NEW ZEALAND BUSINESS ROUNDTABLE

Submission on the Draft Report on Oil Security Prepared for the Ministry of Economic Development by Covec and Hale & Twomey Limited

November 2004

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Summary

- This submission on the Draft Report on Oil Security by Covec and Hale & Twomey Limited is made by the New Zealand Business Roundtable (NZBR), an organisation comprising primarily chief executives of major New Zealand businesses. The purpose of the organisation is to contribute to the development of sound public policies that reflect overall New Zealand interests.

- In our view the Draft Report's recommendation that the government engage with the International Energy Agency (IEA) directly over oil security issues is sensible. We consider that the government will be able to do this more effectively if it gathers more information about willingness to pay and if it approaches the issues in a structured manner, using the framework for evaluating regulatory proposals in the Cabinet Manual.

- We suggest that a key empirical finding in the Draft Report is that the industry is operating on sound commercial lines. Its authors searched for evidence that oil companies are failing to give users the security they require, and did not find any. We doubt that any case can be made that the industry in New Zealand is any less prudent in managing risks of supply shocks than its counterparts in countries that are meeting the IEA's requirement.

- Our strong recommendation is that there should be no further talk of regulating the industry until a proper regulatory analysis has been undertaken in accordance with Cabinet Manual guidelines.

- The Draft Report's cost benefit analysis is in fact an analysis of what might be in oil users' interests if they used petroleum products irrationally in a shortage, had no alternative means of managing shortages, and enjoyed access to funding at a cost of capital of 5 percent instead of the industry's actual cost of capital. We attach an analysis that explains why it is plausible that the consumer irrationality assumption has exaggerated estimated benefits to users by up to a factor of 7.

- The Draft Report is not a regulatory analysis. It fails to identify any actual (as distinct from theoretical) industry problems; examine a full range of alternative courses of action; and assess the likely costs and benefits of the regulations it is recommending. We are particularly concerned that it fails to consider the potential adverse implications for future investment – dynamic efficiency.

- We recommend that fuller consultations be held with the industry and other parties over an extended timetable before any decisions are taken.

SUBMISSION ON THE DRAFT REPORT ON OIL SECURITY BY COVEC AND HALE & TWOMEY LIMITED

1.0 Introduction

1.1 This submission on the Draft Report (Draft Report) on Oil Security by Covec and Hale & Twomey Limited is made by the New Zealand Business Roundtable (NZBR), an organisation comprising primarily chief executives of major New Zealand businesses. The purpose of the organisation is to contribute to the development of sound public policies that reflect overall New Zealand interests.

1.2 The Draft Report arises from the realisation that oil stocks in New Zealand are below the levels required by its membership of the International Energy Agency (IEA). It investigates the issues and recommends, *inter alia*, that the government require the four major oil suppliers and Gulf to store up to 500,000 tonnes more oil than they currently store so that the IEA-mandated levels can be achieved. It also proposes that a government regulatory structure be put in place for ongoing monitoring, auditing and prosecuting companies for non-compliance. The recommendations also favour setting up an inventory obligation trading scheme to encourage least-cost storage solutions. The Draft Report leaves it for the government to determine who would be liable for all these expenses, but its discussion seems to favour imposing the costs on the industry. It also recommends that the government engage with the IEA directly to investigate the possibility of more flexible options for product afloat and short-term storage.

1.3 The economic consequences of the measures proposed are significant. While the Draft Report does not identify all the direct costs of the proposed imposts and regulations, or any of the indirect costs, it estimates that the one-off capital cost of its proposals (oil inventory and storage capacity) could be of the order of $500 million.

1.4 The Cabinet Manual contains a sound framework for evaluating regulatory proposals. The procedure laid down for preparing Regulatory Impact and Business Compliance Cost Statements involves carefully defining the problem that the proposed regulation is addressing, identifying the objective and the full range of relevant alternatives, and assessing the costs and benefits against these alternatives. This submission uses that framework to evaluate the Draft Report's regulatory recommendations.

1.5 Section 2 evaluates the Draft Report's 'problem definition' section on market failure. Section 3 analyses its cost-benefit analysis. Section 4 comments on the issue of who should pay for the proposed imposts. Section 5 comments on the international commitment aspects. Section 6 makes some concluding comments.

2.0 The market failure issue

2.1 The Draft Report acknowledges up front that the oil industry has been operating on sound commercial lines. This is exactly what we should all want it to be doing. Governments should not intervene unless they can overcome a substantial burden of proof that they will be doing more good than harm.

2.2 The Draft Report fails to provide a balanced discussion of market failure and government failure.[1] This deficiency needs to be corrected.

