

# Discussion Paper

## Improving the Financial Security Regime for Offshore Oil and Gas Installations

December 2016



# Improving the Financial Security Regime for Offshore Oil and Gas Installations

## Making a submission

Submissions can be made by sending to the Ministry of Transport:

Consultation on Improving the Financial Security Regime for Offshore Oil and Gas Installations

Ministry of Transport

PO Box 3175

Wellington 6140

via email to [info@transport.govt.nz](mailto:info@transport.govt.nz)

Submissions should be received by 5pm 20 February 2017.

This consultation document directly poses 9 questions. Other relevant information or comment is also sought.

You should indicate in your submission whether it would be acceptable, if required, for officials from the Ministry of Transport to contact you to discuss your submission. If you need more information to assist you in preparing a submission, please contact Olivia Kitson at [o.kitson@transport.govt.nz](mailto:o.kitson@transport.govt.nz) or through the above contact information.

Your submission may be the subject of a request under the Official Information Act 1982, which could result in its publication. The withholding of particular submissions for any reason will be determined in accordance with the Official Information Act. If you feel that any part of your submission should be properly withheld under the Official Information Act, you should indicate this clearly. Further information about the Official Information Act is available at: <http://www.legislation.govt.nz>.

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## Executive Summary

1. New Zealand's regulatory framework for offshore petroleum exploration and production seeks to ensure that operators have procedures to minimise the likelihood, and reduce the effect, of any adverse event. In parallel with this framework, multiple agencies oversee a financial security regime which aims to ensure operators are able to meet the costs of their proposed activities and their legal obligations.
2. In the event of a spill, owners and operators of offshore installations are liable for the full costs of regaining the control of a well; pollution damage to other parties; and the costs incurred by public agencies in preventing, mitigating, and cleaning up the spill.
3. The government has undertaken a review of the financial security regime for offshore installations to improve its effectiveness and efficiency.
4. Officials reviewed each aspect of the financial security regime for offshore installations to determine their relevance, effectiveness and suitability. Officials found that for the most part the financial security regime is fit for purpose.
5. However, three main issues have been identified with the financial assurance requirement for offshore installations set out in Marine Protection Rules Part 102, and established under the Maritime Transport Act 1994 (MTA):
  - Lack of an explicit requirement to provide financial assurance for the cost of well control;
  - An insufficient level of financial assurance required to ensure each operator has the financial means to pay the relevant cost of pollution damage resulting from a spill from their installation; and
  - Incompatibility between the financial assurance requirement and coverage provided by conventional insurance policies.
6. This document seeks feedback on the issues and options outlined below.

## Background

7. New Zealand uses a prevention-control-response-recovery framework for regulating offshore exploration and production. The primary focus is on minimising hazards and preventing spills from occurring by ensuring that operators have the capability, plans and resources necessary to minimise the likelihood, and reduce the effect, of any adverse event.
8. In the event of a spill, operators are responsible for stopping the release of oil. Operators are also liable for the full costs related to pollution damage<sup>1</sup> incurred by other parties, and costs incurred by public agencies in preventing, controlling and cleaning up a spill.
9. The regulatory framework for offshore installations includes a financial security regime that aims to ensure operators are able to meet the costs of their proposed activities, meet their legal obligations, and cover their potential liabilities from pollution damage.
10. In broad terms, there are four aspects to the financial security regime.

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<sup>1</sup> Pollution damage is defined as damage or loss of any kind. Section 385A of the Maritime Transport Act also explicitly states it includes: (a) costs of any reasonable preventive measures taken to prevent or reduce pollution damage and any damage or loss occurring as a result of those measures; (b) costs of reasonable measures of reinstatement of the environment that are undertaken or to be undertaken; (c) losses of profit from impairment of the environment.

## **A: Financial capability assessment**

11. Under the Crown Minerals Act 1991 (CMA), the Ministry of Business, Innovation and Employment (MBIE) undertakes a preliminary assessment of the operator's financial capability to carry out its proposed work programme before granting a petroleum exploration permit. This assessment also considers whether the permit applicant is likely to have the capability and systems required to meet applicable health, safety and environmental legislation.
12. MBIE can revoke a permit if the operator is unable to meet its work programme obligations. This can indicate a change to the operator's financial capability.
13. Prospective operators must demonstrate their ability to finance their share of committed activities, and 50 percent of contingent (non-committed) activities up to, and including, the first contingent well.
14. Financial capability can be demonstrated using: net worth; future cash flows; loans from banks and other financial institutions; directors' loans; parent company support (deed of guarantee); and the issue of additional share capital.
15. In 2013, the CMA was reviewed and the financial capability assessment was broadened to include Tier 1 permit applicants (this includes offshore oil and gas operations). The 2013 review did not identify any significant issues with the financial capability test. Therefore, the requirements have remained broadly unchanged since 2013.

