Shell Exploration NZ Limited

13 February 2009

Dear Committee Members,

Shell New Zealand's submission to the Emissions Trading Scheme Review Committee

Shell New Zealand appreciates the opportunity to make submissions to the Emissions Trading Scheme Review Committee as it undertakes a review of the New Zealand climate change policy response and the current New Zealand Emissions Trading Scheme (NZETS).

Although the global recession is serious, we must not lose focus on the far-reaching threat of climate change. Shell New Zealand believes that there is an urgent need for national and international policy implementation in this area. In our view, it is vital that all governments urgently develop market-based policies and supporting legislation that recognise the need to address both the world's growing energy demand and climate change issues. New Zealand also needs to develop a market-based policy framework that manages and reduces greenhouse gas emissions.

New Zealand businesses have been faced with the prospect of legislative emission mitigation measures for several years. Regulatory uncertainty results in additional cost and risk, which discourages investment. At Shell we have been working hard to ensure we are ready to operate within the framework of an Emissions Trading Scheme, to adapt our processes, and identify opportunities accordingly. We consider it important for regulatory certainty to be provided sooner rather than later.

Shell's position remains clear. Our submission to the Finance and Expenditure Committee on the then Climate Change (Emissions Trading and Renewable Preference) Bill 2008 remains valid. We, again, strongly recommend that the government implement a cap and trade scheme as an efficient way to reduce national greenhouse gas emissions.

To assist the Review Committee, we have structured our submission based on the Committee's Terms of Reference. We would welcome an opportunity to present to the Committee.

Please contact me if you would like to discuss any aspect of this document or additional items.

Yours sincerely,

Rob Jager

Chairman, Shell Companies in New Zealand

1. Executive Summary

1. Shell recognises climate change as a critical global issue. The imperative to limit greenhouse gas in the atmosphere needs strict management of carbon dioxide (CO_2) emissions from both the production of energy and its use by customers. Shell supports and strongly recommends cap and trade schemes as the best policy approach to reduce greenhouse gas emissions from stationary sources.

2. A cap and trade scheme will deliver its environmental objective at lowest cost to the economy. By combining trading with a price for emitting, this approach seeks out the most attractive reduction projects within the market, which then drives the overall system to a lowest cost outcome.

3. Shell advocates for the implementation of a New Zealand Emissions Trading Scheme with links to other emissions trading schemes as soon as possible so as to provide certainty and to facilitate the development of a global carbon market.

2. About Shell and Shell New Zealand

4. Shell has a history of nearly 100 years of operation in New Zealand. Shell ventures currently operate around 85% of the total New Zealand natural gas production via the Kapuni, Maui and Pohokura gas-condensate fields. Shell produces more than 50% of the total New Zealand natural gas production and a significant proportion of total New Zealand oil production.

5. In 1997, Shell was one of the first oil companies to recognise and acknowledge that climate change was a global issue urgently requiring internationally-aligned policies. We have been working actively with governments in both developed and developing countries to establish market-based policies and supporting legislation that recognises the energy challenges of increasing demand for finite fossil fuel and addresses climate change issues.

6. To help think about the future of energy and climate change, Shell has developed two scenarios that describe alternative ways it may develop.

7. Under the first scenario – entitled “Scramble” – policymakers pay little attention to more efficient energy use until supplies are tight and greenhouse gas emissions are not seriously addressed until there are major climate shocks. Political responses to the twin crises of the energy squeeze and climate change are often knee-jerk and severe; leading to price spikes, periods of economic slowdown, and increased fiscal turbulence.

8. In the second scenario – “Blueprints” – growing local actions begin to address the challenges of economic development, energy security and environmental pollution. A price is applied to a critical mass of emissions giving a huge stimulus to the development of clean energy technologies, such as carbon dioxide capture and storage, and energy efficiency measures. The result is far lower carbon dioxide emissions by 2050 in comparison with the “Scramble” scenario.

9. We believe a "Blueprints" approach to climate change and energy offers the best hope for delivering a sustainable response through joint and concerted efforts by governments, industry and consumers.

