
Section 57 of the Competition Act (Cap. 50B)

Grounds of Decision issued by the Competition Commission of Singapore

In relation to the notification for decision of the completed acquisition by National Oilwell Varco Pte Ltd of Barracuda Ventures Pte Ltd pursuant to section 57 of the Competition Act

19 July 2011

Case number: CCS 400/004/11

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I. Introduction

The notification

1. On 3 June 2011, National Oilwell Varco Pte Ltd (“NOV”) and Barracuda Ventures Pte Ltd (“BV”) filed a joint notification pursuant to section 57 of the Competition Act (the “Act”), applying for a decision by the Competition Commission of Singapore (“CCS”) as to whether the acquisition, by NOV of sole control of BV (the “Transaction”), has infringed the section 54 prohibition of the Act. NOV and BV are collectively referred to as “the Parties”.
2. Subsequent to the submission of a revised non-confidential form of Form M1 by the Parties on 15 June 2011, CCS consulted customers and competitors to seek their views on the likely impact of the Transaction on the relevant markets.
3. CCS has sought the views of 2 competitors¹ and 3 customers² in the market for the manufacturing and supply of blow out preventers (“BOPs”), 8 competitors³ and 9 customers⁴ in the market for the provision of repair and refurbishment services for the same. Of which, 3 competitors⁵ and 1 customer⁶ in the market for the provision of repair and refurbishment services responded. The remaining third parties approached by CCS declined to comment or indicated that they had no comments on the notified Transaction.
4. CCS has also sought the views of 3 independent inspection companies for the repair and refurbishment of BOPs⁷. Of which, CCS received 1 response⁸.
5. The Transaction was notified as a proposed acquisition but was completed during the course of assessment on 4 July 2011. This was notified to CCS on 7 July 2011.
6. At the end of the consultation process and after evaluating all the evidence, CCS has concluded that the Transaction will not infringe section 54 of the Act (Cap. 50B).

¹ [X]
² [X]
³ [X]
⁴ [X]
⁵ [X]
⁶ [X]
⁷ [X]
⁸ [X]

II. The Parties

NOV

7. NOV is one of the primary operating entities of the NOV Group in Singapore. The ultimate parent company of the NOV Group of businesses is National Oilwell Varco, Inc., a Delaware, US corporation. NOV provides the design, manufacture and sale of comprehensive systems and components used in oil and gas drilling and production, the provision of oilfield tubular inspection, internal tubular coatings and other services, to the upstream oil and gas industry⁹. NOV is a limited private company incorporated in Singapore which provides inspection, coating of drill pipes, servicing and renting of oilfield equipment.
8. Following the Transaction, the Parties have submitted that the merged entity will better manage the quality and consistency of repair and refurbishment services for NOV BOPs under the direct control and management of NOV and allow NOV to provide a complete service to its customer base for BOPs, through increasing NOV's BOP repair and refurbishment capabilities in Asia¹⁰.
9. The Parties submitted that the global turnover for NOV, which was largely Singapore-based, was [X] for the financial year ending 31 December 2010¹¹.

BV

10. BV is a Singapore-incorporated holding entity. Its subsidiaries are primarily focused on various aspects of the BOP market in providing services such as the repair and refurbishment of BOPs and high pressure drill floor equipment and the trading of BOPs and BOP spare parts. The Parties submitted that the Singapore turnover was [X] for the financial year ending 31 December 2009¹². In the industry, BV's BOP repair facility in Singapore is known as STSA or Stork.

III. The Transaction

⁹ Paragraph 2.2.2 of Form M1.

¹⁰ Paragraph 3.2.1 of Form M1.

¹¹ Paragraph 3.1.5 of Form M1.

¹² Paragraph 3.1.7 of Form M1.

11. The notified Transaction is the acquisition of control of BV by NOV¹³. NOV has made a cash offer for the entire issued share capital of BV. The Transaction was completed on 4 July 2011.
12. The Parties have submitted that the notified Transaction will enable the merged entity to better manage the quality and consistency of repair and refurbishment services for NOV BOPs under the direct control and management of NOV, and allow NOV to provide a complete service to its customer base for BOPs, through increasing NOV's BOP repair and refurbishment capabilities in Asia¹⁴. The Parties have further submitted that this was in response to customers' demand for increased OEM capabilities for such services in Asia, in the aftermath of the Deepwater Horizon oil spill in the Gulf of Mexico in 2010, which resulted in more stringent BOP safety specifications and maintenance requirements¹⁵.
13. Post-Transaction, the BV Group will be providing BOP repair and refurbishment services for NOV BOPs only¹⁶. As such NOV will be providing BOP repair and refurbishment services in Asia through BV exclusively and will not be engaging other service providers in Asia post-Transaction¹⁷.
14. Based on the Parties' submission that the Transaction is an acquisition of sole control by NOV over BV, the Transaction constitutes a merger pursuant to s 54(2)(b) of the Act¹⁸.

