'not as rigid as a closed tender',<sup>1</sup> has resulted in local firms considering they have not received fair access to tendering, or in key contracts not going to tender. Witnesses stated that such an arrangement may preclude local design work and supply of components, which effectively decreases local industry participation for the whole job, including maintenance and refit work.

5.5 Witnesses from the WA Government and the Australian Manufacturing Workers' Union gave an example of alliance arrangements allegedly excluding Australian suppliers. This particular case involved an alliance between Ampolex and Keppel, partners in the development of the Wandoo field:

*Such a procedure was followed in the case of the Ampolex Wandoo offshore gas project, where the construction of platform modules was undertaken by Keppel Shipyards of Singapore, a partner in the Wandoo alliance, without competitive tenders being*

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1 Agostini, D, Woodside: *Transcript of evidence*, p 69

*called. Australian industry was thereby denied any opportunity of undertaking this work.<sup>2</sup>*

5.6 There is considerable concern among industry, trade unions and the WA Government that this type of alliance arrangement will proliferate and be used by developers as a means of circumventing government policy on local industry participation in major projects.

*Major developers should be required to ensure that offshore based designers, project managers, manufacturers and constructors form joint ventures or consortia with component companies [which are Australian based] to ensure maximum local content and technology transfer.<sup>3</sup>*

5.7 The policy advocated by the Institution of Engineers often might not be practical. The extent to which alliances could be formed between major project developers and Australian companies depends on the existence of Australian companies which have the capability of supplying what the developer needs at a competitive price. To attempt to force such arrangements may jeopardise the viability of the project. The existence of alliances between major developers and overseas companies is perhaps unavoidable, to some extent at least.

5.8 Woodside has seen this as a method of ensuring prompt delivery and appropriate quality. Financial alliances with suppliers are attractive to developers also because the suppliers must share some of the cost of poor performance as well as the benefits of good performance.

5.9 The Committee considers that greater efforts should be made at the Federal level to educate and encourage developers to comply with government expectations, as described elsewhere in this chapter and in Chapter 3.

5.10 The Committee believes there are grounds for an investigation to be held into the preference of petroleum developers to use overseas firms with whom they have pre-existing alliances and whether this is circumventing the Federal Government's policy of 'full, fair and reasonable opportunities' for Australian suppliers to compete.

### **5.11 Recommendation 5.1**

**The Committee recommends that the Australian Competition and Consumer Commission investigate whether alliances between petroleum developers and overseas firms have resulted in anti-competitive behaviour in relation to goods and services to be used in the domestic petroleum industry.**

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2 Cowan, Hon H, WA Minister for Commerce & Trade; Regional Development; Small Business: submission 11, p3

3 Institution of Engineers: submission 18, p D7

## Australian – overseas alliances

5.12 An alliance arrangement between an Australian firm and an overseas partner may result in an increase in the Australian companies' skills and technology bases and dissemination to other local companies over time. Subject to performance, it may also result in medium term contracts with developers. The benefits of the use of long term supplier arrangements are surety of workload and reduction in the high costs associated with more frequent re-tendering.

*In this regard the trend towards 'alliance consortia', should be welcomed, given the enormous cost of preparing pre-qualification and tender submission. The trend has the potential to include competent Australian engineering capacity on a risk sharing basis. If however overseas based alliance partners of major developers are chosen at the expense of local companies, their capacity to learn and develop will be reduced.*

*In turn, this reduces Woodside's risk from engagement of local firms. At the same time local participants provide the overseas partner with knowledge of the technological capabilities of local industry ...<sup>4</sup>*

5.13 The Committee received evidence that some Australian companies have been reluctant to change their practices and take risks. In this respect Woodside made the following analogy:

*I likened it to a company wanting to sell Holden motor vehicles to Woodside. ... you would not expect Woodside to go out and purchase the Holden motor vehicle franchise for the individual to end up doing business with Woodside. Surely, it is the responsibility of individual companies out there to get themselves in a situation where they are capable of doing business at the level required.<sup>5</sup>*

5.14 Under an alliance arrangement, risks are shared. In addition, forming an alliance with an overseas partner may assist technology transfer and in the long term enable Australian companies to compete internationally.