10. A copy of our energy scenarios booklet has been included for each Committee member, and is publicly available at: http://www.shell.com/home/content/aboutshell/energy_challenge/the_challenge/the_challenge_000407.html

3. The Select Committee's Terms of Reference

11. The Emissions Trading Scheme Review Committee has asked specifically for submissions that address the Committee's Terms of Reference. The Terms of Reference are included below:

    a. hear views from trade and diplomatic experts on the international relations aspects of this issue;

    b. consider the prospects for an international agreement on climate change post Kyoto 1, and the form such an agreement might take;

    c. require a high quality, quantified regulatory impact analysis to be produced to identify the net benefits or costs to New Zealand of any policy action, including international relations and commercial benefits and costs;

    d. identify the central/benchmark projections which are being used as the motivation for international agreements to combat climate change; and consider the uncertainties and risks surrounding these projections;

    e. consider the impact on the New Zealand economy and New Zealand households of any climate change policies, having regard to the weak state of the economy, the need to safeguard New Zealand's international competitiveness, the position of trade-exposed industries, and the actions of competing countries;

    f. examine the relative merits of a mitigation or adaptation approach to climate change for New Zealand;

    g. consider the case for increasing resources devoted to New Zealand-specific climate change research;

    h. examine the relative merits of an emissions trading scheme or a tax on carbon or energy as a New Zealand response to climate change;

    i. consider the need for any additional regulatory interventions to combat climate change if a price mechanism (an Emissions Trading Scheme or a tax) is introduced;

    j. consider the timing of introduction of any New Zealand measures, with particular reference to the outcome of the December 2009 Copenhagen meeting, the position of the United States, and the timetable for decisions and their implementation of the Australian government; and

    k. report to the House accordingly.

12. We address items: b, e, h, i, and j in our submission. We consider each point in turn.

4. Post Kyoto Agreement

13. The Review Committee has asked for submitters' views on the prospects for an international agreement on climate change post Kyoto 1 and the form that such an international agreement might take.

14. It is difficult for anyone to predict the final outcome of the international negotiations or what the final agreement will contain. However, we consider that a broad consensus on the existence of climate change and a resolve to act to mitigate its effects will remain, and a global agreement will be reached.

15. Shell strongly recommends that New Zealand act sooner rather than later in finding a policy framework that reduces greenhouse gas emissions. In Shell's view, the preferred means of addressing climate change is through a market-based system such as a cap and trade system. Hence, Shell's recommendation is for New Zealand to implement a market-based policy framework, while constructively engaging in the upcoming and ongoing international negotiations.

16. Climate change presents the world with an urgent challenge that is arguably too complex to address with a single approach. In Shell's view, internationally-aligned policy frameworks are required to encourage the discovery, development and demonstration of new technologies, supported by a global market-based approach to drive technology deployment.

17. Policy development is key to addressing climate change while meeting energy needs. A market for low CO_2 emission projects will not develop globally without the creation of demand of some sort, either through establishing a cap and trade system, setting a standard, or creating a baseline for a project.

18. The ability for developing countries to take on targets is also key to the sustainability of any international agreement on climate change. Yet many developing countries lack the capacity to manage emissions across the economy and may not have the necessary technical expertise to implement the necessary projects.

19. An overarching pathway through which developing countries can progressively adopt targets will be required. An approach that focuses on key sectors within developing country economies is one possible solution. We can envisage a large scale sectoral mechanism introduced into the framework.

20. The mechanism would give rise to agreements, each negotiated for a specific sector by a limited number of parties, as satellites to the main agreement, but utilising the infrastructure offered by the overall framework. Each agreement would have a specific purpose and would operate by encouraging widespread business-led project development in the target countries, given incentives by the mechanisms and the availability of targeted funding and financing.

21. The projects would result in the introduction of infrastructure and new technologies into developing countries together with the capacity for ongoing operation and future expansion. This then puts developing countries on a pathway towards substantial future action (figure 1).