IV. Competition Issues

15. The Parties submitted that there may be overlaps between NOV and BV in the market for the supply and manufacture of BOPs and the market for the provision of repair and refurbishment services for BOPs¹⁹. The NOV Group is active in the upstream market for the manufacturing and supply of BOPs as an original equipment manufacturer ("OEM"), through the NOV brand, Shaffer. BV has some minor activities in this area, having recently manufactured and supplied a small number of BOPs in Asia. The NOV Group currently provides repair and refurbishment services for NOV BOPs

¹³ Paragraph 3.1.8 of Form M1.

¹⁴ Paragraph 3.2.1 of Form M1.

¹⁵ Ibid.

¹⁶ Paragraph 3.2.15 of Form M1.

¹⁷ Response to Request for Further Information dated 5 July 2011, reply to Question 8.

¹⁸ Section 54(2)(b) provides that a merger occurs if one or more persons or other undertakings acquire direct or indirect control of the whole or part of one or more other undertakings.

¹⁹ Paragraph 3.1.10 of Form M1.

in the United States, Norway and United Kingdom, but does not undertake the repair and refurbishment of NOV BOPs in Asia. Instead, the provision of repair and refurbishment services for NOV BOPs in Asia is outsourced to third party facilities²⁰. BV carries out BOP repairs in Singapore. CCS has therefore focused on whether the Transaction will lead to coordinated and non-coordinated effects that would substantially lessen competition in these markets.

V. Relevant Markets

(a) Product markets

16. The Parties have submitted that the relevant product markets for the purposes of this notification are:

- (i) the manufacturing and supply of BOPs, and
- (ii) the provision of repair and refurbishment services for BOPs.

Description of Product

17. A BOP is a large, specialized valve used to seal, control and monitor oil and gas wells. BOPs were developed to cope with extreme erratic pressures and uncontrolled flow emanating from wells during drilling and can be closed if, for example, the drilling crew risks losing control of formation fluids. BOPs are critical to the safety of the crew, the rig and the environment, and for monitoring and maintaining the well. BOPs are used on both land and offshore drilling rigs.
18. A BOP system typically consists of a stack of BOPs as well as additional components. For instance, a typical subsea deepwater BOP system also includes components such as electrical and hydraulic lines, control pods, hydraulic accumulators, test valve, kill and choke lines and valves, riser joint, hydraulic connectors and a support frame.

(i) Market for the manufacturing and supply of BOPs

19. From a demand-side perspective, the Parties have submitted that BOPs are specific to the purposes of sealing, controlling and monitoring oil and gas wells and generally are not substitutable with other products for this purpose²¹.

²⁰ Paragraph 3.1.11 of Form M1.

²¹ Paragraph 6.1.13 of Form M1.

20. From a supply-side perspective, the Parties submitted there is considerable scope for supply-side substitution by OEMs. The different types of BOPs, while being suitable for different environments, are unlikely to be vastly dissimilar in terms of manufacturing and operational principles. The Parties have submitted that it would not be prohibitive for BOP manufacturers to leverage on commonalities in manufacturing processes of various types of BOPs to reap economies of scale and scope by manufacturing BOPs of all types and product specifications. This is supported by the fact that the major OEMs supply BOPs over the entire range of product specifications²².

(ii) Market for the provision of repair and refurbishment services for BOPs

21. The Parties have submitted, and industry players have confirmed, that a BOP would need to be repaired and refurbished approximately every 3 to 5 years. These repairs are usually carried out by the OEMs themselves (such as NOV, Cameron and Hydril), or by authorized repair facilities ("ARFs") appointed by the OEMs, or by independent third parties.

(i) *Parties' Submissions*

22. The Parties submitted that from the demand perspective, repair and refurbishment services for the separate BOP product lines are likely to be specific to the BOP being serviced, which means they cannot be substituted with other services.
23. In respect of supply-side substitution, the Parties have submitted that there is considerable scope for supply-side substitution by service providers across the BOP product lines. Parties also further submitted that where existing service providers already possess the requisite licences or other quality accreditations for the provision of repair and refurbishment services for BOPs, such service providers would be able to easily switch to providing and repair and refurbishment services for other types of BOPs without the need to obtain any additional licences or quality accreditations.
24. The Parties are also of the view that supply-side substitution exists by service providers in neighbouring heavy engineering industries such as shipbuilding, milling, gold mining, oilfield services and coal industries where requirements for repair facilities or workshops, as well as requisite equipment, are similar to those for the provision of repair and refurbishment services for BOPs.

²² Paragraph 6.1.19 of Form M1.