*An example I could use would be the Wandoo project for Ampolex, where a joint venture was formed. Joint ventures, we believe, can be of advantage to the State and the nation because they bring in technology.<sup>6</sup>*

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4 Exhibit 10, p 92

5 Wedgwood, G, Woodside: *Transcript of evidence*, p 75

6 Ferguson, J, AMWU: *Transcript of evidence*, p 80

5.15 Woodside stated that it encouraged alliances between overseas and Australian companies, as a method of ensuring a quality outcome and therefore reducing risk. In relation to quality outcomes and technology transfer, Woodside stated:

*The second way in which this has occurred is that companies in Western Australia and Australia, which have done supply and contracting business with the North West Shelf, have formed joint ventures with other similar contracting companies from overseas to be able to meet the technical specifications of the project.<sup>7</sup>*

5.16 Such an approach should not be viewed as the easy way out or costless for Australian industry. Overseas companies have devoted resources to developing their skills bases and technology. Local companies must be prepared to develop their own technology or buy existing technology, perhaps under a licensing agreement.

## **Australian companies as prime contractors**

5.17 It is vital that Australian companies position themselves to become prime contractors and thus maximise Australian industry participation:

*... the principal objective in any future large scale project must be to base and control the design, engineering and procurement activities wholly within Australia, starting as far as possible with initial feasibility studies .... because it is during such early stages of a project that Australian engineers will be best able to promote the involvement of Australian manufacturing industry.<sup>8</sup>*

5.18 This is backed up in the WA Chamber of Commerce and Industry submission, which stated that some 80% of the total value of a project's plant and equipment come from the same country as the prime contractor.<sup>9</sup> Woodside also stated:

*It is the components in the modules that will determine if there is an overseas input into the ongoing maintenance. If there is, for instance, in the module a very large turbine that was built somewhere in Europe, then it is likely that we would have an ongoing relationship with that firm in the maintenance of that large turbine. The actual construction of the module,*

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7 Agostini, D, Woodside: *Transcript of evidence*, p 65

8 Institution of Engineers: submission 18, p D7

9 CCI: submission 7.01, p 8

*with various components in it, does not in itself cause us to bring someone in; it is the components within it which do.*<sup>10</sup>

5.19 Another of the major changes underway in industry is towards through-life or whole-of-life costing. This method will certainly be applied during the evaluation of the merits of different tenders.

5.20 In order to reduce costs, supply and maintenance, for example, may not be viewed in isolation, but may now be put out for tender in the one package. As such it has major ramifications for smaller firms and their ability to compete. If smaller firms decline to take the risks associated with larger packages they may well fail to win contracts. However, forming cooperative alliances to spread risk and capitalise on individual firms' expertise may make them successful tenderers.

5.21 During the life of high cost plant, it must be maintained, repaired, and may need to be updated, refurbished and expanded. Where the initial design and project management was undertaken locally, the expertise for through life support is readily available. This is a natural advantage local firms should use to persuade developers to select their tenders. Considerable opportunities exist for Australian industry to reap benefits from the provision of ongoing support over a lengthy period.

5.22 Early involvement of local industry in project construction can ensure considerable savings on through-life operational support costs, create a broad-based and sustainable design/ engineering capability, which will have application to diverse industry sectors, and may provide a catalyst for major corporate, management and work practices restructuring within Australian industry.

## **Changes in technology**

5.23 A feature of the North West Shelf project has been the incorporation of new technology at all stages. In some cases this has resulted in leading edge technology being developed or used here. Examples include LNG trains which are air-cooled, undersea remote equipment, et cetera.

5.24 Witnesses to the inquiry spoke of the impact of technology on the industry. In many cases the level of local industry participation has declined, at least in the short term, until technology has been integrated into local industry to a level satisfactory to developers' notions of acceptable risk. Lower levels of technology, for example use of first generation platforms, account for the greater local content levels achieved in Bass Strait compared to the NWS.