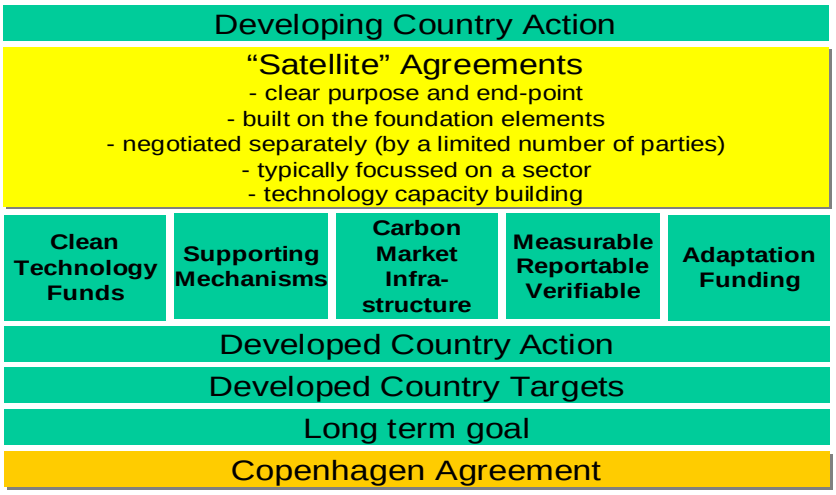

Figure 1. Properly funded and executed sector-based satellite agreements in developing countries may lead to targets that align with longer-term goals and targets in developed countries. Refer to attached short paper "A New International Framework to Address Climate Change".

22. Shell has been closely following the international discussions and negotiations, and we have developed a paper on how an international agreement could be developed (attached).

5. Economic impacts, international competitiveness and trade exposure

23. The Committee has asked submitters to consider the impact on the New Zealand economy and New Zealand households of any climate change policies, having regard to the weak state of the economy, the need to safeguard New Zealand's international competitiveness, the position of trade-exposed industries, and the actions of competing countries.

5.1 Economic impacts

24. Shell appreciates the cost concerns that the government has in implementing an effective climate change framework in the current economic situation. However, we advocate that the need for national and international policy implementation is urgent. Clear, effective and timely policy implementation also provides regulatory certainty to enable businesses to adapt efficiently to a low carbon economy.

25. A McKinsey and Company's recent report suggests that with the right policies, the transition to a low carbon economy has the potential to stimulate economic growth, create jobs, and bring benefits to consumers.[1] McKinsey & Company advise that with the right policies, market-based incentives, financing mechanisms and technologies, it should be possible for most countries to combine goals for climate security with goals for economic, energy, and national security. Shell supports this view and considers that there is now, in fact, a greater drive for businesses to seek opportunities in managing greenhouse gas emissions and using energy more efficiently.

[1] Oppenheim, Jeremy, and Eric D Beinhocker (2009) *Climate change and the Economy: Myths versus Realities.* McKinsey & Company; Davos, Switzerland 29 January 2009

26. Shell considers that the current economic situation is serious but unlikely to be long-term. We do not consider that the global recession provides sufficient reason not to implement public policy that manages New Zealand's greenhouse gas emissions, and could also stimulate economic growth. Furthermore, we submit that the current recession should not have a significant impact on the design of a long-term climate change policy solution.

27. Shell acknowledges that there are concerns over the cost of the current NZETS and the volatility of carbon markets. However, we consider that many of these concerns can be overcome or minimised through considered design of the ETS and the associated framework, as discussed below.

28. While an emissions market can only be created by regulation and the creation of a scarcity, regulation should avoid trying to modify the trading behaviour of the market. Shell submits that regulation should not be used to manage the carbon price through price caps or price floors, or to limit the trading of any of the instruments created for the market (i.e. flow to/from linked scheme, or import/export restrictions). In essence, the carbon market should be treated as any other commodity market.

29. Shell considers that an overly constrained or poorly designed ETS could lead to an inadequate supply of carbon credits needed to meet the market demand or cloud the overall supply/demand position in the market. Such outcomes could lead to significant excursions in the carbon price or levels of volatility that are not akin to good market performance.

30. To help contain the cost of a cap and trade system, and reduce unnecessary impacts, Shell recommends the following features be considered and included in the New Zealand policy framework:

    - A statutory body should be created to decide on the number of allowances within the market and to operate the allocation process.

    - The statutory body should declare the total number of allowances available to the market at least five years in advance of any compliance period. The mechanism for allowance distribution should be transparent to the market. All allowances should be distributed before the end of the compliance period. The number of allowances should be determined by the need to meet the environmental targets, and an assessment of the availability and readiness of technology to reduce emissions.

    - Allowances should be distributed early in any compliance year and placed in the registry. This would encourage the development of a healthy secondary market.

    - The market should consist of multi-year trading periods, i.e. Kyoto compliance periods, with annual compliance within the trading periods.

    - Banking of carbon credits and allowances into future trading periods should be allowed.