2.3 The Draft Report's discussion of market failure fails to establish any practical problems with current arrangements.[2] The analysis needs to identify the problems that people are actually facing, not the problems that they might be facing in theory.

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[1] For example, it fails to consider the harms that must be expected from the government intervention of the type proposed. Investment decisions (dynamic efficiency) will be impaired by regulatory takings without compensation in particular, and by the politicisation of the industry more generally. For example, any differences between the price at which oil is taken out of inventory and the cost of replenishing inventory will raise distributional issues that invite rent-seeking. The system will require arbitrary decisions concerning rules and initial allocations that will create injustices, rigidities and distortions.

[2] Departures from the idealised zero transaction cost textbook model of perfect competition are not manifestations of a real problem.

2.4 The Draft Report claims (p 36) that there must be a problem of *market power* because "during short-term supply shortages, physical rationing rather than price is used to limit demand". It asserts that this causes an efficiency loss without considering any transaction cost constraints that might make it efficient. For example, it fails to consider the possibility of implicit contracts for sharing risk or the need to deal efficiently with political and reputational risks during times of shortage. The Draft Report does not establish that users would prefer price rationing during a shortage to quantity rationing. In other words it does not establish that there is a real problem.

2.5 The Draft Report claims (p 37) that there is an *externality* because a shortage is more serious if it affects all firms or households rather than just one firm or household. As a statement of fact this is both obviously true and devoid of meaning. It amounts to saying that a major shortage is more serious than a trivial shortage. There is no obvious externality effect here. Suppliers have a greater incentive to avoid serious shortages because of the greater number of firms and households that will be prepared to pay to avoid being short.

2.6 The Draft Report's discussion of the lack of consumer demand for formal risk-sharing contracts is puzzling to encounter under the externality heading. It does not seem to consider that such contracts might be inefficient given transaction costs.

2.7 The Draft Report argues (p 38) that oil security has some of the aspects of a *public good*. It proposes that there is such a thing as "confidence in the economy as a whole". It does not consider whether expropriating private property rights in the oil industry without compensation would increase or reduce "confidence in the economy as a whole". Again the Draft Report notes the evidence that there is no problem in reality – the absence of cases in which customers tried to contract for greater security but were unable to do so – but apparently prefers to find that there is a problem in theory.

2.8 The Draft Report argues (p 38) that many consumers will not be as well informed as oil companies about the probabilities of supply failure. It postulates that this *information asymmetry* induces consumers to under-provide for security of supply. If this were true then better-informed users would not be making the same mistake. The actual evidence the Draft Report refers to does not suggest that well-informed users behave any differently. In any case, the proposition lacks a rationale for excluding the alternative possibility that ignorance could make people anxious and exaggerate the risk of extreme events, leading them to seek too much security of supply.

2.9 The Draft Report also suggests (p 38) that market failure occurs because of *moral hazard* because governments are expected to intervene in the event of a major crisis and limit losses. The notion that government intervention could limit losses needs justification. A shortage is a shortage and the costs must be borne regardless of how governments shift them around. Any notion that governments might intervene in a crisis to favour the oil companies at the expense of voters at large needs justification. Yet if governments would not do this, oil companies surely have an incentive to manage risks so as to avoid the possibility of populist actions by governments that would damage their interests. This would work in the opposite direction to the Draft Report's *ad hoc* theorising. In any case, moral hazard of this sort is a problem of government failure, not market failure.

2.10 Finally, we question the Draft Report's leap of logic in paragraph 2.4.6 when it concludes without any analytical framework that because it will not pay any one firm or user to incur the costs of avoiding an economy-wide shortfall, the willingness of all firms and all users to pay something on their own account will somehow lead to a failure in aggregate to look after the macro picture. This seems to be like arguing that there will always be a shortage of steak because individuals only buy enough for themselves and no one

thinks of buying enough for the nation. What is needed here is an articulated theory of stockpiling.

2.11 We conclude that the Draft Report does not establish that any market problems exist in reality. Customers are getting the level of assurance they require and there is no reason to think that there are any special contractual impediments to alternative arrangements should some customers be looking for greater security.

2.12 We therefore conclude that the Draft Report's opening observation that the industry is operating on a sound commercial basis looks sound. It should add that it has found no factual basis for inferring that it is not meeting user preferences satisfactorily. All the rest seems to rely on armchair theorising using a model that ignores real world transaction cost constraints.

3.0 The cost benefit assessment

3.1 The Draft Report's cost benefit analysis is not an assessment of the case for regulation. it ignores all dynamic efficiency issues and all the likely indirect costs of the regulation it is proposing. It does not provide any factual evidence of problems or consider alternatives to regulating for greater inventories. The latter omission is lamentable and in breach of Cabinet Manual guidelines. It means that the counterfactual for the cost benefit analysis bears no relationship to reality.