5.25 If Australia is to benefit from such technology and its industry remain competitive, its firms must take the risks associated with integrating new technology, developing an export orientation, forming alliances and so on. It

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

should, of course, be noted that some technology will not be transferred to Australia for reasons outlined in Chapter 2. These include the small size of Australia's oil and gas industry and the sometimes prohibitive cost of gearing up for a new product given the intermittent nature of the industry.

5.26 Innovation in offshore technology has occurred not only to ensure economic viability, but to overcome problems specific to the project. The design of structures for extraction of North West Shelf gas has been adapted to cope with the need to maintain gas flow in cyclonic conditions, seabed geological makeup, remoteness from shore and deep water factors.

### **Floating production and offloading systems**

5.27 One of the major new changes in the oil extraction industry is the trend towards the use of floating production, storage and offloading facilities (FPSO), which are essentially oil-tanker sized offshore processing plants. The use of FPSO technology increases the likelihood of development of the large number of very small/ marginal reserves where it would be uneconomic to incur the costs of a platform.<sup>11</sup>

5.28 The use of fixed platforms is declining in the offshore Australian petroleum industry, with about one-fifth of total oil and condensate being extracted by this method. Fields likely to be developed without platforms are given in Chapter 1, and include new fields such as Lambert and Hermes which are producing oil through subsea wells tied back to the *Cossack Pioneer*.<sup>12</sup>

5.29 FPSO technology is new to Australia. It has evolved over the last decade to provide a cost-competitive approach for oil extraction in small-to-medium accumulations, extraction from deeper water and handling of large quantities of high pressure gas as well as oil. Disconnectable systems are also ideal for cyclone prone areas.

5.30 Other benefits of this technology are:

- considerably lower capital costs, which are crucial for the economics of remote and marginal fields;
- the ability to re-use the facility;
- shortening the timing between investment decisions and initial production (which is often significant in the economics of a development);
- increased flexibility to access nearby resources, and

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11 Agostini, D, Woodside: *Transcript of evidence*, p 66

12 Woodside: press release on its internet business and finance news page, dated 24.10.97; DRD estimates in 1996 put the cost of subsea equipment for these two fields at \$200 million

- a reduction in the demolition and abandonment complexity associated with a project, leading to improved environmental performance and project economics.<sup>13</sup>

5.31 The development of the Wanaea and Cossack fields was based on use of a converted large tanker (the *Cossack Pioneer*) and extensive subsea production, control and transmission equipment. Information in relation to local content for this development may be found in Chapter 2. The disbenefit of the introduction of this technology is that it decimates local content in areas where Australian manufacture has traditionally been strong.

5.32 Woodside has announced it will commence extraction from the Laminaria and Corallina fields using an FPSO. Samsung in Korea has been awarded the work for the FPSO without a competitive tender process. The Committee is concerned that existing alliance arrangements (between Woodside and Keppel) meant that Australian industry was precluded from tendering for work for which it had capability (see alliances and tendering section).

5.33 It is anticipated that of the 129 FPSOs to be used worldwide in the next decade, the size of the Australian industry means only ten will be used here.<sup>14</sup> Although the *Cossack Pioneer* was a converted crude tanker, it is anticipated the majority of FPSOs will be purpose-built. It seems unlikely that Australia would be competitive with respect to building new hulls. It should however be possible for Australia to compete for the high value on-going maintenance and refit work, provided it has appropriate facilities and capacity. To service this aspect of the industry an integrated engineering site needs to be developed (see marine heavy engineering section at paragraph 5.5.43).

5.34 The Committee is pleased to note that manufacture of key subsea equipment now occurs in Australia. However, it is evident, given the compelling reasons for use of FPSO technology, that local industry must actively pursue other ways of value-adding or a dramatic reduction in local content levels will result and technology transfer will be slowed. Indeed industry may find itself in a similar position to that which existed at the beginning of the NWS project.

### **Concrete gravity structures**

5.35 Concrete gravity structures have been developed in parallel with steel designs and are commonplace in the North Sea oil fields. These structures are popular because of strength, durability and the capacity to store large quantities of oil when it can't be pumped.<sup>15</sup> They are seen as an alternative to fixed steel support structures in shallow-to-medium water and potentially offer higher local content in terms of design and construction.