## **B: Financial bonding conditions**

16. Depending on the location of an offshore oil or gas installation, operators are required to seek a marine or resource consent:
  - Under the Exclusive Economic Zone and Continental Shelf Act 2012 (EEZ Act), applicants are required to seek a marine consent from the Environmental Protection Authority (EPA) before undertaking certain activities in the exclusive economic zone.
  - Under the Resource Management Act 1991 (RMA), activities in the territorial sea require a resource consent from the relevant authority before undertaking activity.
17. The EPA or regional councils may impose conditions to ensure operators appropriately deal with adverse effects of the activity authorised by the consent on the environment or existing interests. Conditions may include a requirement that consent holders:
  - provide a bond for the performance of any one or more conditions of the consent; and/or
  - obtain and maintain public liability insurance of a specified value.
18. A bond requirement can continue after the expiry of the marine consent to secure the ongoing performance of conditions relating to long-term effects.

## C: Financial resources for well containment

19. As part of their Oil Spill Contingency Plan, operators of offshore installations must prepare, and implement when necessary, a Well Control Contingency Plan (WCCP). The operator, as the party responsible for stopping the release of oil, must demonstrate they have prepared for all spill scenarios, have access to equipment, and have financial means to contain a spill at its source.
20. Under Marine Protection Rule Part 131 (Rule Part 131), Maritime New Zealand assesses whether applicants have sufficient financial resources available to give effect to their emergency response plans and procedures in the event of an oil spill. In the first instance, Maritime New Zealand uses open-source information to make a judgment on an operator's financial ability, although additional information is sometimes sought.

## D: Financial assurance for clean-up and compensation

21. Under the Maritime Transport Act 1994 (MTA), the owner or operator of every offshore installation is required to have a current Certificate of Insurance issued by Maritime New Zealand before commencing their activity. Marine Protection Rules Part 102 (Part 102) sets out the requirements that operators must meet to be issued with a Certificate of Insurance.
22. Part 26A of the MTA establishes liability to an operator for pollution damage and provides affected parties with a clear avenue to claim damages against the insurer or person providing the guarantee. This ensures that a specified level of funds is available through a third party in the event an operator does not have the financial ability to meet its liabilities resulting from a spill event.
23. Currently Part 102 applies a fixed minimum financial assurance requirement for all offshore installation operators. The minimum is currently set at 14 million International Monetary Fund Units of Account or approximately NZ\$27.0 million.<sup>2</sup> The fixed level has remained at this rate since Part 102 was first introduced in 1998.
24. Part 102 allows operators to use a range, or combination, of financial security products to meet their assurance requirements, for example, insurance products, bank guarantees, bonds, and deposits.

## Reviewing the financial security regime

25. The level of financial assurance for offshore installations that is required under the MTA ('D' above) was reviewed in 2013. The review found that New Zealand's current financial assurance requirement was too rigid, insufficient in scale, and failed to adequately reflect the potential consequences of adverse events from different installations. The requirement was based on a framework designed for ships, and the fixed minimum requirement for financial assurance did not reflect the likely costs and damages of an incident.
26. In 2014, the Ministry of Transport and Maritime New Zealand sought public feedback on a proposal to increase the minimum financial assurance requirement from 14 million International Monetary Fund Units of Account. At the time this equated to approximately NZ\$26 million.

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<sup>2</sup> As at 30 September 2016, 1 International Monetary Fund Unit of Account is equal to NZ\$1.93. Based on this rate, 14 million units of account equates to NZ\$27.02 million.

27. Submitters agreed that the current level of financial assurance was inadequate and should be increased. However, some submitters also stated there was a lack of suitable insurance policies available to cover liabilities required under the MTA.
28. Due to these concerns the proposal was not progressed. Instead, the Ministry of Transport and Ministry of Business, Innovation and Employment subsequently undertook a further review of the broader financial security regime to determine its relevance, effectiveness and suitability.
29. The review indicated that the majority of the regime is appropriate, specifically:
  - the sequencing of the four aspects of the financial security regime;
  - the agencies responsible for each aspect of the regime;
  - the financial capability test carried out by the Ministry of Business, Innovation and Employment ('A' above);
  - the financial bonding conditions that can be applied by the EPA and regional councils ('B' above); and
  - the WCCP requirement administered by Maritime New Zealand ('C' above).
30. Officials identified three main issues with the financial assurance requirement for clean-up and compensation ('D' above), relating to:
  - the lack of an explicit financial assurance requirement for well containment under Part 102;
  - the level of financial assurance for clean-up and compensation under Part 102; and
  - the incompatibility of conventional insurance policies with the requirements under Part 102.
31. This document seeks feedback on these issues and options to address them, as outlined in detail below.

## Issue 1: Financial assurance for well containment

32. There is no requirement for operators to provide financial assurance under Part 102 specifically for well containment. This creates two risks.
33. The first risk is that if an operator does not, or cannot, fulfil its legal obligations to respond to an incident, the Crown would respond to resolve it. Without financial assurance for the costs of containment, there is no guarantee that the Crown, or any contracted parties, could recoup these costs. Affected parties may have to take their claim through the courts at their own expense, without guarantee of success.
34. Operators already typically hold insurance policies that specifically include well containment costs. Conventional insurance policies provide hierarchical protection against the costs and damages associated with an out of control well. The total insured value would first be allocated to pay out the cost of controlling the well, then remaining funds from the policy would be put towards clean-up, compensation, and damages.
35. The second risk is that without well containment being explicitly considered in calculating the total level of financial assurance required, the level of insurance an operator has may be insufficient to cover clean-up, compensation and damages. As insurance policies typically pay out the costs of controlling the well before other costs, fewer funds would be available for subsequent payments to affected parties.