3.2 Another puzzling omission is the apparent failure of the analysis to consider the relevance of inventory 'on the water'. The IEA (apparently arbitrarily) excludes this, and this is a major reason why New Zealand falls short of the IEA requirement. Yet according to the Draft Report (p 18), New Zealand typically has 300,000 tonnes of crude oil and 45,000 tonnes of finished product 'on the water'. It is not clear why the consultants think that users would also want a further 340,000 tonnes to be stored as a deadweight inventory on land – yet this is what it concludes (p iv).

3.3 The cost benefit analysis, while purporting to represent user preferences, relies heavily on the presumption that they are irrational. It presumes that neither users nor the industry have taken any measures to hedge against the risks of major disruptions to supply. It ignores all fuel on the water and in users' vehicles and storage tanks. Most remarkably, it further assumes that users and the government would not cut their least valued uses of fuel first in a shortage. Instead the Draft Report assumes that they would 'toss a coin' to determine priorities and would be just as likely not to use rationed fuel to rush a pregnant mother to the maternity ward as they would be to use it to go on a frivolous Sunday outing.[3]

3.4 The attached diagram explains why this bizarre assumption of mass irrationality inflates estimated benefits up to 7-fold. But for this assumption, annual estimated benefits could be less than $12 million and would be likely to fall short of estimated costs, perhaps being as low as 38 cents of benefits for each dollar of costs. The irony here is that the government, on its officials' own calculations, could achieve a return of $4 for each $1 spent for the same road users that would be affected by the shortages if it spent more on by roads. Road congestion is a real problem for a significant proportion of road users, unlike the imagined problems that are the focus of the Draft Report. Even the Draft Report's inflated benefit calculation would produce less than $3 of benefits for each $1 of costs. Such a project fails to reach the 4:1 cut-off point.

3.5 The Draft Report's cost estimates are another concern. Again, the failure to identify and develop the counterfactual is a fundamental problem. There is no assessment of how the industry would deal with the risks of shortages in the absence of regulation. Implicit in the Draft Report is the notion that users are not sufficiently concerned about small catastrophic risks. This notion is at odds with the opposite belief sometimes associated with 'behavioural economics', but if it were true the Draft Report should consider the

[3] We also question whether the demand elasticities that Covec uses are appropriate for modelling demand responses to shortages that are expected to be temporary.

option of a government education programme. This would be vastly cheaper than the regulatory apparatus it recommends.

3.6 It follows that the Draft Report does not justify its recommendation to regulate at all. Its cost benefit analysis really purports to show that users would like the industry to hold these inventories in the absence of regulation. But the opportunity cost the industry would face would be the industry's cost of capital, not the assumed 'social discount rate' of 5 percent in the Draft Report. If we used the long-standing 10 percent public sector discount rate as a more realistic measure of the opportunity cost of the project, the estimated annual cost to users would be 67 percent higher at $49 million a year for 500,000 tonnes. If estimated benefits are as low as $12 million then this represents a return for users of less than 25 cents for every dollar spent.

3.7 By using a low discount rate and concluding that governments should regulate to mandate projects that can be justified using that discount rate, the Draft Report is advocating a methodology that is inimical to private sector investment. Private sector investments that could earn 10 percent would be crowded out by government-mandated investment projects that return only 5 percent. That is obviously not in users' interests as a general proposition.

4.0 Who should pay?

4.1 The Draft Report proposes that users would be the beneficiaries of the proposed mandatory stockpile, invoking the ‘beneficiary pays’ principle. The only factual evidence that it cites indicates that consumers, including well-informed consumers with a lot at stake, are not seeking to obtain greater security of supply. The Draft Report seems to offer only unrealistic hypotheses about their preferences drawn from armchair theorising to draw its contrary inferences.

4.2 This is all the more surprising in that it should be a simple matter to canvass major users and small users concerning their willingness to

pay for higher inventories. For example, users could be polled via the Automobile Association, the Consumers' Institute and the Road Transport Forum.

4.3 We suspect that Auckland road users would not hesitate to tell the pollsters that easing road congestion was a greater priority. If road users indicate that they are not prepared to pay for these additional inventories, there is no respectable basis for asserting that the benefits to them would exceed the costs. In that case there are no grounds for imposing the costs of additional stockpiling on the industry and its customers. If the government wishes to follow this course of action the costs should be met from general taxation. The willingness of taxpayers to bear these costs could also be tested via polling.