    - There should be no borrowing of allowances from future **trading** periods, i.e. participants cannot borrow allowances from a future Kyoto compliance period (beyond 2012). Borrowing should be allowed from future **compliance** periods i.e. borrowing from 2011 for compliance in 2010.

- All Kyoto compliant carbon credits should be recognised as instruments of compliance, and there should not be limits on the use of Kyoto compliant carbon credits.

- Links with other emissions trading schemes (i.e. EU ETS, CPRS, RGGI, and US ETS) should be implemented as soon as possible to create a global carbon market.

- The government or statutory body should not impose any price caps, price floors, or utilise reserve prices in auctions.

- The statutory body should not enter into any form of market management through the withholding of allowances or release of additional allowances not already declared to the market.

- The statutory body should remain independent of the market and pricing.

- There should be a design review process within five years of start-up to correct any design oversights or anomalies only. The environmental goal should remain unchanged.

31. The current NZETS contains some of the above measures, but not all. Shell recommends that the government adopts all of the above measures to minimise the cost of managing greenhouse gas emissions.

5.2 Limiting carbon leakage and reducing trade exposure

32. Ross Garnaut suggests that policy makers are faced with a truly dreadful problem in regard to international competitiveness and trade exposure, particularly where there is no global carbon market.[2] He warns that shielding industries from the effects of a carbon mitigation scheme either undermines attempts to limit national GHG emissions, or increases the adjustment burden elsewhere in the economy. Moreover, poorly designed competitiveness and trade exposure compensation schemes result in the paradoxical outcome where low emitters feel the effects of an ETS, but high emitters do not.

33. Designing policy to minimise carbon leakage whilst balancing the cost burden and ensuring that there is sufficient environmental integrity can be difficult and complex. Much of this falls on the design of the allocation method. Getting it right is, therefore, one of the most critical aspects of an ETS.

34. As an end-game, full auctioning of allowances by the government is the right approach. Full auctioning supports the objective of establishing a new financial flow within the economy, which results in emission reductions in certain value-chains, demand destruction for high emitting products, and demand creation for new low emitting products.

35. As such, an ETS framework is not designed to simply remove money from business, but to regear capital flows towards lower carbon projects and actions. This permeates the whole value chain. The key steps are as follows:

    - Companies buy allowances from government.

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[2] Garnaut, Ross (2008) *The Garnaut Climate Change Review: Final Report* Cambridge University Press, Melbourne

- Government changes the tax structure in the economy as a result of the increased revenue.

- Companies pass the CO_2 price through the value chain, but can only do so to the extent allowed by the marginal producer. This means that higher emitting facilities in a particular product range will not be able to pass along the full CO_2 price. It also means that substitute products with a much lower CO_2 footprint will compete better.

- Although consumers have to pay more for certain products as a result of the CO_2 price, they also see a lower call from the government as a result of the changes in the tax structure.

36. As noted, this is the end-game outcome. It is built on the principle of "price pass through". Pass through will establish itself in the economy at different rates. Experience in the EU has shown that this occurs quickly in the electricity sector, but hardly at all when the product price is established outside the local market.

37. When price pass through does not occur, or when it is slow to appear, the government should continue to allocate allowances for free, otherwise business incurs an unrecoverable cost and is competitively disadvantaged in both import dominated and export led markets. Conversely, as price pass through is established, the level of auctioning should rise. Profit neutrality needs to be maintained.

38. There may need to be a high level of free allocation initially, until the cost pass through establishes itself, which can take some time especially where international pricing dominates. Shell recommends that a suitable trade exposure test be applied to all participants to assess their exposure to international competition. This should inform the government in deciding on the method of allocation of allowances.

39. Free allocation can also be utilised to address the instances within sectors including our own where we understand contractual terms do not allow the recovery of such costs (and there could be similar examples in other sectors).

40. Shell recommends that the government implements an allocation method that provides profit-neutrality and appropriate safeguards exist to ensure that the above objectives are delivered in practice and not just in principle.

41. We recommend that the Select Committee review the current legislation and make the appropriate changes required to ensure the allocation methodology is based on being profit neutral for all participants.

6. Cap and trade or carbon tax?

42. The Select Committee wishes to examine, as New Zealand's response to climate change, the relative merits of either an emissions trading scheme or a carbon/energy tax.

43. With respect to stationary energy and industrial processes, Shell has consistently recommended that the government implement a cap and trade system to manage and reduce greenhouse gas emissions. Our rationale is described below.