## Option 1A) Status quo

36. The first option is to retain the status quo. There would not be an explicit financial assurance requirement for costs of well containment under Part 102.
37. Under the status quo, there remains a risk that the Crown, or any contracted parties, may not be able to recoup their costs.
38. There would be no additional compliance costs for operators, nor additional administration costs.

## Option 1B) Introduce a prescribed cost of financial assurance for well containment

39. The second option is to introduce a financial assurance requirement under Part 102 that specifically includes a cost estimate for well containment. This option is similar to the requirements in Australia and the United Kingdom.
40. The calculation would broadly reflect the expected cost of containing a well blow-out, including the cost of drilling a relief well and using a capping stack.
41. Two potential methods for calculating the expected cost of well containment are presented below for comment. Where adequate information is available for both methods, the higher of the two estimates shall be used.

Cost of well control = (2 x Estimated cost of drilling activity) + Cost of capping stack

In the absence of an operator's estimate, the default cost of a capping stack in New Zealand is NZ\$60 million.

Cost of well control = (Estimated daily rig cost x time to achieve well kill) + Cost of capping stack

In the absence of an operator's estimate, the default cost of a capping stack in New Zealand is NZ\$60 million and the time to achieve kill well is 120 days.

42. Requiring financial assurance to include the costs of well containment would increase the likelihood that sufficient funds will be available to cover costs of clean-up, damages and compensation in the event of a spill. Under this option, well containment costs would become part of the total financial assurance requirement.
43. The cost to operators of meeting their financial assurance requirement under this option may increase. This will depend on whether they currently hold insurance that includes well containment costs, and whether this insurance is of a sufficient level to meet their financial assurance requirement.

**QUESTION 1: Which is your preferred option? Why? What are the strengths and weaknesses of each option?**

**QUESTION 2: What are your thoughts on the proposed formulas under option 1B?**



## Issue 2: Level of financial assurance for clean-up and compensation

44. Part 102 applies a minimum financial assurance requirement for all offshore installations, which is currently set at approximately NZ\$27 million. This minimum requirement applies to all offshore installations, irrespective of each installation's characteristics or the potential impact of a spill from it.
45. The level of financial assurance was reviewed due to concerns it did not reflect the likely costs of a spill. Should a spill occur, and the costs of clean-up and compensation exceeded the current minimum level of financial assurance, an operator may not have the means to pay the relevant costs of pollution damage.
46. Modelling has been undertaken to estimate the potential costs of oil spills from different offshore locations in New Zealand. The full report can be found at [www.transport.govt.nz/sea/financial-security-regime-for-offshore-installations](http://www.transport.govt.nz/sea/financial-security-regime-for-offshore-installations). The main findings are outlined below.
47. The modelling primarily focused on the likely cost of pollution damage from hypothetical exploration wells in Deepwater Taranaki basin, Pegasus basin, and Canterbury basin. Modelling found that the estimated costs of a credible worst-case oil spill varied substantially between wells in these locations. The range of costs estimated for exploration wells varied from a median of \$12 million for a well off the coast of Canterbury to a median of \$926 million for a Deepwater Taranaki well.
48. The estimated median damages from 200 scenario runs at each location are shown below.

	Deepwater Taranaki		Pegasus		Canterbury	
	\$ million	Percent	\$ million	Percent	\$ million	Percent
Estimated damages						
Clean-up	799	86.3%	56	97.2%	12	99.7%
Tourism	123	13.3%	0	0.0%	0	0.0%
Fisheries	4	0.4%	2	2.8%	0	0.3%
<b>Total</b>	<b>926</b>	<b>100.0%</b>	<b>58</b>	<b>100.0%</b>	<b>12</b>	<b>100.0%</b>

49. The modelling also investigated the potential cost from actual production wells in the South Taranaki Basin using published studies and modelling. Costs for these two hypothetical scenarios, involving a non-persistent gas condensate<sup>3</sup> release and a persistent light condensate release, were estimated at an indicative level and are shown in the table below.

Well characteristics						
Oil type	Non-persistent gas condensate			Persistent light condensate		
Barrels/day	5,000	8,830	20,000	5,000	8,830	20,000
Barrels washed ashore	16,204	28,620	64,810	61,215	108,120	244,839
Estimated damages (\$ million)						
Clean-up	120.0	130.0	170.0	170.0	220.0	360.0
Tourism	0.1	0.1	0.9	0.9	2.4	6.5
<b>Total</b>	<b>120.1</b>	<b>130.1</b>	<b>170.9</b>	<b>170.9</b>	<b>222.4</b>	<b>366.5</b>

50. The cost of clean-up made up the vast majority of estimated damages. Losses of profit in the fisheries and tourism sectors were small in proportion to the cost of clean-up following oil spills.