(ii) *CCS' assessment*

25. CCS agrees with the Parties that they overlap in the supply of the manufacturing and supply of BOPs and the provision of repair and refurbishment services for BOPs. These are the two focal products for competition assessment²³.
26. From a demand perspective, CCS has received feedback that there are no substitutes for BOPs; this is in line with submissions made by the Parties. From the supply-side perspective, CCS understands from third parties that where patents for older designs of BOPs expire, these designs are replicated by other manufacturers located in countries elsewhere in the world. These BOPs do not differ in their intended use and are generally a viable substitute for BOPs of a newer design²⁴. Overall, CCS agrees with the views put forward by the parties that the relevant product market is the market for the manufacture and supply of BOPs.
27. In relation to the market for the provision of repair and refurbishment services for BOPs, from the demand perspective, CCS agrees with the Parties' assessment that there are no substitutes for the services.
28. Based on the information submitted by the Parties and the feedback received from third parties, CCS understands that, from a supply side perspective, such services are available from OEMs, authorized repair facilities and independent third party providers. CCS further understands that while repair services can be obtained from independent third party providers, the provision of a certificate of conformity ("CoC") at the end of repair and refurbishment services (typically done every 3 to 5 years) can only be obtained from OEMs and their authorized repair facilities.
29. The requirement of having a full inspection carried out every 3 to 5 years by an OEM, or certified by an OEM, is a recommendation of the American Petroleum Institute ("API"). The API provides guidelines and technical specifications for the oil industry and generates standards for drilling equipment. The API is also an accrediting body for rig operators and repair and refurbishment facilities in the oil and gas industry. Requirements of oil exploration companies, who engage the rig operators, are generally based on the guidelines of API. API technical specifications and standards are also

²³ *CCS Guidelines on Substantive Assessment of Mergers*, paragraph 5.5.

²⁴ [X]

generally regarded as the baseline for assessment by insurers in the event a claim is made²⁵.

(b) Geographic Market

(I) Manufacturing and Supply of BOPs

(i) Parties' Submissions

30. The Parties submitted that the relevant geographic market for the manufacturing and supply of BOPs is global²⁶ as BOPs are supplied to customers worldwide regardless of the geographic location of the manufacturing facility. The Parties also submitted that end-users of BOPs typically choose OEMs on the basis of the specification of the BOP and product availability.

(ii) CCS' assessment

31. Based on research carried out by CCS on the major OEMs in the market, CCS concludes that BOPs are supplied on a global basis and agrees with the Parties' submissions in this regard.

(II) Repair and Refurbishment Services

(i) Parties' Submissions

32. The Parties have submitted that the relevant geographic market for BOP repair and refurbishment services is likely to be Asia. The Parties submitted that once the BOP is purchased and installed on the rig, customers are able to procure BOP repair and refurbishment services for any type of BOP either from the OEM, the OEM-approved ARF, or non-ARFs in all regions of the world, depending on the location of the rig and its intended use after refurbishment. Customers may also transport the BOP to repair facilities of the service provider of their choosing in other regions should the customer prefer to do so²⁷.
33. From the demand perspective, customers generally select repair and refurbishment service providers on the basis of regional availability or

²⁵ [3<] and notes of meeting between CCS and local representatives of National Oilwell Varco on 8 July 2011.

²⁶ Paragraph 6.1.10 of Form M1.

²⁷ Paragraphs 6.1.29 and 6.1.30 of Form M1.

proximity of the service provider's repair facilities to the location of the customer's drilling rig²⁸.

34. The Parties have also submitted that existing providers of BOP repair and refurbishment services may choose to expand their repair and refurbishment capabilities beyond their existing geographic scope of operation. Parties have cited the expansion plans of MTQ Corporation Limited in Bahrain to support their submission²⁹.
35. Subsequent to CCS' request for further information, the Parties submitted a list of providers of repair and refurbishment services in Asia which NOV considered could be suitable as ARFs outside of Singapore. In their view, such service providers would constitute supply side substitutes for end-customers and OEMs³⁰.

(ii) CCS' Assessment

36. In view of the feedback received, CCS notes that the views of industry players are consistent with the Parties' submissions that the geographic region from which customers are drawn is very wide and may extend from Australia to India³¹. Feedback received from third parties indicates that there are instances where requests for repair works may come from regions further afield, such as Russia.
37. CCS understands that this is possible as BOPs which are used for offshore rigs are nearly always repaired in the workshops and not on the rigs as they require extensive disassembly³².
38. CCS has also received feedback which confirmed the presence of providers of repair and refurbishment services situated in countries other than Singapore, such as Malaysia and Indonesia, which may be competitors to the service providers situated in Singapore³³. In light of the foregoing, CCS concludes that the relevant geographic definition for the market for the provision of repair and refurbishment services may be as wide as Asia.

VI. Market Structure

²⁸ Ibid.

²⁹ Paragraph 6.1.31 of Form M1.