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13 CCI: submission 7.01, pp 5 – 6

14 CCI: submission 7.01, p 6

15 Garrison, E: *A history of engineering and technology*, CRC Press Inc., USA 1991, p 218

5.36 Wandoo B, a concrete structure, was constructed at Bunbury and towed to the site in 1996. Ampolex, the designated operator, was part of an alliance formed to design, construct and install the Wandoo facilities. APPEA quoted local content levels of 70% as being achieved for the development as a whole, but it is not known if that level was exclusive of the steel topside modules, which were fabricated by Keppel, the Singapore alliance partner, without Australian contractors being able to bid for work. (see Chapter 2 — Measurement of local content). The union summed up its view:

*We are most concerned that that trend will continue. If it does continue, obviously we are not going to get the work — not in Western Australia, not in Australia.<sup>16</sup>*

5.37 As well as technology transfer for the North West Shelf gas project, this new industry may offer export potential, but it will not occur if large parts are closed to Australian tenderers.

5.38 It should also be noted that in the future giant offshore concrete structures may be used to process LNG, a development which will cause a severe downturn in local content levels, given that there would be minimal civil engineering, and other work to bolster up the local content figures.

## **Modularisation**

5.39 Large scale modular fabrication is another trend being fed by the remote and inhospitable environment in which the NWS project operates. Materials, which traditionally have been sourced locally and then assembled using local labour at the project site, are now just as likely to be imported as prefabricated modules.

5.40 The benefits of modularisation are given as:

- improved opportunities for effective quality control;
- opportunities to maintain a core of highly skilled trades people that benefit from continuity of work over a number of projects;
- the ability to build more sophisticated and sensitive equipment in a controlled environment and to even conduct preliminary commissioning trials before shipment to site;
- achievement of efficiency benefits from repeated modular elements in a major project;
- the ability to concentrate the wide variety of technologies and skills necessary to fully manufacture modular elements at a central engineering and fabrication facility;
- minimisation of cost and delay risks to all parties; and

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16 Ferguson, J, AMWU: *Transcript of evidence*, p 80



- minimisation of work required on-site in what may be demanding and hostile environments.<sup>17</sup>

5.41 The Committee notes overseas experience is that modularisation has achieved cost reductions of 5 – 10%.<sup>18</sup> It also notes industry's concerns that acceptable quality has not always been achieved in work carried out overseas (eg Batam, Indonesia<sup>19</sup>), and has resulted in re-work when modules have reached Australia.

5.42 The ability of local industry to capitalise on the trend to modularisation is directly related to the provision of a permanent and integrated heavy engineering facility, such as that envisaged in Western Australia.

## **Marine heavy engineering facility**

5.43 There is broad agreement that if Australian industry is to compete more readily with Southeast Asia, and to capitalise on the significant opportunities created by deregulation of the WA energy market and considerable growth in Australia's immediate region, a world class waterfront engineering facility must be created.

5.44 WA planners have identified the Jervoise Bay/ Henderson Industrial Estate on the eastern shores of Cockburn Sound near Perth as the most suitable base to support both offshore and onshore aspects of the resource industry. This area already has some basic infrastructure capable of servicing large scale fabrication activities and ocean transport facilities. However, these existing facilities have been developed largely on a project-by-project basis rather than being focused on longer term, integrated development requirements.<sup>20</sup>

5.45 Witnesses from the union movement, Western Australian Government, WA Chamber of Commerce and private companies stated that an integrated facility for marine based engineering and fabrication was a strategic mechanism to increase opportunities for Australian industry to compete internationally. However, this could not be justified by a single project.

5.46 It is important that a critical mass be established if such a site is to be worthwhile. A variety of firms must be prepared to locate there. It is by encouraging such industry clusters, comprising firms with strong growth potential and common requirements, that benefits accrue such as those arising from economies of scale, commitment to quality issues and the acceleration of technology transfer.