<sup>3</sup> Condensate is a low-density liquid hydrocarbon that generally occurs in association with natural gas.

51. Overall, the modelling highlights that operators currently are not required to provide financial assurance that reflects the potential costs of clean up and compensation from their installation. Any significant incident is likely to exceed the current minimum level of NZ\$27 million.
52. The current minimum requirement does not guarantee there will be adequate, effective, and prompt compensation available to those affected by a pollution incident. In the event of a major incident, the current level (\$27 million) exposes the Crown and other parties to a risk of non-recovery for clean-up costs and pollution damage, should an operator become unable to meet costs above the level prescribed.

## **Option 2A) Status quo**

53. The first option is to retain the status quo. Maritime New Zealand would continue to issue a Certificate of Insurance if insurance or other financial guarantee of approximately NZ\$27 million is provided by an applicant.
54. Under the status quo, the risk remains that the Crown and other parties may not be able to easily recover the likely costs of clean-up and pollution damage.
55. However, there would be minimal compliance costs for operators. Administration costs associated with retaining a single financial assurance requirement at the current level would also be minimised.

## **Options 2B) Increase the minimum level of financial assurance**

56. An alternative option is to increase the level of minimum financial assurance required for all offshore installations.
57. An indicative minimum requirement of NZ\$300 million is above the potential cost from a spill in the Pegasus and Canterbury Basins, but below that for a spill from the Deepwater Taranaki. It places New Zealand near the midpoint of requirements in Canada, the United Kingdom and Australia.
58. Compared to the status quo, NZ\$300 million would more appropriately reflect the potential costs to the Crown and other third parties generated by a major oil spill and would ensure a more realistic level of readily available compensation.
59. However, this option may force lower risk operators to hold financial assurance that is in excess of the likely cost and damage of a spill from their installation, and could be prohibitive to those permit holders. In other instances, as indicated by the modelling, a fixed requirement may mean some permit holders provide financial assurance that is not sufficient to cover the costs of higher-end potential spills.

## **Option 2C) Introduce scaled requirements**

60. Another alternative option is to adopt a scaled framework for requiring financial assurance in the offshore drilling environment, similar to those applied in Australia and the United Kingdom.
61. This option would subject each individual installation to a financial requirement that is more appropriate and based on the potential impact of a spill from that installation. The highest requirement within the framework would reflect the highest damages estimated in the modelling. Installations with a lower estimated potential impact would be required to provide a lower financial assurance.

62. A draft scaled framework is outlined in detail in Appendix 1.
63. In summary, each installation would be allocated points based on the length of coastline impacted, volume of oil reaching shore (in bbl<sup>4</sup>), and the type of hydrocarbon released, based on modelling of a credible worst case spill from the installation. A summary is outlined below.

Score A: Total length of shoreline oiled							
0km	1 to 200 km	200 to 400km	400 to 600 km	600 to 800 km	Over 800 km		
0 points	1 point	2 points	3 points	4 points	5 points		
Score B: Total volume reaching shore							
0 bbls	1 to 5,000 bbls	5,000 to 40,000 bbls	40,000 to 80,000 bbls	80,000 to 120,000 bbls	120,000 to 160,000 bbls	160,000 to 200,000 bbls	Over 200,000 bbls
0 points	1 point	2 points	3 points	4 points	5 points	6 points	7 points
Score C: Hydrocarbon type							
Dry gas				Other			
0 points				1 point			
Total Score							
Score (total A + B + C)		Band		Financial Assurance Requirement			
0		0 (Dry gas)		NZ\$25 million			
1		1 (No shoreline impact)		NZ\$50 million			
2-3		2		NZ\$100 million			
4-5		3		NZ\$200 million			
6-7		4		NZ\$300 million			
8-9		5		NZ\$450 million			
10-11		6		NZ\$600 million			
12-13		7		NZ\$800 million			

64. The level of financial assurance required would vary from NZ\$25 million to NZ\$800 million, depending on the estimated impacts of a spill from each installation.
65. For instance, an installation likely to release only dry gas<sup>5</sup> would have minimal clean-up costs and the lower financial assurance level of NZ\$25 million would therefore be appropriate. By contrast, an installation with a credible worst case scenario that involves a large volume of oil being released and impacting many kilometres of coastline would have significant clean-up costs and the maximum level of NZ\$800 million may therefore be appropriate.
66. While the framework cannot accurately predict the cost of a spill, a scaled approach provides a better assessment of the possible pollution damages of an incident resulting from a particular installation. It provides the greatest assurance that there is effective, prompt and adequate compensation available to those affected.
67. This option would have implications for operators as a scaled approach would increase the financial assurance requirement for many installations. Those operators would be required to either adjust their insurance coverage, or find additional financial guarantees, to cover their new requirement.
68. Such a requirement may also require operators to undertake oil spill fate modelling for their installation to enable their installation to be allocated a requirement based on the scaled framework. Should this option be progressed, it may be possible to align this requirement with the modelling operators already undertake to inform their Well Control Contingency Plans to avoid duplication.