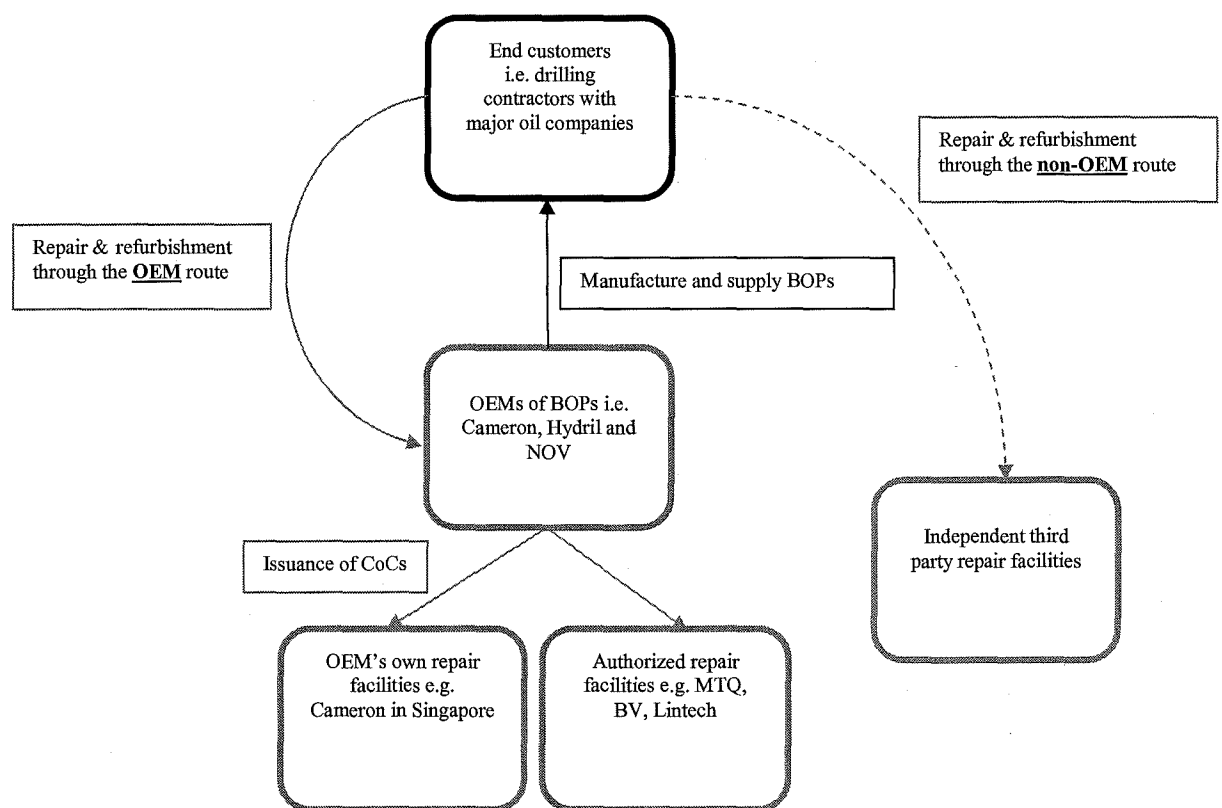
³⁰ Response to Request for Further Information dated 7 July 2011.

³¹ [X]

³² [X]

³³ [X].[X].

39. In examining the structure of demand for the supply of BOPs and provision of repair and refurbishment services for BOPs, CCS understands that the purchasers of BOPs and end customers of BOP repair/refurbishment services are the owners of the drilling rigs (drilling contractors) on which the BOP is installed. The drilling rigs may be offshore rigs or land rigs. Many of the more complex BOPs, such as those manufactured by NOV and repaired/refurbished by BV, are installed on offshore drilling rigs. These drilling rigs are in turn engaged by oil exploration companies who would set out technical specifications which the drilling rigs would have to meet. This is expressed diagrammatically below.



40. The BOP on a drilling rig will need to be repaired and refurbished typically every 3 to 5 years in conformance with the OEM's specifications. After which, the drilling contractor will need to obtain a CoC to demonstrate that repair and refurbishment work has been carried out satisfactorily.
41. The way in which an OEM certificate is obtained will depend on whether the company carrying out the repair acts as a subcontractor or a main contractor. The first can be described as the OEM-route, whereby the company carrying

out the repair acts as a subcontractor for the OEM, who in turn is contracted to provide the relevant repairs to the rig owner. CCS understands that to provide repairs in this way, the service provider is usually first appointed by the OEM as an ARF. The CoC is issued by the OEM to the drilling contractor. The second can be described as the non-OEM route, whereby the engineering company provides the repair service direct to the drilling contractor, but requests the OEM to issue the certificate following inspection by the OEM³⁴.

(i) Market shares and market concentration

Market for the manufacture and supply of BOPs

(i) Parties' Submissions

42. The Parties have submitted that in the upstream market for the manufacturing and supply of BOPs, while NOV had an estimated market share of approximately [10-20]% in 2010 based on sales volume, the estimated market share of BV Group in this market is negligible at approximately [0-1]%³⁵.

Table 1: Market share estimates (by volume) in the Reportable Market for the manufacturing and supply of BOPs worldwide from 2008 to 2010

		Manufacturing and supply of BOPs worldwide		
		2008	2009	2010
NOV (sold under the Shaffer brand)	Sales (by volume)	[X]	[X]	[X]
	Estimated market shares	[15-25]%	[15-25]%	[10-20]%
BV Group	Sales (by volume)	[X]	[X]	[X]
	Estimated	[0-1%]	[0-1%]	[0-1%]

³⁴ [X]

³⁵ Response to Request for Information dated 23 June 2011, reply to question 2. The Parties have submitted that QBOP Pte Ltd ("QBOP"), a wholly owned subsidiary of BV, designs, manufactures and markets BOPs for oil and gas drilling. The manufacturing of BOPs is not directly undertaken by QBOP [X]. QBOP sold [X] units of BOPs in 2010 and [X] prior to this. These [X] units accounted for approximately [0-1]% of the estimated total sales in the global market for the manufacturing and supply of BOPs in 2010.