44. Both a carbon tax and a cap and trade system create a carbon price signal, but fundamentally differ in the way that price signal is determined. A carbon tax fixes the price of CO_2 emissions,

and allows the quantity of emissions to adjust. In contrast, a cap and trade system fixes the quantity of aggregate emissions, and allows the price of CO_2 emissions to adjust according to scarcity.

45. Shell considers the ability for a cap and trade system to deliver an environmental outcome adds certainty that is critical for the environment. While a carbon tax delivers some level of fiscal certainty, it does not necessarily deliver any particular environmental outcome. The environmental outcome with a carbon tax is entirely dependent on the ability and willingness to impose taxes that are sufficiently high to achieve meaningful emission reductions.

46. Further, because a carbon tax is likely to vary substantially over time to meet the desired emissions pathway, there is no guarantee of price certainty, particularly in the long-term. Also, there can be a tendency for exemptions to be granted to address distributional issues, which weakens the environmental effectiveness of the carbon tax, and increases the cost for all others. By contrast, the distributional battle over the allowance allocation in an ETS neither raises the total cost of the programme nor affects the climate impacts.[3]

47. Shell considers that an ETS delivers the environmental objective at the lowest cost to the economy. By combining trading with a price for emitting CO_2, the most attractive reduction projects within the market are sought, delivering a lowest cost outcome. Perhaps the best example of a successful cap and trade system that has delivered an environmental outcome at the lowest cost is the program that regulates SO_2 in the United States. It is estimated that the robust market in SO_2 allowances that emerged under the program resulted in cost saving in the order of $1 billion annually compared with other regulatory approaches.[4] The SO_2 program has a significant environmental impact, with SO_2 emissions from the power sector decreasing from 15.7 million tons in 1990 to 10.2 million tons in 2005.[5]

48. Shell considers that being able to link and harmonise national cap and trade systems and delivering over time a global carbon market is the best mechanism for achieving lowest cost outcomes. Cap and trade systems generate a natural unit of exchange (carbon products are denominated in units of CO_2 emissions) that enables global market harmonisation.

49. In Shell's view, the lack of country co-ordination of carbon taxes is likely to provide further complications to international negotiations as parties question and debate the level of a country's taxes. In the long run, linking is desirable to ease the overall cost of reducing greenhouse gas emissions and to achieve any future global concentration targets.

50. A further advantage of a cap and trade system is that it offers both compliance and policy flexibility that is important for business and unavailable with carbon taxes. The compliance flexibility is delivered through the ability for a firm to 'make or buy', i.e. to implement a project and make reductions (including selling carbon credits), or to buy carbon credits from the market. The policy flexibility comes through the allowance allocation method. For example, the

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[3] Stavin, Robert N (2007) *A US Cap-and-Trade System to Address Global Climate Change* - Discussion Paper 2007-13. The Brookings Institute: Washington DC

[4] Carlson, Curtis, Dallas Burraw, Maureen Cropper, and Karen Plamer (2000) *Sulphur Dioxide Control by Electric Utilities: What are the gains from Trade?* Discussion paper 98-44-REV. Resources for the Future: Washington, DC

[5] US Environmental Protection Agency (2005) *Acid Rain Program: 2005 Progress Report* Washington DC: Office of Air and Radiation, Clean Air Markets Division, US Environmental Protection Agency.

government can progressively decrease or increase the number of allowances distributed to address competitiveness concerns. Despite the flexibility, the incentive to reduce emissions remains because the allowances still have a value. Replicating this approach in a tax-based system would add significant complexity.

51. Shell's experience of operating and trading within the EU ETS, has informed our recommendation that a well-designed cap and trade system is effective and efficient, and we strongly recommend that the New Zealand government also implement a cap and trade system.

7. Complementary measures are required

52. The Select Committee wishes to consider whether other regulatory interventions are required to address climate change in addition to an ETS or carbon tax.

53. Shell considers that some complementary regulatory interventions are required in addition to a market-based policy, to ensure emission reductions take place across all sectors of the economy. As the McKinsey carbon abatement curves often highlight, there are already significant negative carbon cost abatement opportunities that are not used, particularly in the commercial and domestic sectors. The further addition of a CO_2 price will not necessarily deliver these reductions. To reduce cost, Shell considers that complementary regulatory intervention is required, particularly to promote a robust energy standard for buildings and electrical appliances, along with incentives to retrofit existing infrastructure.