<sup>4</sup> A bbl is a barrel of oil, a standard unit of measurement of oil.

<sup>5</sup> Gas with no liquid component.

69. The framework would also subject Floating Production, Storage and Offloading (FPSO<sup>6</sup>) to the same type of assessment as fixed offshore platforms.
70. It may be that an unexpected release from a FPSO storage vessel could feasibly produce damages similar to, or exceeding, the costs of a blow-out of the relevant well. Where this is the case, modelling of a scenario in which the main tank of the storage vessel is lost would also be undertaken. This should then be assigned to a band, and if this is higher than the band for a blow-out of the relevant well, this will be the financial assurance requirement for the installation.
71. The proposed levels in New Zealand for both option 2B and 2C are higher than Australia, reflecting New Zealand's greater distance from Singapore, from which equipment would be mobilised to respond to an accident. It also reflects the higher persistence of the waxy condensate found in New Zealand relative to hydrocarbons found in Australia.

**QUESTION 3: Which is your preferred option? Why? What are the strengths and weaknesses of each option?**

**QUESTION 4: What are your thoughts on an appropriate financial assurance level under option 2B?**

**QUESTION 5: What are your thoughts on the draft formula under option 2C?**

**QUESTION 6: What would be a reasonable threshold (in bbl/km) for considering a section of shoreline 'affected' in an operator's oil spill modelling undertaken to satisfy option 2C?**

**QUESTION 7: How should Floating Production, Storage and Offloading (FPSO) vessels be treated?**

## **Issue 3: Coverage issues with conventional insurance policies**

72. Part 102 allows operators to use insurance or other third party financial guarantee products to meet the financial assurance requirements relating to remediation and compensation. Part 26A of the MTA requires that assurance must be provided by an external source to ensure affected parties have a clear avenue to claim damages in the event that an operator may not have the financial ability to meet their liabilities resulting from a spill event.
73. As part of their normal business operations, operators already hold insurance of a level well above the current minimum financial assurance requirement.
74. However, the insurance market faces difficulties in providing policies that cover all types of liabilities that operators have under the MTA. Specifically, conventional insurance policies do not typically provide cover for third party losses of profit from impairment of the environment.<sup>7</sup> While a small number of operators currently hold customized policies that cover third party losses of profit, the insurance market has indicated that these policies are unlikely to be available at a significantly higher level of financial assurance requirement.

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<sup>6</sup> A FPSO is a floating vessel used for the offshore production and processing of oil and gas.

<sup>7</sup> For example, in a scenario where someone suffers a loss of income resulting from environmental damage but where no physical damage has occurred to their property.

75. In the absence of acceptable insurance policies, operators would need to use another form of financial guarantee to meet the requirements of Part 102 and be issued a Certificate of Insurance. For example, some operators currently use parent company guarantees. However, at a significantly higher level of financial assurance, companies are unlikely to have the ability to provide a parent company guarantee, or other form of guarantee such as a bond, given the demands this would place on companies' capital.

### **Option 3A) Status Quo**

76. The first option is to retain the status quo in terms of the scope of the financial assurance requirements under Part 26A of the MTA, as given effect to under Marine Protection Rules Part 102.
77. Operators will continue to be required to use insurance policies, or other third party financial guarantee products, that address all of the operators' potential liability. Potentially affected parties would continue to have a clear path to claim damages in the event that an operator may not have the financial ability to meet their liabilities resulting from a spill event.
78. However, at present, operators have to use customized insurance policies, or alternative forms of financial security (such as parent company guarantees), to cover third party losses of profits. Operators are unlikely to be able to secure suitable financial guarantees of this kind if the level of financial assurance increases significantly.

### **Option 3B) Refine the scope of financial assurance required**

79. An alternative option is to make amendments to Part 102 to further specify the type of liabilities that the financial assurance must cover. The purpose of this amendment would be to address the mismatch between the liability for which financial assurance is required under Part 102 and the coverage of internationally available insurance products. This would result in conventional insurance policies being accepted as meeting their financial assurance obligation.
80. Operators would still be liable for third party losses of profit from impairment of the environment in the event of an oil spill incident, but would not be required to provide any assurance that they can cover it. This would not affect operators' unlimited liabilities for losses of profit in the event of an incident. Redress for third party losses of profit would need to be sought through a civil claim and would not be guaranteed.
81. Although there are differences between jurisdictions, this option is similar to the UK and Australia, where third party losses of profit are not incorporated into financial assurance tests, but operators remain liable for losses of profit.
82. If this option is progressed, further work would be required to establish what exclusions, conditions and deductibles are reasonable for an insurance policy while still allowing a Certificate of Insurance to be issued by Maritime New Zealand.
83. This option would increase the risk of non-recovery for third parties which suffer losses of profit from impairment of the environment, as funds would not be guaranteed for this aspect of liability.

