

Chapter 2 — Australian industry participation in major projects

2.1 Major projects could provide vital opportunities to Australian suppliers of components and materials and of design and finance services. If full advantage is taken of these opportunities and Australian industry becomes internationally competitive, long term economic benefits will flow to Australia through the development of a skills base, technology transfer and sustainable growth.

What is local content?

2.2 The following represent attempts by industry to grapple with the concept:

The definition of what constitutes local content is getting harder (is it locally registered offices or percentage of staff in Australia?) and needs to be clarified.¹

If a local company wins a contract then proceeds to have 90% of the work fabricated overseas is this still local industry participation?²

Once you have an ACN [Australian Company Number] you are basically an Australian company. So even if you had one employee and you imported \$100 million worth of equipment, which was then on-sourced to the prime contractor, that would be local content.³

[Local content] has been defined as a good or a service which is manufactured or supplied by an Australian facility where the Australian value added is 70% or more of the selling price.⁴

2.3 A witness from the WA public service stated that there were three types of contracts to be considered:

The first type ... must be done on site or in Australia — physically the drains have got to be dug, the landscaping has got to be done, the civil works have got to be completed. It has got to be done here whether the developer likes it or not. The second type is, of

1 Australian Institute of Steel Construction (AISC): submission 10, p 2

2 AISC: submission 10.01, p 1

3 Dowe, R, Executive Director, Heavy Engineering Manufacturers Association: *Transcript of evidence*, p 105

4 Marine and Heavy Engineering Group: *Major projects' statement*, (exhibit 15), p 3

*course, the work that cannot be done in Australia. There are just certain things that cannot be made here. ... In between those two extremes there is a grey area of work that could be done in Australia under certain conditions.*⁵

Figure 2.1: Types of contract

Type 1 contract	Type 3 contract	Type 2 contract
Contracts which must be carried out in Australia eg civil engineering	Contracts which may be performed in Australia or overseas	Contracts for which Australia does not have the capability eg oil tanker sized hulls for ship based oil and gas processing, cryogenic heat exchangers

2.4 Examples of the first kind of local content include: road, airport and water supply extensions, and construction of community sporting and cultural facilities. Other examples include installation and final commissioning of the NRA platform and installation and hookup of pipeline. Because of their high local labour components, these activities involve high local content levels.

2.5 Examples of the second type include the provision of products or services: for which the local demand is *usually* extremely small or intermittent; or where the scale or complexity is so great that very few firms world – wide have the necessary capability and these few do not include Australian firms. This category includes high technology, specialised oil and gas processing equipment, such as cryogenic heat exchangers; and large ship building facilities for construction of floating production and storage offloading facility (FPSO) hulls. In these activities Australian industry participation may never be viable⁶.

2.6 For some types of work Australian industry involvement may be viable only if export opportunities are developed. For example, the situation for manufacture of large scale compressors might improve if an Asian market share could be obtained but this would depend on the ability to compete with producers in that region, and the very large capital investment needed for an integrated heavy engineering site (see Chapter 4 and Chapter 5).

2.7 By its discretionary nature, local content of the third type is of most interest. However, it needs to be borne in mind that there are definitional issues to be considered in deciding to which of the three categories a particular contract or type of work belongs. It must also be remembered that the percentage of local

5 Suttie, G, Director, Policy and advisory services, Department of Resources Development: *Transcript of evidence*, p 42–43

6 A list of relevant equipment and services not available in Australia (as at August 1995), is to be found in submission 23, appendix 2.

content achieved can be quite different depending on whether it is measured as a proportion of total project costs or as a proportion of type three contracts only.

2.8 Since the beginning of the NWS project, wide variations in local content levels have been achieved according to the nature of the resource (gas, oil or both) and the technology involved (for example, basic fixed steel platform, or sophisticated processing equipment).

Measurement of local content

2.9 Assessing whether the level of local industry participation in the NWS project is high, low or in between has been made difficult by the lack of independent, systematic monitoring and the lack of an agreed methodology.

2.10 The tables in this chapter represent the Committee's attempts to compile recent data on which to draw conclusions about whether the level of local industry participation has improved since the former IST Committee wrote its report on the North West Shelf in 1989. Most sources of local content data, however, were published well before phase III concluded. They therefore can only be considered indicative.

2.11 Local content levels are often quoted in aggregate form and without further analysis may be misleading. One study of local content was that undertaken by the Allen Consulting Group, which showed that participation achieved by Australian industry has been 72% in phase I, 73% in phase II and 65% in phase III. This is an average participation rate of 88% of the maximum feasible Australian participation.⁷ This aggregate does not give information about the nature of the contracts won by Australian industry, which would show local participation levels in the more specialised and skills intensive areas, so important to the development of Australia's industrial and technological capability; nor does it allow analysis of possible lost opportunities, that is, areas where local firms had the ability to supply goods and services.

