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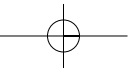
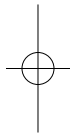
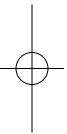
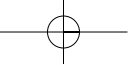
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THE POLICY ISSUES ARISING WITH THE LINKING OF INTERNATIONAL EMISSIONS TRADING SCHEMES

Regina Betz* and Ashley Stafford**

Australia and New Zealand are both in the process of developing and implementing their national emissions trading schemes. Linking emissions trading schemes offers the potential benefits of cheaper global compliance costs in meeting greenhouse reduction targets, greater market liquidity and can also reduce risks of price volatility and market power. However, for linking to be effective, some important policy questions will need to be addressed. This article will focus on the key economic and regulatory issues which are relevant for the design of the Australian Emissions Trading Scheme to facilitate linking with the New Zealand scheme.

1. INTRODUCTION

A larger greenhouse gas emissions trading market will, all other things being equal, lead to higher efficiency gains because there will be more variety and greater cost differences in emissions reduction options, while no trades take place if no gains are available. Especially for small countries, the ability to use emissions allocations (allowances) or project-based emissions reductions (offsets) from other emissions trading jurisdictions – known as linking – is important, since it can increase the liquidity of the market, reduce volatility and reduce market power. The first such links are expected soon between the European Union Emissions Trading Scheme (EU ETS) and emissions trading schemes in Norway and later on between Iceland and Liechtenstein.¹ However, Norway only implemented the trading scheme under the European Union directive² and did not develop a national design.

The situation in the Asia Pacific region is different. Both Australia and New Zealand are developing their own emissions trading schemes and, while both schemes are to be “cap-and-trade” models, the specific design features will most likely be different.³ Given the size of the

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¹ Decision of the European Economic Area Joint Committee No 146/2007.

² Directive 2003/87/EC of the European Parliament and European Council, 13 October 2003.

³ In Australia, when writing this paper, there were two design proposals on the table: One from the former Howard government (Prime Ministerial Task Group on Emissions Trading (PMTG 2007), Report of the Task Group on Emissions Trading, Australian Government, May 2007) and one from the States and Territories (National Emissions Trading Taskforce (NETT), *Discussion Paper: Possible Design for a National Emissions Trading Scheme*, 2006). So far there has not been a detailed proposal on design elements for an ETS or an endorsement of any of the existing proposals by the current Rudd government: Senator the Hon Penny Wong, Minister for Climate Change and Water, *Climate Change: A Responsibility Agenda*, Speech to the Australian Industry Group Luncheon, Melbourne, 6 February 2008; In New Zealand there is a draft legislation which is currently undergoing Parliamentary review: *Climate Change (Emissions Trading and Renewable Preference) Bill 2007* (NZ) (NZ Bill).

economies, the geographic location and the Australian-New Zealand Close Economic Relations Trade Agreement it seems likely that linking of the schemes will occur.⁴ In a joint press conference with Australian Prime Minister Kevin Rudd, New Zealand Prime Minister Helen Clark has already indicated that the two countries are liaising closely and considering compatibility between their schemes.⁵ The linking mechanism already proposed in New Zealand, in particular, could provide the opportunity for linking to the Australian market to increase liquidity and to reduce price volatility. The New Zealand emissions trading scheme (NZ ETS) allows an almost unrestricted link to the international Kyoto market, which will make it easy for other schemes to link with it.

Importantly, direct linking is expected to occur between Australia and New Zealand before links are established between any other schemes (for example, the EU ETS). In the case of the European Union, linking faces the obstacle that the EU ETS does not allow importation of emissions credits created from afforestation and reforestation (known as “sinks”). The Australian emissions trading scheme is expected to follow New Zealand’s lead in recognising domestic sinks as a source of emissions reduction credits⁶. This makes linking easier between these two countries, but this issue would need to be resolved before any links between the EU ETS and Australia or New Zealand could occur. Linking to an Emissions Trading Scheme in the United States (for example, the Regional Greenhouse Gas Initiative), on the other hand, remains a more distant possibility given that it is state-based and the United States has not ratified the Kyoto Protocol. In addition, linking the Australian scheme with the NZ ETS would also be a test case for Australia for future linkages in general. Therefore the focus of this paper will be on the issues at stake and options for linking in the context of the emerging emissions trading schemes in Australia and New Zealand. The regulatory issues will be discussed in a more general context having regard to Australian and international law.

Connections between regional schemes could present an important path to consistent detailed global emissions restraints. The Australian Prime Minister’s Task Group on Emissions Trading suggested that a unified effective global trading scheme would likely develop from the ground up from regional schemes.⁷ However, if there is no broad mandatory global framework to guide consistency between individual regional or national schemes, linkages could also lead to unworkable global markets. Zapfel and Vainio comment that such an evolution of links across legal jurisdictions could lead to schemes that are not compatible in respect of critical choices, so that linking will be complicated if compromises are not then made to adapt schemes.⁸ Linking will require harmonisation of some key design features, otherwise distortions, double counting and loopholes are likely to occur. These risk the environmental integrity of the schemes. A number of measures can be introduced to overcome the incompatibilities (such as “gateways” that restrict imported carbon or make adjustments or conversions to the carbon that is imported, or other limits on the use of imported carbon) but these come at the costs to efficiency gains from linking.

⁴ See further assessment of Australian-New Zealand Close Economic Relations Trade Agreement and emissions trading schemes in B Gundersen, “Analysis of the Policy and Regulatory Framework of the New Zealand Emissions Trading Scheme with Reference to the Economic Relations Treaty” (2008) 27 ARELJ 23.

⁵ Point Carbon, *Australia, NZ eye emissions trading link*, 27 February 2008, <http://www.pointcarbon.com/Home/News/All%20news/article26929-703.html> accessed 7 March 2008.

⁶ For example, PMGT 2007, op cit n 3, p 111.

⁷ PMGT 2007, op cit n 3, p 71.

⁸ P Zapfel and M Vainio, *Pathways to European Greenhouse Gas Emissions Trading History and Misconceptions*, Fondazione Eni Enrico Mattei, October 2002, p 4.

The fact that Australia and New Zealand have both ratified the Kyoto Protocol enables both schemes to be linked much more easily since both countries can now exchange a “currency” which is valid under the Kyoto Protocol and can be counted against the Kyoto targets. However there will still be some practical and regulatory challenges, which will be explored in the paper.

2. LINKING OPTIONS

There are a number of ways linkages might be achieved, in terms of the jurisdictions that are linked, the direction of the linkage and the type of schemes that are linked. In theory, linkages might be sought between an international, regional, national or state scheme and any other international, regional, national or state scheme, or series of schemes. Linkages might also be established between Government or industry programs to reduce emissions.⁹ Furthermore linkages between a cap and trade scheme and a project-based mechanism (even within a domestic scheme) have been considered to be a form of linking.¹⁰ However, in this article we consider inter-jurisdictional linkages in the context only of national and international mandatory schemes. The two major directional options for linking which need to be distinguished are bilateral and unilateral linking.