		Manufacturing and supply of BOPs worldwide		
		2008	2009	2010
	market shares			
Merged entity	Estimated market shares	[15-25]%	[15-25]%	[10-20]%
Cameron International Corporation (“Cameron”)	Estimated market shares	[55-65]%	[60-70]%	[60-70]%
Hydril Pressure Control (“Hydril”), a subsidiary of General Electric Company (“GE”)	Estimated market shares	[15-25]%	[15-25]%	[15-25]%
Others	Estimated market shares	[X]	[X]	[X]
Pre-merger CR3	Estimated market shares	[90-100]%	[90-100]%	[90-100]%
Post-merger CR3	Estimated market shares	[90-100]%	[90-100]%	[90-100]%
Total size of the BOP market	Estimated sales volume	[X]	[X]	[X]

Source: NOV's internal estimates based on observations of the market

43. While the CR3 of the top three suppliers of BOPs post-Transaction is [90-100]% of the market, CCS recognizes that in the upstream market for the manufacturing and supply of BOPs, based on the submissions of the Parties and supported by views expressed by third parties, the overlap between the Parties in this market is negligible.

Market for the provision of repair and refurbishment services

44. The Parties submitted that the turnover of the Parties in the market for the repair and refurbishment services for BOPs in Asia is as follows.

Table 2: Turnover of NOV, the BV Group and MTQ in the Reportable Market for the provision of repair and refurbishment services for BOPs in Asia from 2008 to 2010³⁶

		Provision of repair and refurbishment services for BOPs in Asia		
		2008	2009	2010
NOV	Sales (by value)	[X]	[X]	[X]
BV Group ³⁷	Sales (by value)	[X]	[X]	[X]
MTQ ³⁸	Sales (by value) (based on Parties' submissions)	[X]	[X]	[X]

Source: The Parties' internal data and publicly available information

45. The Parties have submitted that [X] value has been attributed to NOV in the above table as NOV does not provide repair and refurbishment services for BOPs in Asia.
46. The Parties have also submitted that due to the absence of published data on the market shares, a more appropriate measure of market participants' respective positions would be the number of API licences issued.
47. CCS does not accept that the calculation of market shares based on the number of API licences as put forth by the Parties in this respect is appropriate as not all holders of the licences are active in the market for repair and refurbishment, and there are other factors and costs which may be significant for new entrants.

(ii) Barriers to entry and expansion

48. Entry by new competitors or expansion by existing competitors may be sufficient in likelihood, scope and time to deter or defeat any attempt by the merger parties or their competitors to exploit the reduction in rivalry flowing

³⁶ Table 2 of Form M1.

³⁷ The Parties have submitted that [X].

³⁸ The Parties have submitted that [X]

from the Transaction (whether through coordinated or non-coordinated strategies)³⁹.

49. The Transaction under consideration appears to be a vertical merger, where there is little or no horizontal overlap between the activities of the merging parties. However, post-Transaction, BV is expected to only provide repair and refurbishment services for NOV's BOPs. As such there is a reduction in the number of independent providers of BOP repair and refurbishment services. In this context we assessed of the role of barriers to entry in this market.

(i) *The Parties' submission*

Market for the provision of repair and refurbishment services

50. The Parties stated that there are no prohibitive barriers to entry in the relevant markets. In relation to the downstream market for BOP repair and refurbishment services, the Parties have explained this as follows: (i) accreditations such as API and ISO are not required to enter the market and in any case are not difficult or time consuming to obtain (approximately 6 months), in particular by companies already active in the engineering sector; (ii) appointment as an ARF is not a requirement for market entry and is in any case not prohibitively difficult to obtain; (iii) the demand for BOPs and maintenance work required for BOPs is likely to grow as activities relating to oil and gas exploration and production increase; this will attract new entry.⁴⁰
51. In terms of expansion, the Parties have also noted that a potential constraint on the capacity of BV to expand its maintenance and repair business in Asia may be [X].

(ii) *Feedback from industry stakeholders*

API Accreditation

52. The views of third parties that responded to our inquiries did not fully align with those of the Parties. Respondents indicated that in practice, API accreditation is required by end-customers before they will consider using a particular company for BOP repairs.⁴¹ Although API accreditation is not a legal requirement, it is a general industry standard. It is a requirement in order to achieve ARF status. From the perspective of third parties, obtaining

³⁹ Paragraph 7.2 of CCS Guidelines on Substantive Assessment of Mergers.

⁴⁰ Paragraphs 3.2.69 to 3.2.84 of Form M1.

⁴¹ [X]

an API accreditation can be a time consuming matter, with application processes taking up to a year.⁴² ISO accreditations are also required as part of the API accreditation.⁴³

Appointment as ARF

53. There is a strong preference among end-customers for service providers to be appointed as an ARF and/or be listed on the OEM's approved vendor list⁴⁴. ARFs are expected to have equipment that conforms to the OEM's requirements, for example relating to lifting, welding, heating and pressure testing, as well as API accreditation. An ARF is regularly inspected by the qualifying OEM to ensure that the standards required by the OEM are met. As such an ARF may also issue a CoC that certifies that repairs have been done in conformity with the technical standards required by the OEM.