2.12 In addition to the aggregate figures quoted above, the Allen report gives maximum possible Australian industry participation rates for the three phases of 80%, 81% and 77% respectively, and 'effective unrealised levels of potential Australian industry participation' or work which leaked overseas of only 8%, 8% and 12%. The report asserts the 'residual overseas content' therefore represents work of a highly specialised type that simply could not be performed in Australia.⁸

2.13 Statistics in the following tables are sourced primarily from Woodside's submission to the Committee in August 1995. The date is significant, as some costs incurred in phase III, for example in relation to geotechnical research and

7 *North West Shelf gas project development: Opportunities and outcomes for Australian industry — a stocktake*, Allen Consulting Group, April 1992, p 1 (Allen). The phase III figure is given on p 1 as 69% — this is believed to be a typographical error.

8 Allen, p 20

development and other work for the Goodwyn A platform, would not have been envisaged in April 1992, when the Allen report was published.

Table 2.1: Woodside’s assessment of project costs and sourcing⁹

Facilities	Development costs (mod \$ million)	Overall sourcing %		Claimed ^δ Australian participation %
		Australian	Overseas	
Phase I — North Rankin A platform and domestic gas facilities	1 921	73	27	88
Phase II — LNG trains 1 and 2	2 888	73	27	88
Phase III — LNG train 3	928	(71 av.) 69	(28 av.) 31	(86 av.) 89
LPG plant	265 [#]	[85] 89 [*]	[15]	[94]
Goodwyn A platform ^α	1 606	60	40	75
Operations (1984-1995)	3 072	82	18	88

Notes: source of figures, unless otherwise indicated, is Woodside: submission 23 (as at 29.8.95)

mod = money of the day; [The figures in square brackets are percentages when contracts were paid]

δ Woodside uses the term ‘actual participation’ which it defines as *the calculated level of participation for those items that could be procured or undertaken in Australia* (submission 23, pp 19 – 20). This term is not synonymous with the ‘actual participation rate’ used in the Allen report.

the LPG project was ongoing at the time of the submission. DRD 1996 at p 45 gives this cost as \$305 million.

* APPEA: submission 22.01, p 4

α excludes exploration/ appraisal costs and insurance claims for the foundation failure on GWA platform.

2.14 The following quotes from Woodside indicate to some extent how local content was measured:

You will note that, with the exception of Goodwyn, where the figure is 75 per cent, Australian contractors and suppliers have consistently won in competitive

9 Woodside: submission 23, pp 13 and 19

tender over 85 per cent by value of contracts for which they had the appropriate expertise to qualify and to bid.¹⁰

The development sourcing for the Wanaea/ Cossack Project ... reflects the application of industry competitive practices/solutions relating to floating production systems and offloading (FPSO) technology on this project ... Of significance is the relatively higher overseas sourcing of equipment and services ... However, if it is recognised that a large proportion of the materials and services were not available in Australia at the time of project implementation, the actual participation rate is similar to that achieved on the NWS Project.¹¹

For each project, a number of items of material and service supply could not be supplied from Australia, therefore the Australian component of what they actually could provide was correspondingly higher.¹²

2.15 One interpretation of the above information is that, once goods and services not able to be provided from Australian sources are removed from the value of the work, items remaining make up the total, out of which real Australian participation is then measured. This method would therefore throw up quite different levels of 'actual' participation depending on what Australian suppliers are deemed to be capable of providing.

2.16 Since it is the developer who makes the judgement about whether a firm has appropriate expertise and the right to bid, this may cause the boundaries between the third type of contract and other contracts to become somewhat fuzzy (see figure 2.1 and paragraph 2.2.7).

10 Agostini, D, Woodside: *Transcript of evidence*, p 60

11 Woodside: submission 23, p 20

12 Woodside: submission 23, p 20

2.17 In trying to analyse the Allen report data, it is possible to deduce the following:

Where:

PP is ‘maximum possible rate of Australian industry participation’;

AP is actual participation rate;

UL is ‘effective unrealised levels of potential Australian industry’;

100% is total project participation (wherever sourced); and

RR is ‘residual overseas content’.

PP - AP = UL

and

100% - AP = RR

2.18 The following can therefore be calculated:

	PP	AP	UL	RR
	%	%	%	%
Phase I	80	72	8	28
Phase II	81	73	8	27
Phase III	77	65	12	35

2.19 Woodside’s data in the same format is as follows:

	PP ¹³	AP	UL	RR
	%	%	%	%
Phase I	88	73	15	27
Phase II	88	73	15	27
Phase III (av.)	86	71	15	29

2.20 Work for phases I and II took place from 1985 to 1990 which is well before the publication date of the Allen report and the first Woodside submission

13 Woodside’s submission calls this actual participation — *the calculated level of participation for those items that could be procured or undertaken in Australia.* (submission 23, pp 19 – 20).

to the Committee. The data indicate similar levels of Australian industry participation were achieved in phases I and II according to all sources.