2.1 Bilateral Linking

Bilateral linking means that schemes across two jurisdictions reciprocally recognise the unit or units traded in the linked market so that they can trade a common or fungible currency (one can exchange one unit with another). The fact that Australia and New Zealand have both ratified the Kyoto Protocol makes bilateral linking simpler. Article 17 of the Protocol enables both countries to exchange Assigned Amount Units (AAUs, a type of tradeable allocation comprising the Kyoto Protocol target for developed countries) if they meet certain criteria.¹¹ Even if they each create a national currency – for example, New Zealand Units (NZUs) and Australian allowances – they will be able to use the Kyoto Units as a common exchange currency.

2.2 Unilateral Linking

Unilateral linking involves one emissions trading scheme recognising another’s allowances for compliance at home, but without reciprocity. An example would be if allowances or offsets (collectively “carbon units”) from Australia could be used in the New Zealand scheme for compliance by New Zealand emitters but not the other way around. This often requires some mechanism so that units in the supplying market can be surrendered or rendered unusable (such as by placement in a holding account under the supplying scheme) and recognition of such surrender in the receiving jurisdiction. Unilateral links can be made even involuntarily to any scheme that enables carbon units to be voluntarily surrendered,¹² if the receiving country can recognise that surrender. The markets for the two different allowance types would remain separate and a single allowance price would not necessarily emerge. In New Zealand such unilateral linking to the EU

⁹ For example, E Haites and F Mullins, *Linking Domestic and Industry Greenhouse Gas Emission Trading Systems*, EPRI, International Energy Agency and International Emissions Trading Association, October 2001 pp 71 to 80.

¹⁰ S Bygrave and M Bosi, *Linking Project-Based Mechanisms with Domestic Greenhouse Gas Emissions Trading Schemes*, OECD/IEA June 2004 pp 17 and 21.

¹¹ Decision 11/CMP1 (FCCC/KP/CMP/2005/8/Add.2 p 18).

¹² E Haites, *Harmonisation between National and International Tradeable Permit Schemes: Concerted Action on Tradeable Emissions Permits Country Forum Synthesis Paper*, OECD 2003 pp 5-6.

ETS is expected to emerge, as New Zealand is planning to allow their companies to surrender any Assigned Amount Units (therefore as well as EUAs, which are AAUs with an EU-tag) for compliance. The appeal of unilateral linking is that it provides a “safety valve” for allowance prices in the domestic market since when they rise above the price of foreign allowances domestic buyers substitute their purchases of domestic allowances with purchases of foreign allowances. Unilateral linking can therefore provide opportunities for lower cost compliance with an emissions cap than under autarky, which may be desirable if, say, the governing body of one scheme fears that bilateral linking would undermine confidence in its own scheme due to differences in monitoring standards.

The downside of unilateral linking is that it does not allow for global least cost abatement to be achieved under equilibrium, unless the domestic scheme always faces cheaper allowance prices abroad than at home. If this is not always the case, then foreign emitters will miss out on access to cheaper allowances, and are therefore not forcing domestic emitters to exploit their relatively cheaper abatement options. Moreover, since the foreign scheme’s participants are not able to benefit from the unilateral link, but nevertheless face increased compliance costs due to the extra demand it generates, such a linkage may face opposition from the foreign scheme’s participants. This is more likely to be the case when the “exporting” partner of the unilateral link is a smaller market relative to a larger “importing” market, which is demanding allowances. This might be the case, say, if Australia were to unilaterally allow allowances from New Zealand to be recognised for the purposes of the Australian market.

2.3 Direct and Indirect Linking

Linking can occur directly, as described in the bilateral and unilateral linking examples above, but it might also be indirect through a common third market. The linkage of two schemes may involve an indirect exchange of different units, such as where domestic allowances (held by liable parties within cap and trade emissions trading schemes) are exchanged for AAUs and are transferred to the authorising country of a purchaser before being exchanged for further domestic units.¹³ Two markets might also be said to be linked indirectly even if there can be no ultimate exchange of units from one scheme to another. Take the NZ ETS and the EU ETS, which will be linked indirectly through the Clean Development Mechanism¹⁴ and Joint Implementation.¹⁵ Even if allowances under the New Zealand scheme and the EU ETS are not directly exchangeable, or are not exchangeable via a common unit, but both schemes can import offsets from the project-based mechanisms of the Kyoto Protocol by allowing the covered emitters to use Certified Emissions Reductions (CERs) and Emissions Reduction Units (ERUs) for compliance. This means the price for Kyoto Protocol offsets will be a price cap for every market which is linked to this international currency and the aggregated demand of all schemes will determine the price. There will be no such cap if there is a limit on the volume of such offsets that can be imported into a scheme, but the availability and price of such emissions reduction credits will impact on the price of the remaining allowances within the scheme. The EU ETS has a limit on the use of the Kyoto Protocol units and the New Zealand scheme has no limit so far (see Table 1 below). If an Australian scheme is going to allow Kyoto Protocol units to be used this would link the scheme indirectly in this sense with the EU ETS and NZ ETS, even in the absence of a direct linkage to either scheme.

¹³ Haites, *ibid*, p 5.

¹⁴ Kyoto Protocol Art 12.

¹⁵ Kyoto Protocol Art 6.

3. DESIGN OBSTACLES TO LINKING

There are a number of key design issues that would be critical in any bilateral linkage between an Australian cap and trade scheme and the NZ ETS. Given that the New Zealand scheme is already underway, the Australian scheme would need to be designed with linkage to the New Zealand, and the much larger EU ETS, schemes in mind.

3.1 Coverage

The broader the coverage of an emission trading scheme, the greater potential for gains from trading, since differences in marginal mitigation costs are more likely. Through trading the mitigation costs are equalised leading to a reduction of overall compliance costs. Different degrees of coverage, such as a possible combination of covering entities downstream or upstream of certain emission sources in Australia should not cause serious problems for linking given that New Zealand also has such a hybrid system.¹⁶ Energy exports from both countries should not be covered in keeping with the approach under the *United Nations Framework Convention on Climate Change* of counting emissions at the country where they occur. Otherwise there might be double counting problems if country A where an upstream approach is taken exports fossil fuels into country B where a downstream approach is taken and the fossil fuel is used to generate electricity in country B. In such a case allowance would be held by the fuel supplier in country A and the electricity generator in country B for the same emissions. However the double counting does not arise from linking it would also occur without any linkages of the scheme. As explained above it this risk of double counting can easily be cured by exempting exports.¹⁷

The major problem of linking systems with different coverage of greenhouse gases is the risk of importing increased environmental uncertainties into the linked systems. For example, the EU ETS includes only sources which are quantifiable with high certainty. Thus, linking to a scheme which allows for sources to be covered with higher uncertainty (for example, agriculture) could undermine the integrity of the EU ETS. Since the New Zealand scheme will cover all six Kyoto Protocol greenhouse gases and there are plans to include agriculture and forestry, which are especially excluded of the EU ETS, this may be an issue further down the track with linking to an Australian scheme.