54. Shell recommends that the government consider and implement regulatory interventions that address such market failures, and are complementary to the NZETS.

7.1 Additional transport abatement measures are required

55. Shell recommends regulatory intervention in the transport sector. The rationale for complementary measures is because the carbon price is unlikely to promote the behavioural change required in the transport sector because of the relatively low elasticity of demand. Shell does not consider that the inclusion of transport fuels in the NZETS by itself is an efficient or effective way to reduce transport emissions. To help abate transport emissions, Shell recommends a number of targeted mechanisms across the transport sector, designed to promote a smoother abatement transition and lower emissions. These include, but are not limited to:

    - vehicle efficiency standards to reduce fuel consumption;
    - incentives for low carbon fuels such as the advanced/next generation biofuels; and
    - measures to influence driver behaviour and mobility choices, including increased investment in public transport.

56. It is vital that any transport or transport fuel regulatory measure is complementary to the NZETS. Measures that are not complementary or create duplication with the NZETS should not be implemented, as they are likely to be costly and ineffective.

8. Six months are needed for implementation

57. The Select Committee has been asked to consider the timing of the introduction of any New Zealand measure, taking into account the outcome of the December 2009 Copenhagen meeting, the position of the United States, and the implementation of the Australian CPRS.

58. Shell recommends that the government completes its review of the current NZETS legislation quickly, makes the amendments that are required, and enables participants a minimum of six months' implementation time.

59. Consideration of international negotiations, the position of the other countries, and the implementation of the Australia CPRS, is largely extraneous to New Zealand's actions. New Zealand needs to be aware of the business environment but this should not prevent the government from preparing for New Zealand's own ETS given the globally recognised imperative to manage climate change. We, therefore, recommend that the government implement an ETS framework that is suitable for managing New Zealand's emissions both now and in the future.

60. Shell considers that there may be positive benefits if New Zealand implements the NZETS before the Australian CPRS in July 2010. In Shell's view the head-start is an advantage, as it will enable New Zealand businesses to develop the processes and systems to manage emissions, trade carbon, and reporting, and therefore be in a position to look for business opportunities.

61. Shell suggests that if the government is concerned about the timing of the NZETS in relation to other countries' climate change policy, that suitable timing flexibility is incorporated in the policy framework. However, Shell considers that it is important for New Zealand to have a suitable policy framework in place, even if the start dates for participants are somewhat delayed or staggered.

62. It is Shell's preference for the current NZETS timetable to be kept, with Stationary Energy and Industrial process, and Transport fuels being included in 2010 and 2011 respectively. We will need a minimum of six months from legislative enactment to be in a position to comply.

63. If there are substantial changes to the current NZETS legislation, or the government has not passed the NZETS legislation in time to enable participants a minimum of six months, we recommend that the government consider deferring the current start dates of the NZETS.

9. Carbon Capture and Storage

64. Shell considers that Carbon Capture and Storage (CCS) technology is the only technology that is entirely driven by climate change policy and the need to abate greenhouse gas emissions. It is, however, becoming increasingly clear that the deployment of CCS technology will not happen without policy intervention, as a carbon price alone will not provide a sufficient incentive for the commercialisation of CCS in the timeframe required.

65. Shell supports the current provisions in the Climate Change Response Act that includes CCS as a removal activity. We strongly recommend that the government continue to enable CCS to qualify as a removal activity as this will help encourage CCS projects in New Zealand.

66. To encourage the development and investment of CCS projects, we recommend that a CCS regulatory framework is developed to provide the necessary certainty that enable opportunities to be explored. The regulatory framework should utilise the general principles outlined in the CCS-specific section of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

10. Conclusion

67. As stated, climate change is a global issue that requires a far-reaching global response. Shell considers that it is vital for governments to implement a climate change policy framework that enable us to prepare and adapt to a low carbon future. In Shell's view, the best policy response is based on a cap and trade system, for the rationale that has been outlined throughout this submission.

68. Regardless of the government's chosen climate change policy, Shell remains committed to engaging constructively with the government to ensure that New Zealand prepares and adapts for a low carbon future.

Additional material provided

"A New International Framework to Address Climate Change". Shell International B.V., 2009.

"Shell Global Scenarios to 2025". Shell International B.V., 2008