### **Option 3C) Introduce separate financial assurance requirements for different aspects of liability**

84. Another option is to keep the level of financial assurance for third party losses of profit at the current level of NZ\$27 million, and to introduce an increased level of financial assurance for all other liabilities, including clean-up costs, remediation, and compensation for expenses incurred and physical damage (i.e. either option 2B or 2C).

85. Spill fate and damage modelling indicates that NZ\$27 million of financial assurance for third party losses of profit is predicted to more than adequately cover related costs for an oil spill event in the Pegasus or Canterbury basins, but is not necessarily sufficient for all modelled spills in Deepwater Taranaki.
86. This option would provide a better level of protection than the previous option, as all liability types would have at least the current level of financial assurance. It would also provide broader protection to the public than both the United Kingdom and Australia.
87. The insurance market has indicated a tailored policy covering varying levels of assurance is unlikely to be available. If the insurance market does not evolve, operators would be able to use insurance to meet most aspects of their requirements under Part 102, and provide a separate form of financial guarantee to cover third party losses of profit.

**QUESTION 8: Which is your preferred option? Why? What are the strengths and weaknesses of each option?**

**QUESTION 9: What would be the implications if options 3B or 3C were chosen?**

## Other operational matters

88. In addition to the three issues outlines above, there are three operational matters where submitters may wish to provide feedback.

## Joint Ventures

89. At present, parties in a joint venture are responsible for establishing how they meet the financial assurance requirement for the relevant installation. No change is proposed. Entities will continue to decide how they collectively meet the financial assurance obligation. For example, entities may provide a proportion of the financial assurance obligation that represents their interest in the installation. Alternatively, one entity may provide the entire financial assurance obligation on behalf of all other entities.
90. Submitters may wish to highlight any issues with the status quo with regard to how joint ventures meet the financial assurance requirement for an installation.

## Multiple installations

91. As the likelihood of a pollution incident such as a loss of well control is very low, the likelihood of an operator being exposed to more than one incident at the same time is not considered credible. Therefore it is considered sufficient that operators have financial assurance for highest cost installation amongst their portfolio of New Zealand operations, rather than the aggregate costs from multiple incidents. This financial assurance would also be used to meet their lower requirements for other installations in their portfolio.
92. Submitters may wish to highlight any issues with the treatment of multiple installations as described above.

## Currency

93. Under the current financial assurance obligations, the level required is prescribed in terms of the International Monetary Fund's Special Drawing Rights. While technically not a currency, a mathematical conversion is required to calculate whether the level of financial assurance provided by operators is above the minimum level required.
94. However, insurance policies are typically expressed in United States Dollars.
95. To simplify this process, and to protect against exchange rate fluctuations, it is proposed that any new financial assurance requirement will be expressed in United States Dollars. If this proceeds, the values outlined in this document will be converted.

## Next steps

96. This document seeks feedback on the issues and options outlined above that relate to the financial assurance requirement under Part 102. Along with the questions asked above, any other relevant information or feedback is appreciated. Details on how to make a submission are provided at the beginning of this document.
97. Decisions on amendments to the financial security regime for offshore oil and gas installations will be made following consultation.
98. If any of the alternative options are progressed, amendments to Marine Protection Rules Part 102 will be required. Affected parties will be consulted with both during the development of a revised draft rule, and during formal consultation that will be open to the public.
99. Following formal consultation, the final draft rule will be prepared and presented to the Minister of Transport for signing.

## Appendix 1: Draft scaled framework for financial assurance

1. This framework simplifies complex oil spill scenarios for the purposes of assigning a broad financial assurance requirement, and as a result, can only provide an indicative estimate of the potential cost of an oil spill.
2. In developing a draft scaled framework for financial assurance, officials have considered overseas methods and New Zealand-specific modelling (available at [www.transport.govt.nz/sea/financial-security-regime-for-offshore-installations](http://www.transport.govt.nz/sea/financial-security-regime-for-offshore-installations)).

### Approaches overseas

3. Australia, the UK, and the US require operators to model a reasonable worst-case loss of well control event for their installation.
4. All three then apply a scaled framework to determine the appropriate level of assurance based on the characteristics of particular operations. As shown below, these jurisdictions use different variables to determine the likely impact and associated cost of an oil spill.

Australia	United Kingdom	United States
<ul style="list-style-type: none"> <li>• Hydrocarbon type</li> <li>• Total volume of hydrocarbon released</li> <li>• Potential shoreline impact as measured by oil ashore</li> </ul>	<ul style="list-style-type: none"> <li>• Impact on fisheries</li> <li>• Impact on aquaculture</li> <li>• Length of coastline impacted</li> <li>• Volume of oil on shoreline</li> </ul>	<ul style="list-style-type: none"> <li>• Daily oil discharge volume</li> <li>• Location</li> </ul>

5. Operators in Australia and the United Kingdom are required to model the likely impact of a credible worst-case loss of well control for their specific installation. This modelling is used by operators to estimate the expected cost of an oil spill and appropriate financial assurance requirement. Regulators then review the operator's assessment to ensure it is appropriate.