A similar issue is the choice of whether to include sink-based offsets from the Clean Development Mechanism (temporary and long-term CERs, known as tCERs and ICERs respectively). The currently proposed legislation for the NZ ETS prohibits the use of ICERs and tCERs for compliance, allowing tCERs only with the express permission of the regulator.¹⁸ However if, for instance, Australia were to allow tCERs and ICERs under its emissions trading scheme, then linking both systems would effectively mean the NZ ETS would now take the benefit of sink-based CERs. Even though the CERs imported into Australia from forestry offset projects would not physically be accounted for under the NZ ETS, they would still effectively contribute to reduce the cost of abatement for New Zealand installations because Australian companies would use units created by forestry offset projects for their compliance and New Zealand companies would take the benefit of having more allowances or offsets than are accepted in New Zealand being available

¹⁶ A *downstream* approach requires fossil fuel users to acquire permits compared to an *upstream* approach which requires permits to be acquired by fuel producers.

¹⁷ R Baron and S Bygrave, *Towards International Emissions Trading: Design Implications for Linkages*, OECD Discussion Paper 2002 p 17.

¹⁸ *Climate Change (Unit Register) Regulations 2007* (NZ) cl 13-14.

for use. Inclusion of sinks would mean the total amount of available units in the combined systems would be greater than the aggregate of the two systems before. Given the broad linking mechanisms in the New Zealand scheme, New Zealand may find that it accepts linkage to a system which will import the perceived uncertainties from sink projects into its scheme, despite having rejected those uncertainties in the design of its own scheme. However, the risk of liability to replace the temporary sink units would remain with the Australian companies or Government, and so the greatest concern for New Zealand may be the measurement uncertainties of the additional offsets in the combined system, which issue already exists in the NZ ETS because it has included domestic forestry and agriculture.¹⁹

3.2 Accountable Unit

All NZ Units traded will be tagged AAUs, meaning that New Zealand will effectively staple each NZ Unit to an AAU so that they are traded and otherwise dealt with as if they were the same commodity. The units will be subject to dual regulation, in the sense that international law has its own requirements for the trade in AAUs and domestic law may have its own requirements for the tagged units. Since Australia has now ratified the Kyoto Protocol, no mechanism for accounting for allowances imported from New Zealand would be necessary because, with both having ratified, the AAUs could effectively operate as a common currency. This makes the accounting for each country's units in the foreign country much simpler. If both countries are issuing Kyoto Protocol-backed units, it only remains for each of the linked partner countries to agree to recognise the other partner's Kyoto Protocol tagged units as valid for domestic compliance.²⁰

3.3 Traded Unit and Flexibility

It is likely that the Australian scheme will have single-use allowances the surrender of one of which is required for each tonne of carbon dioxide equivalent of greenhouse gases (tCO₂-e) emitted. Both major scheme design proposals in Australia to date have suggested that unlimited "banking" of allowances should be allowed, meaning that there would be no expiry date or other time limit on the use of allowances.²¹ The New Zealand proposal envisages (consistent with the Kyoto Protocol) unrestricted banking of allowances.²² Thus, surplus allowances will be valid until they are used for compliance or cancelled, which will give investors higher certainty and allow for flexibility. However, banking can also reduce market liquidity and enable over-allocation to be carried over into following compliance periods. This would lead to smaller emissions reductions in the future.

There is as yet no decision on banking for the Australian scheme, however the decision it makes has potential impacts on the nature of a linked market with New Zealand. If banking is allowed in only one scheme, then the concentration of banking in that scheme may increase, since transfers to

¹⁹ Such as proposed for other schemes: W Blyth and M Bosi, *Linking non-EU Domestic Emissions Trading Schemes with the EU Emissions Trading Scheme*, OECD/IEA Discussion Paper 2004.

²⁰ A non-linked ratifying country with an emissions trading scheme may wish to link with another ratifying country's emissions trading scheme, but might hesitate because the other ratifying country's emissions trading scheme is already linked to yet another country whose scheme design is viewed as unsatisfactory for one reason or another. Since linking effectively amounts to importing the design features of the scheme to which one links (given that the imported carbon has been a creation of that design), subject to any restrictions on the carbon recognised, linking to another scheme can amount to importing the design features of all the other trading schemes to which it is already linked.

²¹ PMTG 2007, op cit n 3, p 110; NETT, op cit n 3, pp 51-52.

²² NZ Bill pp 6-7.

it could allow banking for the combined market even though the other linked scheme does not allow it. Therefore limited banking might not be possible in a linked scheme in which one partner allows for unrestricted banking.

The proposed legislation for the New Zealand scheme has no direct borrowing provisions. However, the NZ ETS is mainly based on the Kyoto Protocol Article 17 trading, where borrowing between years within a commitment period is allowed. Therefore liable entities might have access to allowances across the whole compliance period and allowances may only become scarce and liquidity may only dry up in 2012 the final year of the first multi-trading period. Thus, if the Australian system does not allow borrowing (this has been proposed in both previous scheme design proposals²³), there might be indirect borrowing opportunities through the NZ ETS similarly to indirect banking.²⁴ This should be kept in mind when deciding on the distribution of allowances over time.

3.4 Targets

Of political importance is the “stringency of the target”. Differences in stringency of targets will impact on the initial distribution of wealth between companies and countries. Nevertheless, competitiveness concerns would arise anyway and are not a result of linking. However, an overall reduction in environmental performance of the linked systems might occur if one scheme is setting targets above business as usual projections. Under a non-linking scenario the price in that system would be very low and if banking is not possible there might be no demand for the surplus allowances. If this scheme is linked to a scheme with more stringent targets, companies in the stringent scheme will buy the surplus allowances, and so the combined emissions of the linked systems would be higher than if they were not linked.²⁵ If the New Zealand scheme allows companies to use AAUs without restrictions for compliance it actually reduces the environmental effectiveness of the scheme compared to a scenario where only selected AAUs (eg EUAs) are allowed. This is because “hot air” from Russia and other countries could enter their scheme.