Ease of New Entry

54. CCS has received feedback that, in view of the equipment and space requirements, sunk costs for new facilities are very significant. Even if start-up costs are not prohibitively high taking into account the industry (at approximately \$30 million for the setting up of a facility in Singapore), difficulties in acquiring land, skilled workers, industry knowledge and technical expertise relating to BOPs are likely to represent barriers to entry. Moreover, third parties noted that it can take a significant period of time for a new entrant to become established in the market. Existing facilities face similar challenges if they wish to expand (save that they are already likely to have the required industry knowledge and technical expertise)⁴⁵.
55. Existing engineering companies and OEMs are the most likely new entrants but respondents stated that there were no examples of new entry in the last ten years. There are also no indications that any particular company may be interested in entering in the short to medium term. Those engineering companies that are providing some BOP services outside Singapore and which are not ARFs, did not indicate that they had an interest in becoming ARFs or in competing with Singapore-based service providers.

(iii) CCS' Assessment

⁴² [X]
⁴³ [X]
⁴⁴ [X]
⁴⁵ [X]

56. CCS notes the differences between the views expressed by the Parties and by third parties relating to the perceived barriers to entry. While the amount of financial investment is generally agreed to be in the region of \$30 million for the establishment of a workshop that can carry out a full range of repair activities comparable to BV and its competitors, the amount of time required for entry as well as the significance of other factors are not aligned. In relation to the time required for entry, CCS notes that it would take approximately 6 months to a year for the obtaining of API accreditation. Upon obtaining the requisite equipment and API accreditation, CCS has been informed that it may take approximately [X] for the workshop to be appointed as an ARF⁴⁶.
57. However, we have not identified any likely new entry. In light of this we did not conclude that entry would deter the exercise of market power (if any) post-merger.
58. CCS has also considered whether the Transaction, which is vertical in structure, may itself create or raise barriers to entry that raise competition concerns. Generally, three conditions are necessary (but not sufficient) for this problem to arise in the context of a vertical merger: (i) the degree of vertical integration between the two markets must be so extensive that entrants to one market (the primary market) would also have to enter the other market (the secondary market) at the same time; (ii) the requirement of entry into the secondary market must make entry at the primary market significantly more difficult and less likely to occur; (iii) and the structure and other characteristics of the primary market must be otherwise so conducive to anti-competitive behavior that the increased difficulty of entry is likely to affect the market's performance⁴⁷.
59. On the available evidence, we concluded that this Transaction does not create or raise barriers to entry that raise competition concerns. This is because in Asia (excluding Middle East), one of the three suppliers of BOPs is not vertically integrated and the other has only limited repair facilities in the region. This indicates that – at least in the short to medium term- it is possible to compete in either market (manufacture/supply and repair/refurbishment) without competing in the other. The Transaction between NOV and BV does not affect this conclusion. Given that the conditions listed in the preceding paragraph are cumulative, and since the

⁴⁶ Notes of meeting between CCS and local representatives of National Oilwell Varco on 8 July 2011.

⁴⁷ Paragraph 8.10 of *CCS Guidelines on Merger Assessment*.

first condition listed in paragraph 58 above has not been met, there has been no need to consider the other conditions.

(iii) Market Developments

60. Recent developments in the markets under consideration impact on the competitive effect of the Transaction. In particular, these developments have an impact on the market for the provision of repair and refurbishment services for BOPs. A summary of CCS' understanding of these developments based on submissions by the Parties and responses from third parties is set out in the following paragraphs.
61. Arising from the incident at British Petroleum's Macondo well in the Gulf of Mexico on 20 April 2010 (commonly referred to as the Deepwater Horizon incident), concerns surrounding the safety of drilling rigs, including BOPs, have escalated in relation to the safety certification of BOPs. In this aspect, the more stringent requirements of certain jurisdictions have led to an increased awareness and higher demand for the involvement of the OEMs in the repair and refurbishment of BOPs. OEMs such as NOV therefore wield a significant influence over the choice of provider of the repair and refurbishment services by virtue of the fact that most repairs and refurbishments are carried out by an ARF and an OEM-issued CoC is often necessary as matter of internal policy of rig operators.
62. The Parties have submitted that it is up to end-customers, as a matter of practice, to procure repair and refurbishment services from non-ARFs in view of the competitive pricing and comparable quality of services offered⁴⁸. Depending on the nature of repair works required and the location of the rig, the end-customers may choose to obtain services from a non-ARF where a CoC is not required either due to the nature of the works carried out or due to the regulations that pertain in the area where the rig is situated.
63. CCS has considered that drilling operations are subject to government supervision and the relevant regulatory authorities impose certification requirements that relate to the safety of equipment and standards of repair/refurbishment. In this context, the regulatory authorities may require CoCs. Further, as highlighted earlier, even where a CoC is not required by the relevant regulatory authority, a rig operator may insist on such a certificate as part of its internal procedures⁴⁹.

⁴⁸ Paragraph 3.2.95 of Form M1.