### Characteristics relevant to New Zealand operations

6. Modelling shows that how much of the spilled oil reaches shore, and the extent of shoreline that is oiled, are the best predictors of the clean-up, remediation and compensation costs from an installation.
7. Officials have developed a proposed framework to set the scaled financial assurance requirement predominately based on the length of coastline impacted and the volume of oil reaching shore. However, to recognise that a worst case scenario involving a dry gas release would have lower clean-up costs than an oil spill, hydrocarbon type is also included.
8. There is an expectation that oil spill trajectory modelling, which must be undertaken by operators as part of their Well Control Contingency Plan, will be utilised to provide relevant information.

### Draft scaled framework for financial assurance

9. Similar to the United Kingdom and Australia, each installation is assigned to one of eight costs bands, reflecting the potential impact of a credible worst case spill scenario.
10. First, points are allocated to each installation based on:
  - Total length of shoreline oiled
  - Total volume reaching shore, and
  - Hydrocarbon type.



11. The sum of these scores is then used to allocate each installation in a cost band, and therefore set the financial assurance requirement for clean-up costs.

**Step One: Length of shoreline oiled**

12. This variable accounts for the length of shoreline oiled. This calculation is based on the assumption that greater clean-up costs will be incurred when more shoreline is oiled.
13. According to the New Zealand-specific modeling, a length of coastline is considered impacted if, at any point in the model run, oiling is greater than 1 bbl per kilometre. If oil washed ashore affects a strip of beach 10 metres wide, this threshold would be roughly equivalent to 14 g/m<sup>2</sup>. Overseas models vary, for instance, Australia has adopted a threshold of 100g/m<sup>2</sup>. Question 6 of the discussion document seeks views on what would be a reasonable threshold for considering when a section of shoreline is affected.
14. The length of shoreline (in kilometres) affected by oil at this threshold is assigned to a band, each of which allocates a score from 1 to 5.

**Score A: Total length of shoreline oiled**

0km	1 to 200 km	200 to 400km	400 to 600 km	600 to 800 km	Over 800 km
0 points	1 point	2 points	3 points	4 points	5 points

**Step Two: Volume of oil reaching shore**

15. This variable accounts for the total volume of oil (in bbl) reaching shore before any onshore weathering sets in. This calculation is based on the assumption that greater clean-up costs will be incurred when there is more oil ashore.
16. Like the previous variable, the total volume of oil is assigned to a band, each of which allocates a score from 1 to 7. As modelling indicates, there is a strong relationship between the total volume of oil ashore and total clean-up costs. Consequently, this variable has been given greater weighting than the length of shoreline oiled.

**Score B: Total volume reaching shore**

0 bbls	1 to 5,000 bbls	5,000 to 40,000 bbls	40,000 to 80,000 bbls	80,000 to 120,000 bbls	120,000 to 160,000 bbls	160,000 to 200,000 bbls	Over 200,000 bbls
0 points	1 point	2 points	3 points	4 points	5 points	6 points	7 points

**Step Three: Hydrocarbon Type**

17. This variable accounts for the type of release expected from an installation. A worst case scenario involving a dry gas release would have lower clean-up costs than an oil spill. Therefore a gas release would be given a score of 0, whereas any other release would score 1.
18. Additional breakdown of hydrocarbon type to take into account the API of oil was considered. However, the potential impact of heavy crude oil is indirectly reflected in other two variables. For example, heavy crude would weather less in the ocean than light crude, and therefore the amount washed ashore would be greater. Including more types of hydrocarbon into the framework would likely double count the impacts of an oil spill.

**Score C: Hydrocarbon type**

Dry gas	Other
0	1

**Step 4: Total Score**

- Points from the three variables above are summed together to establish a total score, and therefore provide the level of financial assurance required for clean-up.
- To establish costs across bands, the clean-up cost for the median modelling scenario from the Deepwater Taranaki was used for the highest band. This scenario is considered a “reasonable worst case”. Lower bands were then shaped to fit the full range of modelling results as best as possible.