3.5 Allocation

Having different allocation methodologies (typically, auctioning, free allocation or a mixture of such measures) will not be an obstacle for linking. Under certain (but unrealistic) assumptions, the efficiency of the systems would be the same with auctioning or free allocation, since the price should be independent of any allocation method.²⁶ However, in reality there might be differences – for example, early price signals might better reflect marginal abatement costs if auctioning is used as the main method. As European Union experience has shown, market prices in an emissions trading scheme can be highly influenced by political decisions. An auction eg as foreseen in the Australian ETS allowing all participants to bid would increase the efficiency of the system since true prices are more likely to be revealed. Therefore there could be benefits eg for an NZ ETS of linking to a scheme which actually auctions allowances rather than allocates them for free.

²³ Op cit n 21.

²⁴ Blyth & Bosi, op cit n 19, p 28.

²⁵ The effect of Russia having more AAUs than it needed and linking up with other emissions trading schemes is modelled by Anger, *Emission Trading Beyond Europe: Linking Schemes in a Post-Kyoto World*, 2006, ZEW Discussion Paper No 06-058.

²⁶ W D Montgomery, “Markets in licenses and efficient pollution control programs” 5 *Journal of Economic Theory* 395-418.

Finally, differences in future allocation, new entrant or closure²⁷ rules might lead to gaming and a distortion of incentives for new investment (similar to differences in banking rules) which may reduce the efficiency of linking. A scheme that does not use updating²⁸ or terminate allocation after closure (for example, through transfer rules) would provide greater incentive for reducing emissions. For example if the NZ ETS would base future free allocation for trade exposed energy intensive industry on emissions in the former period there could be an incentive – assuming higher prices in the future period – to buy allowances in the prior period to keep emissions high in order to get a higher – more valuable – allocation in the next period. Under this scenario, linking to an Australian ETS could facilitate such gaming through higher liquidity and lower prices in the first period.²⁹

3.6 Sanctions

Differences in compliance systems will have an impact on linking as soon as the market price exceeds one system's penalty rate. Linked schemes with different compliance systems might therefore need to attach additional requirements to the linked commodity. Under the New Zealand scheme, in addition to paying a penalty, an operator has to surrender any missing allowances in later periods in order to ensure the total abatement is achieved. Public notification is made of the operator's compliance failure and if a shortfall is thought to be deliberate criminal prosecution may take place.³⁰ The penalty rate can therefore not be considered as a price cap. In contrast, some Australian proposals foresee a penalty rate which should function as a price cap.³¹ If two such systems were linked, the fixed-price allowances will also be available to New Zealand companies. Were prices in other schemes to rise above the penalty rate in Australia, participants in Australia would have an incentive to sell allowances to participants in other linked schemes facing higher penalty rates.³² Linking these systems would encourage non-compliance in the system with lower penalties and compromise the environmental integrity of the two schemes. This situation would not occur if both systems asked participants to surrender missing allowances in the following years (known as a "make good" requirement) since this would de-couple the penalty rate from the market price. Under such circumstances differences in penalty rates would be easier to handle. Different mechanisms to deal with differences in penalty rates have been assessed,³³ but all will have negative impacts on the gains from linking since they will split the market once the lower

²⁷ The term "closing" means, that an installations is ceasing their production and will be shut down.

²⁸ The term "updating" means, that allocation is not based on emissions in a fixed historic base period and is instead using more recent emission data over time.

²⁹ Blyth & Bosi, op cit n 19, p 25 and J Jaffe and R Staving, *Linking Tradable Permit Systems for Greenhouse Gas Emissions: Opportunities, Implications, and Challenges*, Prepared for: International Emissions Trading Association, Geneva, pp 39.

³⁰ Two types of sanctions are envisaged. Where the regulator deems the shortfall to be non-deliberate, operators will pay a NZ\$30 fine per tCO₂e missing, must make good on missing allowances within 90 days at a ratio of 1:1, and public notice will be given of non-compliance. Where the shortfall is deemed deliberate, operators will pay NZ\$60 per tCO₂e missing, must make good on missing allowances within 90 days at a ratio of 1:2, and public notice will be given by the regulator taking out criminal proceedings against the operator. See NZ Bill p 41 and ss 121 and 123.

³¹ PMTG 2007, op cit n 3, p 110; NETT, op cit n 3, p 61.

³² Haites & Mullins, op cit n 9 p 58.

³³ One option would be to issue to the domestic companies with price-cap type of penalties additional allowances up to an amount that covers the difference between their actual emissions and their initial allocation in a given year (see Blyth & Bosi, op cit n 19, p 30 pp). See also assessment by Sterk, Braun, Haug, Korytarova and Scholten, *Ready to link up?: Implications of design differences for linking domestic emissions trading schemes*, JET-SET working paper, Wuppertal Institute January 2006, p 61.

penalty rate is reached. Therefore the most efficient solution is to harmonise enforcement regimes as was required by the European Union Directive when the EU ETS was introduced.³⁴

3.7 Monitoring, Reporting and Verification (MRV)

Differences in MRV might impact on the legitimacy of the traded units and, if not sufficiently robust in one system, might lower confidence in the traded units. The risk of systematically under-reporting in one system, which might be the case if emissions are not externally verified, would lower the environmental effectiveness of both schemes since “false reductions” will be imported across the linked systems. One option to improve the confidence in MRV is to have auditors or authorised administrators from one scheme participate in the auditing a sample of regulated installations in the other scheme.³⁵ This could however undermine confidence if such sampling were to demonstrate ineffectiveness in MRV in the linked scheme, so there may need to be consequences for a poor audit result (for example, restrictions on importing offsets from that source). Since monitoring depends on the coverage of the system (upstream, downstream and gases included) this has to be taken into account in the Australian design.

3.8 Technical Issues

Surrendering of allowance in the New Zealand scheme is similar to the EU ETS (end of April), based on calendar years with a four-month period of finalising and verifying the emission reporting.³⁶ The Australia emissions trading system is more likely to stick to the financial year and surrendering would therefore rather be in the second half of the year.³⁷ Thus linking both schemes would create a staged surrendering which could lead to a more equally spread trading pattern if we assume that some companies will only trade for compliance.

The transparency of the two linked schemes is critical for maintaining public confidence in the schemes and supporting the functioning of the market. Publicly accessible online registries, detailing allocation, holdings of Kyoto Protocol units, and emissions are therefore an important technical feature of a linked trading scheme. It is important that electronic registries should be able to be technically linked, secure and therefore similar enough for compatibility.

4. REGULATORY CHALLENGES FOR LINKING

4.1 Legal Nature of Carbon across Jurisdictions and Schemes

Linking is legally complicated because it requires recognition of an incorporeal commodity across different legal jurisdictions, each of which might attribute different legal characteristics to the commodity and in turn influence the operation of the market. Even allowances and offsets, although often having the same units (tCO₂e), have different characteristics under most scheme rules given that allowances correspond to an allocation of emissions whereas offsets amount to a reduction in emissions that can be netted-off against emissions elsewhere. If only offsets from certain projects are recognised in a linked scheme due to different environmental standards, this

³⁴ For discussion on sanctioning see Yamin and Lefevre, *Final Report: “Designing Options for Implementing an Emissions Trading Regime for Greenhouse Gases in the EC”*, FIELD working paper, 2000 and final decision see Directive 2003/87/EC Art 16.