5.0 International obligation aspects

5.1 A logical course of action for the government would be to continue to research the issue and explore possible approaches with the IEA. If, when surveyed, petroleum users and taxpayers do not see the proposed expenditures on stockpiling as a priority, the government would have an even stronger case for seeking an arrangement with the IEA that would better meet the IEA's real concerns and the interests of New Zealanders. After all, the IEA's 90-day inventory rule is a means to an end rather than an objective in its own right.

5.2 At the same time, the government could explore options for arrangements with other countries, such as Australia, that might be more sensible for New Zealand commercially and satisfy the IEA.

5.3 These would all seem to be more economical and measured responses. Ultimately, there is the question of whether the costs of membership of the IEA exceed the benefits if a sensible arrangement cannot be found. We do not expect it to come to this, but in that event the government could consider asking its officials for an evaluation of the option of revoking the oil security commitment.

6.0 Concluding comments

6.1 The Business Roundtable is concerned about the high costs to the economy that could ensue from ill-judged intervention in the management of New Zealand's oil product supplies. We believe this issue should be addressed in a careful and deliberate way and in full consultation with the industry and other interested parties. We have not had adequate time to research all relevant aspects, and would ask that a more extended programme for consultations be adopted. In our view, the analysis of the problem should follow a logical sequence of steps, following closely the principles underlying Regulatory Impact and Compliance Costs Statements. The following steps seem to us to constitute a logical approach:

(i) New Zealand should explore with the IEA the detailed nature of its obligations, including an identification of all the supplies that could reasonably be counted as part of its security commitments.

(ii) The point should be recognised that the industry is operating on a sound commercial basis, including managing risks to its customers. Putting aside the obligation to the IEA, there appear to be no grounds for further government intervention in its operations unless it can be demonstrated that the market is not operating efficiently from a wider social perspective and that government intervention could improve it, taking all the costs of such intervention into account.

(iii) The Covec report does not provide any such demonstration. For the reasons set out in this submission it is analytically flawed and should not be relied upon. It is based on armchair theorising and utopian assumptions about transaction costs, postulates extremely irrational behavior during shortages and uses a discount rate that fails to consider the social opportunity cost of private capital. In the absence of the IEA obligation, the conclusion that should be drawn at this stage of the analysis is that there is no

evidence of market failure and no justification for government action to increase New Zealand's stockpiles. Such action would impose net costs on the economy.

(iv) The issue that then arises is whether New Zealand should seek to fulfill its IEA commitments when it appears to be against its economic interests to do so. There appears to be a need for an analysis of the treaty and an assessment of what the IEA is really trying to achieve with its 90-day rule and whether New Zealand can satisfy the IEA's real objective in less costly ways. A problem may be that the IEA's requirements exclude inventory on the water which may affect New Zealand's position more than any other country. We doubt that any case can be made that the industry in New Zealand is any less prudent in managing risks of supply shocks than its counterparts in countries that are meeting the IEA's requirement.

(v) If no satisfactory understanding can be reached with the IEA, the government should consider withdrawal from the agreement on the basis that participation is against New Zealand's interest.

(vi) Should it decide not to do so and to bring New Zealand into conformity with IEA obligations, the full range of alternative means of doing so should be considered with a view to adopting the least costly solutions. We consider extended discussion with the industry and other parties would be needed to reach the best possible outcome.