2.21 It is difficult, however, to understand why there is such a significant difference (7% or 8%) between their assessments with respect to the contracts which Australian firms *should* have been able to undertake (see PP columns for phases I and II).

2.22 The differences in phase III data may be explained in part by the additional local industry participation resulting from significant extra work for the Goodwyn A platform as noted in paragraph 2.2.13.

Comparative data on platforms, LNG trains and FPSOs

2.23 The following pages provide examples of how the methodology associated with local content calculation may cause confusion.

2.24 As previously mentioned, little understanding can be gained from data in aggregate form. Equally, it is appropriate to consider local industry's level of participation in two ways: over time *and* within the same technology. The LNG trains provide a good example: they represented technology new to Australia in phase II and the same technology was used to provide LNG train 3 in phase III.

2.25 Care needs to be taken over the terminology used in the data sources: Woodside's 'actual Australian participation' and Allen's 'actual participation rate' are not synonymous, as the tables on page 16 show. The former is an assessment of the maximum possible rate of Australian industry participation and the latter is the effective or realised level of local industry participation.

Table 2.2: Woodside’s assessment of local content of platforms

Facilities	Development costs (mod \$ million)	Overall sourcing %		Claimed ^δ Australian participation %
		Australian	Overseas	
Phase I — North Rankin A	1 080	65	35	not available
Phase II ^λ				
Phase III — Goodwyn A ^α	1 606	60	40	75

Notes: source of figures for North Rankin A was Woodside in correspondence with the Secretariat, dated 5.9.89; and for Goodwyn A, is Woodside: submission 23 (as at 29.8.95)

mod = money of the day

δ Woodside uses the term ‘actual participation’ which it defines as *the calculated level of participation for those items that could be procured or undertaken in Australia.*

λ Platform work was not undertaken as part of phase II.

α excludes exploration/ appraisal costs and insurance claims for the foundation failure on GWA platform.

Table 2.3: Woodside’s assessment of contract sourcing for platforms

Contract category	Phase I (North Rankin A)			Phase III (Goodwyn A)		
	Contract value \$m	% by value of source		Contract value \$m	% by value of source	
		Australia	Overseas		Australia	Overseas
purchase orders	not available				28	72*
subcontracts	not available			not available		
management and other costs	185	95 ^β	5	not available		
total	1 080			1 606		

Notes: Source of data is Woodside: submission 23, p 20

* Derived figure. Woodside stated that although 54% of orders were placed in Australia, 28% were actually sourced locally (submission 23, p 20)

β Source of data: 1989 IST report, p 49

Table 2.4: Woodside’s assessment of local content of LNG trains

Facilities	Estimated development costs (mod \$ million)	Overall sourcing		Claimed ^δ Australian participation %
		Australian	Overseas	
Phase I ^λ				
Phase II — train 1 and train 2	2888 [2900]	73	27	88
Phase III — train 3	928	69	31	89

Notes: source of figures, unless otherwise indicated, is Woodside: submission 23 (as at 29.8.95)

^λ LNG train work was not undertaken as part of phase I.

mod = money of the day; [The figure in square brackets is the value when the contract was paid]

^δ Woodside uses the term ‘actual participation’ which it defines as *the calculated level of participation for those items that could be procured or undertaken in Australia.*

Table 2.5: Clements’ assessment of contract sourcing for phases II and III (LNG trains and associated equipment)

Contract category	Phase II (LNG trains 1 and 2)			Phase III (LNG train 3)		
	Contract value* \$m	% by value of source		Budget value* \$m	% by value of source	
		Australia	Overseas		Australia	Overseas
purchase orders ^Ω	908.1	46.4	53.6	397.6	42 [33]	58 [67]
subcontracts ^θ	1 365	95.6	4.4	420.2	99	1
management and other costs ^μ	723.5	60.5	39.5	320.8	73.8	26.2
total	2 997	72.5	27.3	1 139	72.2	27.8

Notes: source of figures is the 1994 Clements report, pp 104 – 107

* These terms reflect the different stages the contracts had reached when the Clements report was published in 1994.

The 1995 Woodside submission states 38% of all purchase orders were placed in Australia, but only 33% were sourced in Australia. (Woodside: submission 23, p 20)

^Ω Includes *expenditure on equipment, bulk materials and other material related costs.* Clements, p 44

^θ Includes *supply and erect, erection and indirect and miscellaneous subcontracts.* Clements, p 44

^μ Includes *payments for LNG plant main contractor, dredging, movables, construction insurance, fees and royalties, Woodside office and field management, outside services and support and LNG administrative and technical services.* Clements, p 44.