³⁵ E Haites and X Wang, *Ensuring the Environmental Effectiveness of Linked Emissions Trading Schemes over Time*, Mitigation and Adaptation Strategies for Global Change, forthcoming.

³⁶ NZ Bill s 65(4).

³⁷ See timing for reporting under the *National Greenhouse and Energy Reporting Act 2007* (Cth).

will impact on liquidity and can split the pricing of offsets in the exporting market. Even the line between offsets and allowances can be blurred. Offsets created from sectors that are covered by an emissions cap, such as Emissions Reduction Units (ERUs) under the Joint Implementation Mechanism to the Kyoto Protocol, are often created from allowances comprised in the emissions cap so as to avoid double counting the emissions reduction benefit (ERUs are created from AAUs, for example).

In domestic empowering legislation, carbon units may offer different specific statutory rights to the holder. Allowances or offsets may have the characteristics of a property right and, if they do, may comprise different types of property right or interest. While the Kyoto Protocol does not confer “*any right, title or entitlement to*” emit,³⁸ historically other emissions schemes (albeit not for greenhouse gas emissions) have taken other approaches. The tradeable emissions scheme for pollutants in New South Wales enables permits to be established that correspond to an *entitlement* to emit,³⁹ while in South Australia licences to emit beyond limits required by the legislation act as an exemption to the prohibited pollution.⁴⁰ It was proposed that allowances might be made a property right in Australia⁴¹ with a view to avoiding Federal interference in any State-based trading scheme, by relying on the broad range of property rights whose owners must be compensated on just terms if those rights are “acquired” by the Commonwealth.⁴² It is questionable whether this would have been effective in Australia as on current authorities the Commonwealth must obtain some benefit and not merely extinguish property rights for there to be a relevant “acquisition”.⁴³

This may now be unnecessary in Australia given the political will to have a Federal emissions trading scheme, but it could be difficult to stop an allowance or offset from acquiring the characteristics of a property right, even if legislation provides that a unit is not a property right.⁴⁴ This may be the case in New Zealand where the legislation is silent on whether NZ Units are intended to be a particular type of property right, but the allowances are given many characteristics of a property right including title,⁴⁵ transferability⁴⁶ and the ability to register security interests over them.⁴⁷ Allan and Bayliss comment that if carbon units are in fact property rights, the resulting risk of compensation claims for taking those rights away would be a real risk to

³⁸ Decision 2/CMP.1 (FCCC/KP/CMP/2005/8/Add.1 p 4).

³⁹ *Protection of the Environment Operations Act 1997* (NSW) ss 295B(1)(a).

⁴⁰ *Environment Protection Act 1993* (SA) s 37.

⁴¹ NETT, op cit n 3, p 120.

⁴² *Australian Constitution Act 1901* s 51(xxxi), as applied in *Bank of NSW v Commonwealth* (1948) 76 CLR 1 at 349.

⁴³ *Mutual Pools & Staff Pty Ltd v Commonwealth* (1994) 179 CLR 155 at 172-3.

⁴⁴ M W Gehring and C Streck, “Emissions Trading: Lessons from SO_x and NO_x Emissions Allowance and Credit Systems Legal Nature, Title, Transfer, and Taxation of Emissions Allowances and Credits” (2005) 35 ELR 10219 at 10224.

⁴⁵ NZ Units are proposed to be “held” under the *Climate Change Response Act 2002* (NZ) (NZ Act) s 18(2)(a) and a draft consultation Bill covering aspects of financial product regulation and registration of carbon proposes that entry of the name of a person in a register of carbon units as the holder of a carbon unit would be prima facie evidence that legal title to the emissions unit vests in that person (*Draft Emissions Units, Settlement Systems and Futures Bill* s 33(1)).

⁴⁶ NZ Act s 18(2)(b)(i).

⁴⁷ NZ Bill s 65 amends the *Personal Property Securities Act 1999* (NZ) so that NZ Units become “investment security”, like shares in a listed company, so that security interests over them can be registered in the Personal Property Securities Register.

Governments.⁴⁸ In this sense, the certainty that comes with making carbon a property right can be a two edged sword. If adjustments to an ineffective trading scheme could lead to an obligation to compensate, Governments might fetter the evolution of the scheme by granting property rights. Some Governments take the opposite approach and make it clear that they retain the ultimate property rights in emissions reductions. The People's Republic of China declares that the "emissions reduction resource" is owned by the Government and so while the law provides that CERs from each project are then to be owned by the project owner, the Government takes a share of the proceeds from the initial sale of those CERs.⁴⁹

If carbon units have different legal characteristics in a linked "exporting" jurisdiction and "receiving" jurisdiction, different principles in the two jurisdictions can have real consequences. For example, upon the winding up of linked emissions trading schemes, entities holding an excess of allowances could transfer the units to the scheme that affords the strongest proprietary rights to allowances, with the aim of seeking compensation in that jurisdiction if the property is taken or rendered valueless. Different tax treatments in two jurisdictions might likewise lead to forum shopping in terms of where projects to reduce emissions are undertaken or the direction in which offsets or allowances are sold. Similarly, take a contract for the transfer of allowances across two linked jurisdictions, where the seller subsequently breaches the contract by transferring the allowances to a third party who did not act fraudulently but had notice of the contract. Assume that in one jurisdiction (State A) the allowance is a statutory right, issued in the name of a particular party with no scope for non-legal (equitable) interests to be held in the allowance, while in the other jurisdiction (State B) an allowance is a proprietary right that clearly contemplates that persons other than the registered allowance holder may have an interest in the allowance. If State A were the exporting jurisdiction the buyer under the contract would have no recourse against the seller other than for damages for breach of contract because the buyer would have no interest in the allowances. If State B were the exporting jurisdiction, it might be open for the buyer to claim an equitable interest in the allowances and seek a declaration that the third party who received the allowances holds them on trust for the buyer.

In this sense, differences between jurisdictions in their institutions for dispute resolution, decision making, review of decisions, enforcement and recognition of carbon, as well as differences in environmental standards or taxation, can all impact on the operation of the linked markets by changing the nature of the commodity in one jurisdiction compared with the other. Gehring and Streck consider that clear legal definitions of allowances are essential in any market to define the rights of duties of participants, noting that allowances are often designed having the regard to the need for some notion of legal title and the ability to trade so that an effective market is possible.⁵⁰ This is true also across linked markets. Ultimately, the characteristics attributed to carbon units in linked markets need to be sufficiently clear so that the effectiveness of the design of either market is not compromised by the other.