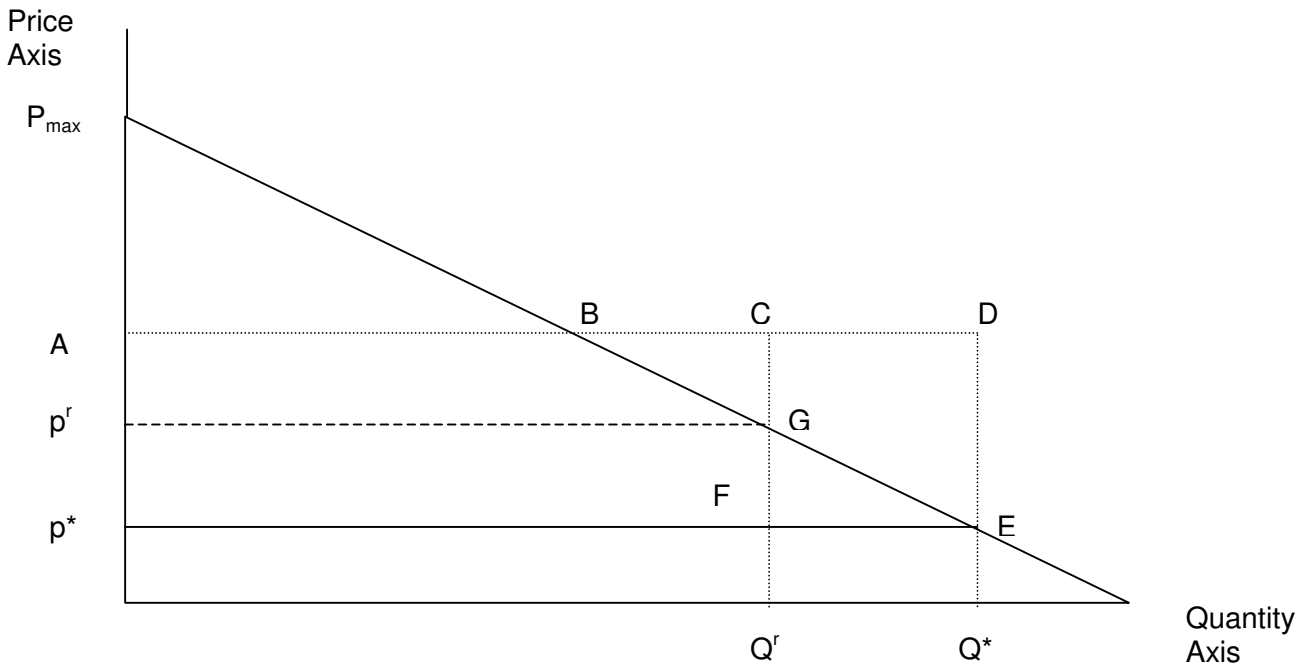
(vii) If the end result of this process were a decision by the government to impose additional stockpiling obligations on the industry (over and above supplies that companies would arrange on commercial grounds) the question arises as to who should pay for the additional supplies. Unless a survey of consumer representatives indicated a willingness to pay for greater security we believe the costs should not be

imposed on the industry and its customers. In effect, the government would be taking the decision on the basis of some judgment about wider national interests, and should enter into contracts with oil companies to increase supplies and meet the costs from general taxation.

6.2 In the event that government intervention is contemplated, we cannot stress too heavily the need for the analysis to assess, *inter alia*, all the likely unintended and undesired effects of regulation. The rigorous tests required of a Regulatory Impact and Business Compliance Cost Statement should be satisfied. Particular attention should be paid to dynamic efficiency, given the capital intensive nature of this industry and the need for New Zealand to be able to attract oil and gas exploration. An important component of this is assuring investors that their property rights will be respected. This process of analysis should not be rushed – there is no evidence that New Zealand's supply security is at imminent risk.

Annex

COVEC's Calculation of Welfare Benefits



Covec's scenario 4 assumes that petroleum supplies will be cut by 14 percent for 183 days. The drop is represented (not to scale) by the move from Q* to Q^r in the diagram.

Covec estimates the lost consumer surplus by the rectangular area (CDEF). This area is 14 percent of the original consumer surplus (represented by the triangular area $p_{max}Ep^*$ which is equal (by construction) to the rectangular area ADEp*).[4]

Covec is assuming here that everyone will cut back on their usage randomly – people will not save their fuel for the most important uses and no mechanism would be used to allocate fuel preferentially in favour of critical services and activities. It does have a point – under quantity rationing prices are held at p* and so cannot fill their role of rationing supply and demand with Econ 101 textbook efficiency. However, Covec take this point to an extreme in effectively denying that anyone anywhere will cut back on their least valued uses of fuel first.

Suppose Covec had assumed instead that many people would rationally cut back on their least valued uses for petrol first. In the limit, the estimate of the value of the lost consumer surplus would then be the triangular area EFG. With a 14 percent cut in consumption, the area of EFG is only 1.96 percent of the original consumer surplus.[5] Expressed differently, the loss of

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[4] Covec states on page 54 that "if equilibrium quantity is restricted by 10 percent, consumer surplus will fall by 10 percent. For ease of exposition, we retain this assumption in the remainder of the analysis".

[5] Each side of the triangle EFG is only 0.14 times as long as the sides of the triangle $p_{max}Ep^*$.

consumer welfare would be only one seventh (14 percent) of the amount calculated by Covec.

This would cut Copec's calculated (annual) welfare loss for scenario 4 in table 22 on page 64 from $82.9 million to $11.6 million. On the cost side, Covec estimates that the social cost of storing more inventory would be $58.33 per tonne (see page 66) and proposes that New Zealand should hold 500,000 tonnes more in inventory (see page iv). This annual cost of $29.2 million would exceed benefits by $17.6 million. This would be a benefit/cost ratio of 0.38:1. This compares with a benefit to cost ratio for road projects of 4:1 and a standard cut-off ratio of 1:1.