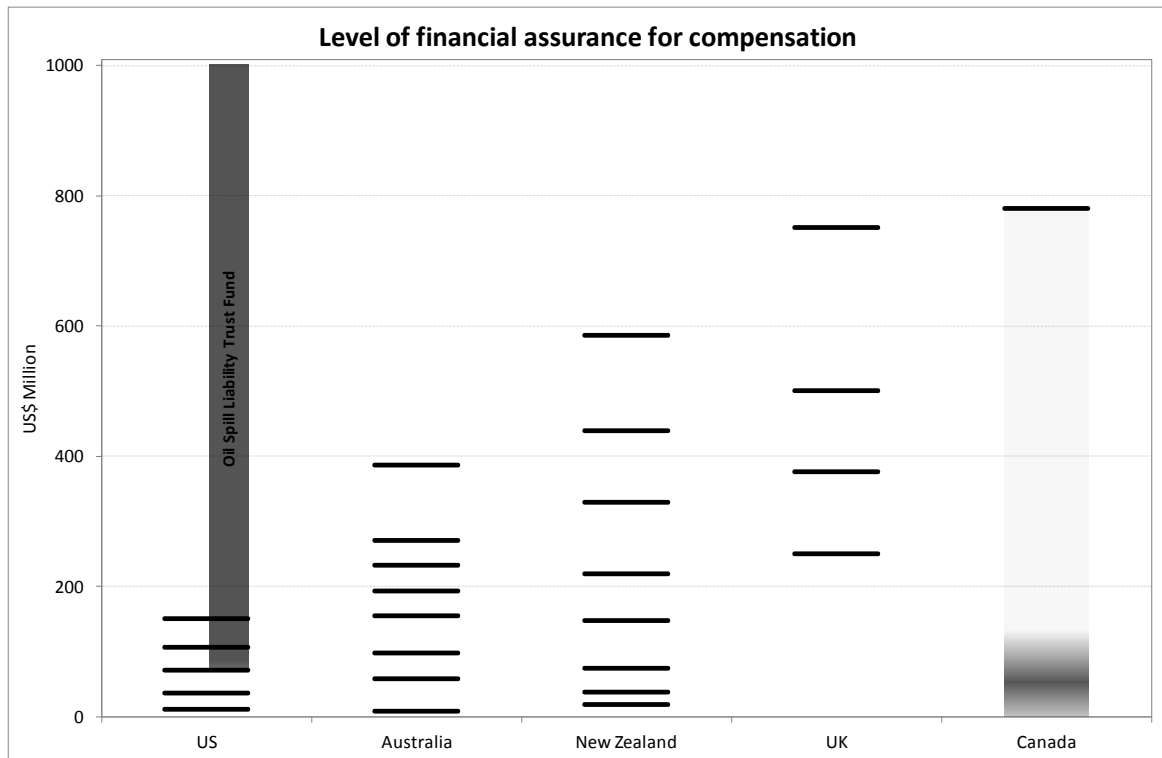
**Total Score: Banding table**

Score (total A + B + C)	Band	Financial Assurance Requirement
0	0 (Dry gas)	NZ\$25 million
1	1 (No shoreline impact)	NZ\$50 million
2-3	2	NZ\$100 million
4-5	3	NZ\$200 million
6-7	4	NZ\$300 million
8-9	5	NZ\$450 million
10-11	6	NZ\$600 million
12-13	7	NZ\$800 million

- Under the proposed banding system, installations with only dry gas wells would have a total score of 0, and would need to provide financial assurance of NZ\$25 million. This reflects that these types of installations are likely to have an indicative clean-up cost that is significantly lower than oil fields.
- For installations for which the credible worst-case scenario has no expected shoreline impact, financial assurance of NZ\$50 million would be required. This level reflects there are likely to be fixed costs during a spill, such as reconnaissance, command and control, pre-emptive activation of response resources, and offshore containment efforts.
- For installations from which shoreline impacts are expected in a credible worst-case scenario, the level of financial assurance gradually increases as the volume of oil reaching shore and the length of shoreline oiled increases.
- The framework would also subject Floating Production, Storage and Offloading (FPSO) to the same type of assessment as fixed offshore platforms.
- It may be that an unexpected release from the FPSO storage vessel could feasibly produce clean-up costs similar to, or exceeding, the costs of a blow-out of the relevant well. Where this is the case, modelling of a scenario in which the main tank of the storage vessel is lost should also be undertaken. This should then be assigned to a band, and if this is higher than the band for a blow-out of the relevant well, this will be the financial assurance requirement for the installation.

## Comparison to other jurisdictions

26. A visual comparison of the level of financial assurance required (excluding cost of well control) across jurisdictions outlined below. The diagram highlights that the proposed top band in New Zealand sits below the United Kingdom and Canada, but is higher than Australia and the United States.<sup>8</sup>



27. The higher level for the United Kingdom reflects the more persistent oil types found in the North Sea, indicating a higher volume of oil would need to be cleaned up.
28. Canada's requirement, which includes well control, reflects its absolute no-fault liability level of US\$750 million. A lower or higher level can be required if warranted because of the risk and impact of the operation.
29. The proposed levels in New Zealand are higher than Australia, reflecting New Zealand's greater distance from Singapore, from which equipment would be mobilised to respond to an accident. It also reflects the higher persistence of the waxy condensate found in New Zealand relative to hydrocarbons found in Australia.
30. The United States sets its financial assurance requirement considerably lower than the other comparator jurisdictions. This reflects the use of the Oil Spill Liability Trust Fund, an industry-funded mechanism, from which claims up to US\$1 billion above a liability cap (all removal costs plus US\$75 million) can be paid.

<sup>8</sup> Canada's requirement, which includes well control, reflects its absolute no-fault liability level of US\$750 million. A lower or higher level can be required if warranted because of the risk and impact of the operation. The United States sets its financial assurance requirement lower than the other comparator jurisdictions. This reflects the use of the Oil Spill Liability Trust Fund, an industry-funded mechanism, from which claims up to US\$1 billion above a liability cap (all removal costs plus US\$75 million) can be paid.