4.2 Legal Capacity to Recognise Carbon across Different Jurisdictions

To exchange carbon units directly between jurisdictions, a jurisdiction needs to have capacity to recognise actions in the other jurisdiction (whether directly or indirectly) and power to enforce in

⁴⁸ T Allan and K Baylis, *Who Owns Carbon? Property Rights Issues in a Market for Green House Gasses* (sic), University of British Columbia, July 2005 p 4.

⁴⁹ *Measures for Operation and Management of Clean Development Mechanism Projects in China 2005-11-21* (PRC), Art 24.

⁵⁰ Gehring and Streck, *op cit* n 44, p 10229.

its own jurisdiction any requirements before carbon units can be imported from the supplying jurisdiction. This is because registries in each jurisdiction might need to interact or, at least, one jurisdiction might need to recognise changes to the registry in another (for example, the surrender of carbon units) or recognise the emissions reduction activities undertaken in another country (such as may be necessary if only certain types of projects or methodologies are recognised to maintain the integrity of the importing trading scheme). In Australia, for example, there would appear to be no legislative barrier to enacting laws that pertain to activities undertaken in another country⁵¹ or that directly recognise or interact with laws in another jurisdiction,⁵² provided that the subject matter is within the heads of legislative power.

Even where there is no legal authority for the receiving jurisdiction to directly interact with the laws of the supplying jurisdiction, it is possible for the laws in one jurisdiction to recognise commodities in another jurisdiction if any extraterritorial prerequisites to the link can be enforced within the receiving jurisdiction. The New South Wales Greenhouse Gas Abatement Scheme (GGAS) employed such a mechanism to recognise Renewable Energy Certificates (RECs) under Australia's Mandatory Renewable Energy Target (MRET). GGAS provides that RECs attributable to sales of electricity in New South Wales⁵³ that are surrendered or offered for surrender⁵⁴ can be counted for the purpose of calculating the total tonnes of emissions abated by an entity that is liable to offset certain emissions to reach a benchmark.⁵⁵ It also provides the means to calculate the greenhouse gas emissions abated for each REC surrendered.⁵⁶ Despite relying on the Federal legislation and commodity, this link arguably does not interfere with matters covered by the Federal legislation in a way that might render the State law invalid for inconsistency⁵⁷ and has the territorial connection that is required to found the law-making power of the State.⁵⁸ The link is effective because Federal cooperation and resources are not required to enforce the prerequisites required before RECs can be imported and the State regulator is in a position to refuse to accept the Federal commodity if the State requirements are not complied with.

It does not follow that every jurisdiction will have the capacity to recognise carbon units from another jurisdiction. Jurisdictions that have restricted powers to make laws concerning matters outside of their territory may only be able to recognise domestic emissions reductions or allowances in another jurisdiction if a sufficient connection can be drawn with the territory of the jurisdiction.⁵⁹ Given that the atmosphere has no borders, it may be the case that a territorial

⁵¹ *Polyukhovich v Commonwealth* (1991) 172 CLR 501 at 530 per Mason CJ.

⁵² For example, relying on the breadth of extraterritorial legislative power, Australia has recognised the laws and courts of New Zealand under the *Evidence And Procedure (New Zealand) Act 1994* (Cth) and authorities established under the laws of New Zealand in the *Food Standards Australia New Zealand Act 1991* (Cth).

⁵³ *Electricity Supply (General) Regulation 2001* (NSW) (ES Regs) cl 73DB pursuant to *Electricity Supply Act 1995* (NSW) (ES Act) s 97CD.

⁵⁴ ES Regs cl 73DA pursuant to ES Act s 97CD.

⁵⁵ ES Act s 97BD(3).

⁵⁶ *Greenhouse Gas Benchmark Rule (Compliance) No 1 of 2003* (NSW) Equation 2, pursuant to ES Act s 97K(1).

⁵⁷ *Commonwealth of Australia Constitution Act* s 109.

⁵⁸ A mere remote or general connection will suffice: *APLA Ltd v Legal Services Commissioner (NSW)* (2005) 224 CLR 322 at 354 per Gleeson CJ and Heydon J, at 483 per Callinan J.

⁵⁹ Australia has on occasions been close to having a weak restriction on extraterritorial legislative competence requiring some connection with Australia: *Polyukhovich* per Brennan J at 552, who

connection founding the basis for linking emissions trading schemes should be found even in these jurisdictions.⁶⁰

4.3 Legal Considerations when Linking International Schemes to National Schemes

International law almost universally acts on nation states and not on individual natural or corporate persons, or even on national laws, unless the domestic law so provides. Likewise, the capacity of domestic law to directly influence the international law without some kind of international consensus is limited,⁶¹ but nations have flexibility in how they implement domestic laws consistently with their obligations. Carbon rights established under the Kyoto Protocol undoubtedly “exist” in international law, there being real consequences for nations that are required to hold AAUs to meet or exceed their net emissions. However, the way these units or corresponding domestic carbon units are recognised in domestic law for trade between corporate and natural persons can have consequences for linked markets. In one sense, international carbon units like CERs can have a dual nature, one that is recognised and enforced by international law and one that is recognised and enforced in domestic law. This will not necessarily prevent linkages, but it could impact on the way the linkage is implemented. All overlapping legal jurisdictions present regulatory challenges for linking where the targets, included emissions, incentives and accuracy of the two schemes differ, or where the two schemes merely have an overlapping coverage of emissions sources but one scheme allows offsets to be created in a sector covered by the other scheme, leading to double counting.⁶²

In Australia, despite ratifying the Kyoto Protocol, neither the Protocol nor its carbon units will be recognised in domestic law until these units are specifically recognised by domestic law.⁶³ Once Australia establishes its national registry for the Kyoto Protocol, the international community will judge Australia’s registry and dealings in carbon units against its obligations under the Kyoto Protocol and the Marrakesh Accords,⁶⁴ while the courts in Australia will judge the registry and carbon units according to the domestic statute and common law,⁶⁵ but subject to such considerations that Australian common law makes of international obligations (such as presumed consistency with international law when construing a statute,⁶⁶ a legitimate expectation in decision

considered that Australia could surely not criminalise littering in Paris by French citizens forty years ago; The Australian States are still subject to this limitation, *op cit* n 58.

⁶⁰ The fact that there are many emitters of greenhouse gas emissions worldwide, and that emissions would be produced domestically and extraterritorially from a development, did not mean these emissions were irrelevant in an environmental assessment process: *Gray v Minister for Planning and Ors* (2006) 152 LGERA 258 at 287. In the Canadian context, Bankes and Lucas considered that even though a provincial emissions trading scheme might operate extraterritorially, the objective of such a scheme would arguably be reducing effectively and efficiently the provincial source emissions: N Bankes and A Lucas, “Kyoto, Constitutional Law and Alberta’s Proposals” (2004) 42 Alberta L Rev 355 at 377.