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17 CCI: submission 7.01, p 5

18 Industry Commission: *Construction costs of major projects*, 1991, p 116

19 Ernst & Young: *Jervoise Bay infrastructure planning study economic evaluation*, report dated February 1997, p 35 in Halpern Glick Maunsell: *Jervoise Bay infrastructure planning study* (exhibit 41)

20 CCI: submission 7.01, p 1

5.47 The Ernst & Young report stated that annually Jervoise Bay could be expected to obtain 2.5% (\$100 million) of future project work and to generate \$160 million in repair and maintenance work, rising to \$572 million per year when the multiplier effects are included (assuming optimal site use).<sup>21</sup> It is interesting to note that 100% use of the current site could not generate more than \$65 million per year.

5.48 Witnesses argued that, because the facility would be permanent and intended for diverse projects, it would also facilitate the retention of a skilled workforce. Notwithstanding the strong growth trend in the WA resources sector, the industry acknowledged it could not presume the revamping of this facility would slow the flow of work awarded to overseas firms:

*We cannot say that investing in infrastructure ... will guarantee that work will come into the Australian economy. But we can say that, if it does not happen, it is guaranteed that the work will not come.*<sup>22</sup>

5.49 The Ernst & Young report also highlighted the importance of achieving a reputation for quality.<sup>23</sup>

5.50 APPEA expressed some concern that too much reliance is being placed on the oil and gas industry as a justification for the Jervoise Bay infrastructure.<sup>24</sup> Because of the sporadic nature of oil and gas industry work, firms on such a site must be capable and willing to tender for a variety of work unrelated to that industry and for overseas gas and oil industry work.

5.51 Funding for the infrastructure facility emerged as a stumbling block during the inquiry, with the WA Chamber of Industry and Commerce (CCI) indicating that a decision needed to be made with some urgency. In January 1998 it was announced the \$200 million redevelopment would be funded by the Federal and WA Governments and the private sector.<sup>25</sup>

## Technology transfer

5.52 Technology may be defined as all forms of 'know-how' which enable a job to be achieved. Technology transfer occurs when practices, standards and technical expertise are integrated and diffused into Australian industry. In this respect, movement of personnel and alliance arrangements are critical.

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21 Exhibit 41, pp 1, 29 and 30

22 Cooke, T, TLC: *Transcript of evidence*, p 87 and also Harris, J, United Construction: *Transcript of evidence*, p 8

23 Exhibit 41, p 32

24 Mullen, N, Assistant Director, Commercial, APPEA, *Transcript of evidence*, p 124. Grazia, N, APPEA, quoted in Ernst & Young report, appendix F.

25 Hon J Howard and Hon R Court: Joint media release, dated 26.1.98

## Skills transfer

5.53 An example given by United Construction Pty Ltd illustrates the jump in companies' ability to perform more complex and higher quality work:

*Participation in these projects has enabled our company and our staff to develop and improve their expertise. It is fair to say that the quality standards that we are capable of now producing have been as a result of participating in those projects such as the drilling modules for the Goodwyn A platform ... with in excess of 2 000 tonnes of relatively complex steel, upgrade work on the Griffin FPSO in Fremantle and a \$60 million contract on the LPG facilities at Karratha for Woodside.<sup>26</sup>*

5.54 Each phase of the NWS has required the use of technology which Australia did not have. Such transfer has been effected through interaction between owners of technology and those involved in the project and facilitated in both directions by movement of personnel and through alliances. In this respect Woodside stated:

*The team that [brought relevant LNG production and design processes here when the North West Shelf project began], whilst being initially run by the senior design people in Shell, had within it a large number of Australian engineers who went through the experience of that design phase and brought back with them the knowledge ...<sup>27</sup>*

*... within Woodside itself the ongoing participation of people from the Shell technical centre in The Hague ... [who] bring with them a level of know-how that is not always available to us here. The other side of that is that we transfer Australian Woodside employees into the international scene where they spend two, three or four years working on these sorts of sites using this same sort of technology. They then come back to Australia with a much broadened and enhanced technical understanding of what they are doing. So by that transfer of personnel in both directions, we also achieve some significant technology transfer.<sup>28</sup>*

5.55 The increase in Australian engineering expertise may be demonstrated by the reduction in use of overseas engineers from phase II to phase III.<sup>29</sup> However

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26 Harris, J, United Construction: *Transcript of evidence*, p 3

27 Agostini, D, Woodside: *Transcript of evidence*, p 65

28 Agostini, D, Woodside: *Transcript of evidence*, p 65

29 Exhibit 10, p 92. Clements also stated that overseas engineers take back to their originating companies/ countries the evolving practice in relation to technology.