⁴⁹ [X]

64. However, this possible limitation on the availability of providers of suitable repair and refurbishment service providers is mitigated by the understanding that rig operators would plan for the repair and refurbishment of the BOPs in advance of the required inspection and source available suppliers and facilities before the date of inspection. Further, CCS understands that where the capacities of the OEM and ARFs are totally utilized, OEMs may allow for the works to be carried out by a non-ARF in order to minimize the down time experienced by the end-customers. Similarly, where emergency repairs are required, OEMs have the ability and provide the service of dispatching inspection teams to inspect available repair facilities and supervise the repair works being carried out⁵⁰.
65. We understand from feedback received that OEMs are generally unwilling to issue CoCs for repair work carried out by non-ARFs⁵¹. However, CCS is also mindful that the non-ARFs will not have been qualified by the OEM and may not meet the required quality standards and are unlikely to be in a position to issue a CoC on behalf the OEM.
66. With the exit of BV as an independent competitor of repair and refurbishment services post-Transaction, CCS has considered if the Transaction will give rise to adverse effects due to a decrease in the number of repair facilities, which can provide services to OEMs and the end-customers.
67. Feedback received from CCS indicates that it may be possible for OEMs to sponsor new entrants (see below), approve new repair facilities, or to construct their own repair facilities⁵². CCS understands that OEMs such as [X] are building their own repair facilities in other parts of Asia⁵³. CCS is thus of the view that the Transaction is unlikely to give rise to adverse effects in this respect.

(iv) Countervailing buyer power

(i) Parties' Submission

68. Parties have submitted that customers in the relevant markets have strong countervailing power as (i) there are no or minimal switching costs in the Reportable Markets in the absence of purchasing contracts entered into by purchasers of BOPs as well as customers of repair services; and (ii)

⁵⁰ [X]

⁵¹ [X]

⁵² [X]

⁵³ [X]

customers are able to sponsor or encourage new entry or expansion in the relevant markets⁵⁴.

(ii) Feedback from industry stakeholders

69. CCS understands from the feedback received from customers and competitors that while there are no purchasing contracts, the process of switching between providers of repair and refurbishment services is uncommon as it requires several steps including qualifying the provider, providing training and transferring proprietary information and technology. As a result, switching is fairly uncommon and the costs are likely to be significant⁵⁵.
70. However, feedback received also raised the possibility that, with significant investment of costs and time, it would be possible for OEM to sponsor new entry into the market for the provision of repair and refurbishment services⁵⁶.

(iii) CCS' Assessment

71. CCS is of the view that while third parties face difficulties in switching providers due to the transfer of technical information and training involved, this is mitigated by the ability of customers, who are generally large and sophisticated companies such as OEMs or rig operators, to sponsor new entrants⁵⁷.
72. As such, the customers are likely to be able to exercise strong countervailing power to discipline supplier pricing.

VII. Competition Assessment

(a) Vertical Concerns

73. Vertical aspects of acquisitions leading to a vertical integration are generally efficiency-enhancing and unlikely to result in a substantial lessening of competition in a market, unless market power exists at one of the affected functional levels⁵⁸.

⁵⁴ Paragraphs 3.2.52 to 3.2.60 of Form M1.

⁵⁵ [X]

⁵⁶ [X]

⁵⁷ [X]

⁵⁸ Paragraph 8.4 of *CCS Guidelines on the Substantive Assessment of Mergers*.

74. CCS notes that the Parties, through the merged entity, will have an estimated market share that is below the indicative 40% threshold for market power in the market for the manufacturing and supply of BOPs worldwide. In the market for the provision of repair and refurbishment of BOPs in Asia, while Parties have not been able to provide market share figures, CCS notes that NOV is not present in the geographic market for the provision of such services and BV is one of a number of repair facilities in Asia. As the Parties do not appear to have significant market power in either market, it is unlikely that the vertically integrated firm will be able to foreclose competition in the upstream market for the manufacturing and supply of BOPs globally nor the downstream supply for the repair and refurbishment of BOPs in Asia.

(b) Non-coordinated effects

75. Non-coordinated effects may arise where, as a result of the Transaction, the merged entity finds it profitable to raise prices (or reduce output or quality) because of the loss of competition between the merged entities⁵⁹. Other firms in the market may also find it profitable to raise their prices because the higher prices of the merged entity's product will cause some customers to switch to rival products, thereby increasing demand for the rivals' products⁶⁰. In this instance, the market likely to be affected in this regard would be the market for the provision of repair and refurbishment services for BOPs as there is a reduction in the number of the number of suppliers post-Transaction.
76. As BV will only be providing BOP repair and refurbishment services for NOV's BOPs post-Transaction⁶¹, competing OEMs who currently appoint BV as one of their ARFs for the repair and refurbishment of BOPs will no longer have access to BV as a supplier of repair and refurbishment services. CCS is of the view that although BV is an important supplier for OEMs to provide repair and refurbishment services for their respective brands of BOPs, there are alternative service providers which competing OEMs to NOV can appoint as ARFs. Third parties' feedback also indicated that OEMs can, with a significant but not prohibitive investment in cost and time, operate their own repair facilities for the repair and refurbishment of their respective brands of BOPs.
77. CCS is of the view that post-Transaction, non-coordinated effects are unlikely to arise in the market for the repair and refurbishment of BOPs in Asia.

⁵⁹ Paragraph 6.3 of *CCS Guidelines on the Substantive Assessment of Mergers*.