⁶¹ For example, States cannot invoke domestic law to excuse non-compliance with international law as far as international law is concerned: Art 27 of the *Vienna Convention on the Law of Treaties*.

⁶² C Boemare, P Quirion and S Sorrell, “The evolution of emissions trading in the EU: tensions between national trading schemes and the proposed EU directive” (2003) 382 Climate Policy S105 at S121.

⁶³ *Chow Hung Ching v The King* (1948) 77 CLR 449 at 478; *Bradley v Commonwealth* (1973) 128 CLR 557 at 582; *Minister for Immigration and Ethnic Affairs v Teoh* (1995) 183 CLR 273 at 286-287.

⁶⁴ For example, *Vienna Convention on the Law of Treaties*, Art 26.

⁶⁵ For example, *Polites v Commonwealth* (1945) 70 CLR 60 at 69 per Latham CJ, at 75 per Starke J and recently in *Povey v Qantas Airways Ltd and Anor* (2005) 233 CLR 189 at 199 per Gleeson CJ, Gummow, Hayne And Heydon JJ.

⁶⁶ *Polites*, *ibid* at 68-69.

makers that they will act in conformity with relevant international obligations⁶⁷ and the potential for international law to contribute to the development of the common law⁶⁸.

For nations, the international law carbon unit can usually be directly recognised in domestic law owing to the legislative capacity of nations to recognise and give effect to international obligations. The European Union appeared to carry no doubt that linking with international emissions trading at the Community level was legal (in reliance on Article 175(1) of the *Treaty Establishing the European Community*, concerning the protection of the environment) and that laws to recognise CERs and ERUs within the EU ETS were proportional to the power conferred by the treaty, under which the Kyoto Protocol was also ratified.⁶⁹ Given the broad entitlement to rely on the external affairs power in Australia,⁷⁰ there is little doubt that Australia would have the same capacity to recognise AAUs, CERs or ERUs directly provided that a law recognising or linking international carbon units is reasonably capable of being considered as appropriate and adapted to implementing a treaty to which Australia is a party.⁷¹ Even the *United Nations Framework Convention on Climate Change* obliges Australia to implement national and, where appropriate, regional programs to combat climate change,⁷² so Australia would have domestic legislative capacity to establish links even without relying on the Kyoto Protocol mechanisms.

4.4 Maintaining the Link between Schemes

Once a linkage is achieved across markets, there is no guarantee that scheme rules in the linked scheme will not change so as to impact on the domestic market. In bilateral or unilateral linkages, the sovereignty of the parties and their ability to change laws could compromise the ability of either party to control changes in the combined market. Mehling suggests bilateral or multilateral linking can be achieved by political arrangement, mutual recognition in domestic law or by treaty.⁷³ The latter is obviously most desirable because it imposes an international law obligation that, as between nations, ought not be compromised. Such a convention might impose obligations to preserve the reciprocal conditions for an effective linkage, particularly if the sanctions for non-compliance involve some suspension of the link so that suppliers or purchasers of carbon rights are likely to bring domestic pressure to bear on nations to continue any linkages.

⁶⁷ *Minister for Immigration and Ethnic Affairs v Teoh* (1995) 183 CLR 273 at 291.

⁶⁸ *Mabo and Ors v The State of Queensland (No 2)* (1992) 175 CLR 1 at 42-43 per Brennan J.

⁶⁹ European Commission, Commissions Staff Working Paper: Extended Impact Assessment on the Directive of the European Parliament and of the Council amending Directive establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project based mechanisms, COM(2003)403 final [Brussels, 23.7.2003, SEC(2003) 785] p 24.

⁷⁰ *Commonwealth of Australia Constitution Act* s 51(xxix).

⁷¹ *Victoria v Commonwealth (Industrial Relations Act Case)* (1996) 187 CLR 416 at 487. Even deficiencies in implementing a convention would not be invalid in Australia unless the deficiency is so substantial as to deny the law the character of a measure implementing the international law or, when taken with other laws, it is inconsistent with the international law: *Industrial Relations Act Case* at 489. However, a treaty obligation that is relied on can be so general and unspecific as not to found a law purporting to give effect to it: *Thomas v Mowbray and Ors* (2007) 237 ALR 194 at 272-273.

⁷² *United Nations Framework Convention on Climate Change*, Art 4(1)(b).

⁷³ M Mehling, "Bridging The Transatlantic Divide: Legal aspects of a link between regional carbon markets in Europe and the United States" (2007) VII(2) *Sustainable Development Law and Policy* 46 at 47.

However, the parties will ultimately have discretion in domestic law as to how the international convention is implemented and small changes in design (some of which were outlined above) could impact on the effectiveness of the linkage. If a nation were to change its trading scheme so as to affect the operation of a linked scheme, the linked jurisdiction might consider discounting allowances, applying a tariff on allowances or setting a quota on imported allowances.⁷⁴ Further, if unilateral linking affects the market in an involuntary supplying jurisdiction (which has not passed legislation to enable the link) the “supplying” jurisdiction might ultimately be forced to pass legislation to take account of the link. This has already been observed in Australia. For a number of years it was not possible to voluntarily surrender RECs under the MRET scheme,⁷⁵ but amendments in 2006 made it possible to voluntarily surrender RECs to the regulator under the Commonwealth scheme,⁷⁶ recognising the demand to surrender RECs for the purposes of other schemes.⁷⁷

4.5 Consistency with International Emissions Trading Obligations

Emissions trading linkages, if made across national borders must still be consistent with international obligations. Any trade in greenhouse gas emissions across national borders should be supplemental to domestic action if it is to be consistent with the Kyoto Protocol.⁷⁸ Some commentators have indicated that restrictions on trade across linked schemes can be intended to “transpose” this supplementarity obligation to domestic schemes.⁷⁹

However, there are other ways in which linked trades might be inconsistent with, but not unlawful under, international Kyoto Protocol obligations. If two Kyoto Parties trade domestic allowances, there will be no adjustment to the respective parties’ obligations under international law (that is, the international cap recognised by international law) unless the corresponding Kyoto units (AAUs, in this case) are transferred. The trade is not unlawful, it is simply not recognised. Haites proposed that this could be effected by either an exporting party exchanging domestic carbon rights for international carbon units, then transferring the international carbon units to the other country, which would then in turn issue domestic carbon units to the purchaser, or by “shadowing” a private law transfer of domestic units between the companies in the different jurisdictions with a concurrent transfer of international carbon units from the host country of the seller to the host country of the purchaser.⁸⁰ The European Union has adopted the latter model for trades within the European Union, by tagging European Union Allowances as AAUs in the registry and, as discussed above, New Zealand has also adopted this approach. If Australia and New Zealand were to exchange AAUs that are tagged as domestic units under domestic law, it would still be necessary for the domestic law to provide whether the tag of the “exporting” jurisdiction would be recognised or whether units would be “retagged” as allowances of the receiving jurisdiction. Likewise, the exporting jurisdiction would need to account for fewer domestic allowances, by removing the domestic allowances from the exporting registry or otherwise “untagging” the transferred AAUs so they are no longer dealt with under the domestic law.