Mr Harris, from United Construction, pointed out that although his company successfully completed the work, increased the qualified (Australian) workforce and was considered good enough by Woodside to train others in Singapore and Indonesia, 'more and more the work seems to be going offshore'.<sup>30</sup>

5.56 The submarine and ANZAC frigate projects were referred to during the inquiry as examples of successful transfer of high technology to Australia. The demands placed on contractors by the Australian Government, as the buyer in these projects, resulted in the development of and/ or increase in, local industry capability. These cases should be distinguished from the NWS project. The vital difference with the ANZAC frigates is that the Australian Government, as client, paid the bills and therefore was in a position to insist on tracing local content beyond primary tender level.

5.57 The Committee received considerable evidence from organisations wishing to compare aspects of the NWS with, for example, the North Sea oil fields, or the American oil industry. There are considerable difficulties in doing this: the North Sea fields and the American oil industry are close to very large consumer populations, their industries have extensive pipeline delivery systems and do not operate in deep water.

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30 Harris, J, United Construction: *Transcript of evidence*, p 6

## *Laminaria*

Although the Laminaria development is not located in the North West Shelf, this section has been included because it illustrates industry trends in local content, technology and alliances.

Laminaria and Corallina oil fields are located in the Timor Sea inside Australian waters. The fields are operated by Woodside (in a venture with Shell and BHP) and will both be developed through floating production storage and offloading (FPSO) technology<sup>31</sup>. It is estimated that the capital investment will be \$1 billion and that the fields will be in production in late 1999.<sup>32</sup>

Unlike the Wanaea development in the North West Shelf, where a converted oil tanker was used, the FPSO for this development is being purpose-built.<sup>33</sup> In late 1996, a \$110 million contract for hull design and construction was let to Samsung in South Korea before formal project approval so that preliminary design work could commence and to secure dry dock and fabrication space.<sup>34</sup> The contract also includes the helideck, marine utilities and accommodation. It was let to Samsung without local industry being able to tender for any part.

The overarching management and procurement contract for the FPSO has been let to Kvaerner, a Norwegian firm.<sup>35</sup> This is an example of the trend by petroleum developers to outsource the engineering, procurement, construction and management (EPCM) functions and concentrate on exploration and extraction. As this early stage of a project is a key access point for maximising Australian content, the result of Woodside's hands off approach is to give control of local content levels to this overseas firm. There appears to have been no opportunity for ISONET to draw to this firm's attention any capacity or capability Australia has.

Publicly available information beyond the prime contract level is limited, however, the Committee is aware that many contracts have been let to Kvaerner in non-Australian joint venture relationships. The Committee is concerned that Kvaerner, through its commercial alliances, has avoided Australia's national local content policy.

The Committee also noted press releases stating \$360 million would be awarded to 'Australian industry' in the 18 month period from September 1997.<sup>36</sup> The Committee does not share the Federal Government's confidence that a local content level of 34% will be the outcome and believes an analysis of secondary contracts and leakage overseas is needed.<sup>37</sup> As discussed in Chapter 2, equating prime contracts with local content is not an accurate measure of Australian industry participation.

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31 See Chapter 1 (developments since 1989) for an explanation of the technology.

32 Woodside: press release at its internet page on the Laminaria venture and DRD 1996, p 85; Woodside reported that this figure has risen to \$1 350 million in an internet media release dated 19.2.98.