2.26 The use of the terms ‘overall sourcing’ and ‘source’ are not synonymous. Where orders were placed may not be the same as where the orders were actually carried out as can be seen by the following quote which refers to data in this chapter’s tables:

It is of interest and concern that although 54% and 38% of all purchase orders for the respective Goodwyn A and LNG Train 3 projects were placed in Australia, only 28% and 33% of the respective purchased items were actually sourced in Australia.¹⁴

2.27 Not making this distinction could lead to a misleading picture of local industry’s participation rates.

Table 2.6: Woodside’s assessment of local content of floating production and storage offloading facilities (FPSOs)

FPSO facility	Development costs (mod \$ million)	Overall sourcing %		Claimed ^δ Australian participation %
		Australian	Overseas	
<i>Cossack Pioneer</i>	723	35	65	81
<i>Griffin Venture</i>	700	not available		
(Laminaria)	1 000*	34	66	72

Notes: source of figures, unless otherwise indicated, is Woodside: submission 23 (as at 29.8.95)
mod = money of the day

δ Woodside uses the term ‘actual participation’ which it defines as *the calculated level of participation for those items that could be procured or undertaken in Australia.*

* Estimated cost. The figures derive from a September 1997 media release from Woodside. Woodside reported that this figure has risen to \$1 350 million in an internet media release dated 19.2.98.

2.28 Limited data is available on FPSOs. This table is included to show the impact on local content levels of this new trend in oil extraction. There is clearly a substantial reduction in the level of local industry participation achieved with this technology. Further information may be found in Chapter 5.

14 Woodside: submission 23, p 20. (At page 19 of the submission the level of all the supply sourcing and costs for GWA is given as 60%. Note that 54% refers to purchase orders only.)

Effect of secondary contracts on local content calculation

2.29 The local content policies published by the WA Government and by Woodside assert that they seek to ensure subcontractors source locally wherever competitive in terms of price, quality and timing. However, since the Federal Government is content to ‘monitor’ industry participation by accepting developers’ figures for local content and the industry acknowledges it rarely monitors beyond the primary level of contract, it is impossible to tell if local content figures quoted are inflated.

On the local content issue and how you calculate the figures, it is ... correct to say that the companies do not go down to level 2 or level 3 monitoring of what goes on.¹⁵

2.30 The Allen and Clements reports and Woodside’s 1995 submission all provide little comment about secondary contracts, leakage overseas and local content levels. DPIE and DIST were not able to add to debate on this matter.

2.31 Table 2.5 gives contract sourcing for LNG trains in the categories of ‘purchase orders’, ‘subcontracts’ and ‘management and other costs’, which together equal all work. It is reasonable to assume that Australian industry should capture almost all the subcontracts for the two LNG trains associated with the NWS expansion. The question is: to what extent did Australian firms who were successful tenderers in turn procure goods required for that contract overseas?

2.32 Allen and Clements both estimated leakage overseas during phases II and III at 27% of (prime contract) purchase orders.¹⁶ Allen stated Australian firms’ procurement of goods and services from overseas contributed to unrealised local participation levels. This unrealised level was attributed to goods and services which could not be sourced economically locally; or tenders being uncompetitive on price, specification or delivery grounds. It gives the effective unrealised levels of local industry participation *at the prime contract level* for each phase as 8%, 8% and 12%.¹⁷

2.33 In addition to these reports, the Industry Commission and Australian Manufacturing Council have also, as part of reports on participation in major projects, made comments along the lines that local industry participation in the North West Shelf was high. DIST and DPIE, in evidence to the Committee, also share this belief. None have made reference to measurement of contracts below the prime level or indeed leakage at the prime level.

2.34 The Committee believes that Australia should not be complacent about the levels of industry participation. By not routinely monitoring below the prime

15 McKeon, F, Member, APPEA tariff committee: *Transcript of evidence*, p 120

16 Allen, p 20 and exhibit 10, pp 104 and 107

17 Allen, p 20

contract level, any further leakage of contracts for the supply of goods and services overseas is masked. It is essential that a methodology for measuring local content be agreed and a program of appropriate monitoring be implemented.

2.35 The Committee would have felt more reassured by up-to-date, independently gathered verification of content levels. There clearly could be distortion caused by deeming certain contracts unwinnable by Australian firms as well as by the confusion about the level of leakage overseas of contracts awarded to Australian sources.

Conclusions

2.36 There should be an agreed national methodology on Australian value added in Australia to measure local content. This measure should be developed through industry consultation. The lack of such an agreed methodology makes the data highly suspect and liable to misinterpretation. The data should be reported by industry for analysis by DIST and ISONET.

2.37 Recommendations on this matter are contained in the next chapter.