⁶⁰ *Ibid.*

⁶¹ Paragraph 3.2.15 of Form M1.

78. As outlined above, the notified Transaction is unlikely to result in any incremental market shares in each of the relevant markets as the Parties mainly operate on different levels of the relevant markets. As such, the Parties are unlikely to find it profitable to raise prices or reduce output post-transaction as they will be constrained by the existing competitors.

(c) Coordinated effects

79. A merger may also lessen competition substantially by increasing the possibility that, post-merger, firms in the same market may coordinate their behaviour to raise prices, or reduce quality or output. Given certain market conditions, and without any express agreement, tacit collusion may arise merely from an understanding that it will be in the firms' mutual interests to coordinate their decisions. Coordinated effects may also arise where a merger reduces competitive constraints in a market, thus increasing the probability that competitors will collude or strengthen a tendency to do so⁶². Vertical mergers may facilitate coordination, for example by increasing market transparency. Integration may afford the merged entity better knowledge of selling prices in the upstream or downstream market, thereby facilitating collusion in either of those markets⁶³.
80. On the available evidence, CCS concludes that the structural change brought about by the Transaction in the context of the characteristics of the markets under consideration is not such as to raise concerns about coordinated effects. In respect of both the downstream and upstream markets, CCS noted that the products/services are not homogeneous and significant asymmetry remains between market participants post merger in terms of their market shares, degree of vertical integration and regional presence.
81. In the upstream market, there is competition by way of innovation, in particular in respect of more complex BOPs. As noted by the parties, prices in the market are not transparent. Moreover, the Transaction does not enhance price transparency as between NOV and BV, because NOV was already aware of BV's prices in the downstream market in the context of BV's role as a contractor for the repair of NOV's BOPs.
82. Finally, CCS notes that in respect of the upstream market there is no reduction in the number of suppliers. Given that the merging parties have indicated that after the merger, BV will only provide repair and

⁶² Paragraph 6.7 of *CCS Guidelines on Substantive Assessment of Mergers*.

⁶³ Paragraph 8.8 of *CCS Guidelines on Substantive Assessment of Mergers*.

refurbishment services for NOV's BOPs, there is a reduction in the number of market participants downstream in Singapore. However, as noted above, there are a number of existing providers of such services in the region. This is likely to impact on the sustainability of any coordination.

VIII. Efficiencies

83. The Parties have submitted that the merged entity is expected to achieve synergies in relation to the integration and consolidation of the repair and refurbishment of NOV BOPs under the direct control and management of NOV. The Parties submitted that the quality of product repair in respect of BOPs in particular with regard to the safety and reliability of BOPs will be improved.
84. Other efficiencies projected by the Parties include better turnaround times for the repair and refurbishment of NOV BOPs through improved control of the repair process. This will in turn lead to savings in time and costs for the customer as the repair and refurbishment work will be completed in a timely manner and in accordance with the agreed dates of completion.
85. While CCS is of the view that there could be potential benefits and improved quality control due to the increased oversight of the repair facilities by NOV as the OEM, CCS is unable to comment on the likely savings in time and costs as this information has not been provided by the Parties.

IX. Ancillary Restraints

86. The Parties have identified Clause 9.2 of the Sales and Purchase Agreement ("SPA") as an ancillary restraint. Clause 9.2 provides that: [X]
87. [X].
88. The Parties have further confirmed that that Clause 9 of the SPA will apply on a [X]⁶⁴.

(i) Parties' Submissions

89. The Parties submitted that the restriction is necessary for the implementation of the notified Transaction in order to allow NOV to benefit fully from the goodwill that is acquired as part of the notified Transaction⁶⁵. The Parties

⁶⁴ Response to Request for Further Information dated 23 June 2011, reply to Question 11.

⁶⁵ Paragraph 10.1.5 of Form M1.

also submitted that the non-compete restriction is [X] and the duration of [X] is required to protect the value of the business and assets acquired by NOV and is not overly restrictive of competition⁶⁶.

(ii) *CCS' Assessment*

90. CCS is of the view that the restrictions contained in Clause 9 of the SPA are directly related and necessary to the implementation of the Transaction and consequently fall under the exclusion under paragraph 10 of the Third Schedule of the Act. The CCS Guidelines on the Substantive Assessment of Mergers state that non-compete clauses, if properly limited, are generally accepted as essential if the purchaser is to receive the full benefit of any goodwill and/or know-how acquired with any tangible assets. CCS will take into consideration the duration of the clause, the geographical application of the clause, its subject matter and the persons subject to it.
91. CCS is of the view, based on the facts of the case, that [X] is a reasonable period of time for NOV to protect its interests in the markets for the provision of BOP repair and refurbishment services and the manufacture and supply of BOPs to fully benefit from the goodwill and know-how acquired as part of the Transaction. For the same reasons, CCS is also of the view that the geographical application is also reasonable in light of the geographic market definition of the affected markets.

X. Conclusion

92. For the reasons above and based on the information available, CCS assesses that the Transaction is unlikely to infringe the section 54 prohibition.



Yena Lim
Chief Executive
Competition Commission of Singapore

⁶⁶ Paragraph 10.1.6 of Form M1.