33 DRD 1996, p 85. See Chapter 2 for information on Wanaea.

34 DRD 1996, p 85

35 Woodside: press releases at its internet page on business and finance, dated 30.12.96 and 19.9.97

36 Woodside: press release at its internet page on business and finance, dated 10.9.97

37 Senator Parer: press release, DPIE 97/206P

Notes on Laminaria/ Corallina FPSO contracts (expected to be about \$1.35 billion)

Item	Firm and location	Amount \$ million
<i>contracts expected to be awarded in the 18 months from September 1997:</i>		
(category unknown)	'Australian industry'	360
<i>contracts awarded:</i>		
<u>purchase orders -</u>		
a 'substantial portion of the flexible flowlines and risers'	Coflexip/ JP Kenny (Fremantle)	60
processing modules (labour only)	United Construction (Kwinana/ Freemantle)	45
design and construction of hull; helideck, accommodation and marine utilities	Samsung (S. Korea)	110
mooring/ turret	Kvaerner/ Single Buoy Mooring (Saudi Arabia/ S. Korea)	
<u>management and other costs -</u>		
overall management of design and procurement	Kvaerner/ Single Buoy Mooring (Oslo - initial design; Perth later design, procurement management)	10

Source: Woodside's press releases at its internet page

## Export opportunities

5.58 The oil and gas industry is a typical example of globalisation of the domestic market. Goods and services used in the domestic industry are composed of designs, technologies and components from around the world. It is essential for industry's long term sustainability to participate in proposed regional developments by providing goods and services where a competitive advantage exists. Advantages may include: cost, delivery time, innovation and quality.

5.59 The Hardcastle report found local industry was characterised by:

- success in supplying domestic petroleum projects (\$20 billion) but export sales were proportionally much less (less than \$1 billion);
- domination by supply of heavy engineering and fabrication, much of which could be exportable as a result of superior quality and efficiency of manufacture;
- lack of relevant quality certification;
- a majority of goods and services supplied domestically are also exportable;
- the capability to service an international market in these goods and services areas.<sup>38</sup>

5.60 In relation to quality, the Committee received evidence on the desirability of companies putting in place quality assurance systems and ensuring goods' compliance with relevant oil and gas industry certification. The Committee has noted elsewhere that such systems are not a requirement domestically yet, but for exporters a fully certified business is essential.

5.61 Companies need to be selective about goods and services they choose to tender for in the international arena. They must consider the protectionist policies some countries have in place (for examples, see Chapter 4) which serve to ensure foreign companies can never be competitive. Successful participation in the Asian region depends on adjusting Australian practices to meet other countries' requirements:

*In most areas of construction and industry Australian firms display a high level of innovation and technical development. In fact our level of technical development is sometimes found to be too high for applications in the Asian region where more 'low tech', labour based construction methods are favoured or required. In general construction, mining and oil and gas developments, Australian firms are currently in the top echelons. Our involvement in Asia is more often a means for Asian firms to achieve technology transfer*

*and skills development through the requirement for Australian firms to joint venture with local firms.*<sup>39</sup>

5.62 The Committee acknowledges there are a number of firms which have successfully expanded their markets overseas, either alone or in alliance with other firms. Among them United Construction, Clough Engineering and Sonsub Services are examples of firms building on successes in the NWS by establishing themselves in south east Asia. Other companies such as Associated Surveys have successfully competed for contracts in the North Sea. These companies are internationally competitive.

5.63 The Committee also recognises the effect of downsizing on companies' ability to seek out market opportunities — many are too small to have that capacity. Yet better and greater marketing of companies' capabilities and capacities is an area identified in most reports as requiring urgent action.

5.64 If opportunities for sustainable industry growth are to be realised, there is a need for an advisory role to be available through industry associations and specialist government agencies, which can offer expertise in matters such as matching products to markets and promoting culturally and economically appropriate methods of breaking into each market. Recommendations in relation to export may be found in chapters 3 and 4.

#### **5.65 Recommendation 5.2**

**The Committee recommends that the Department of Industry, Science and Tourism survey the efforts of industry associations to promote compliance with industry quality control and assurance standards and international best practice and report to the Minister within 12 months on the adequacy of such promotional efforts.**

The Hon Bruce Reid MP

Chair

March 1998

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39 Institution of Engineers: submission 18, p D4