⁷⁴ Haites, *op cit* n 12, p 6.

⁷⁵ Surrenders could only be made under *Renewable Energy (Electricity) Act 2000* (Cth) (REE Act) s 44 or 95 for the purposes of participating in the scheme.

⁷⁶ REE Act s 28A.

⁷⁷ Revised Explanatory Memorandum to the *Renewable Energy (Electricity) Amendment Bill 2006* (Cth) pp 3-4.

⁷⁸ Kyoto Protocol Art 6.1(d), Art 17 and Decision 5/CP.6.

⁷⁹ Bygrave and Bosi, *op cit* n 10, p 34.

⁸⁰ Haites, *op cit* n 12, p 12.

Likewise, if offsets are traded between the two Annex B countries that are “covered” by the Kyoto Protocol, the use of the offset in the receiving country will not reduce the receiving country's target under the Kyoto Protocol unless the corresponding ERUs are transferred between the two countries in accordance with the Kyoto Protocol's Joint Implementation mechanism. Alternatively, AAUs could be traded in place of ERUs using the trading mechanism.

Carbon units generated in nations that are not a party to the Kyoto Protocol cannot be used to meet compliance with the Kyoto Protocol, even if the emissions reduction is genuine and additional, which one commentator has indicated would mean linking could only be achieved from the Kyoto Protocol party to the non-party.⁸¹ This would not, however, stop a party to the Kyoto Protocol from issuing allowances to an entity covered by a domestic trading scheme, corresponding to the emissions that have been “imported” from the non-Kyoto party, provided that the total number of allowances issued across the emissions trading scheme does not exceed the country's Kyoto Protocol target. However, as a matter of policy the Kyoto Protocol party might be disinclined to effectively tighten the target imposed across the remainder of the market, because fewer allowances would then be available to other entities participating in the trading scheme.

5. LINKING SCENARIOS FOR AUSTRALIA AND NEW ZEALAND

Table 1 summarises the differences between the potential Australian scheme and the NZ ETS in order to flag some of the key issues that would arise should there be efforts to link them.

Table 1

Feature	New Zealand	Potential Australian cap and trade	Linking issues
Liable entity	Hybrid scheme: starting with forestry in 2008 downstream, phasing in transport 2009 upstream, electricity and industry 2010 upstream and agriculture and waste 2013 do be decided might be downstream.	Most likely hybrid system: upstream for non-stationary emissions and other distributed fuel consumption, downstream for stationary emissions, aiming for 70% coverage of Australian greenhouse gas emissions.	Differences in coverage do not preclude linkage. Downstream with upstream will need exemption for exported fuel in order to avoid double counting.
Covered gases	All 6 Kyoto gases	Most likely all 6 Kyoto gases	Diversity should improve efficiency. However, low accuracy in monitoring other gases may impact on environmental integrity.
National off-sets	Permits for afforestation of post-1989 forest land owners/lease holders.	Not decided yet, but very likely some forest offset will be included	Additionality will be important to ensure environmental integrity.
Accountable unit	New Zealand Units (NZUs), backed by Kyoto Units (Assigned Amount Units).	Not decided yet. Former proposals suggest units which are date stamped (vintages).	Different units as long as they are exchangeable to AAUs as common currency are no obstacle to linking.

⁸¹ K Engel, “Mitigating Global Climate Change in the United States: A Regional Approach” (2005) 14 NYU Environmental Law Journal 54 at 82.

International linkage	No limits on AAUs, CERs and ERUs (excluding nuclear and sink CERs, although particular tCERS may be granted individual exceptions by regulator; HFC-23 projects not decided yet). New Zealand government looking at options to restrict private purchase from some countries (eg Russia, Ukraine) ⁸²	Not decided yet, but very likely at least a link to the CDM.	Affects total supply of available units, needs political agreement.
Unit and legal nature	1 t CO ₂ e entitlement	Most likely 1 t CO ₂ e Not decided, but not likely to be a property right.	Legal description should be clear and sufficiently similar between the schemes so that commodities are dealt with consistently in each jurisdiction and there is no incentive to shift commodities between jurisdictions to benefit from a more favourable regulatory treatment.
Target	Absolute, based on Kyoto target of stabilising emissions on 1990-1995 level in 2008-2012.	Absolute, since cap and trade is foreseen. However, target has not been decided yet.	Stringency of target is important. If stringency of one system is very low eg more than business as usual, linking would affect environmental effectiveness of the other system, especially if units are not backed by Kyoto units.
Allocation	Free allocation (progressive obligations are discussed) to forestry, agricultural sector and industrial producers, phase out between 2012 and 2025. Upstream points like liquid fossil fuel, stationary energy sources, electricity generators or landfill operators: no free allocation and they will need to buy on the international market, since no auction is foreseen in the short term.	Mix of auctioning and free allocation likely (the latter likely for trade exposed energy intensive industries).	Different allocation is acceptable since competitive distortion would exist without linking. Gaming could occur if updating is used in one of the systems (same effect as different banking rules).
Flexibility	Similar to Kyoto: Banking allowed and borrowing within the commitment period allowed.	No decision so far, but most likely banking at least to some extent will be allowed. No decision on borrowing.	If difference in banking, companies will be able to bank via swap. Banking will increase total emissions allowable in future periods (impact on environmental effectiveness).
Monitoring / reporting / verification	Based on "self-assessment" model like New Zealand tax system, harmonisation of monitoring and reporting with other schemes in long run, annual reporting 31st March	<i>National Greenhouse and Energy Reporting Act 2007</i> (Cth) introduced, but contains more general reporting obligations,	As long as differences in monitoring accuracy have no impact on market confidence there may not be problems. But high inaccuracy might impact on environmental integrity.

⁸² NZ Bill pp 48-49.

	following year might be extended to quarterly reporting.	not yet fully harmonised with the likely trading scheme.	environmental integrity.
Sanctions	Depends on assessed culpability. Either NZ\$30 per tonne (\approx AU\$26 at time of publication) + make good provision of 1:1 within 90 days + public notification, or, if shortfall deemed deliberate then NZ\$60 (\approx AU\$52 at time of publication) per tonne, make good provision of 1:2 and criminal proceedings. Include power to introduce price cap in the future depending on international developments.	No decision yet. In former proposal penalty rate was mainly seen as price cap at least at the beginning.	Linking schemes with different sanctions becomes difficult once the market price reaches the level of the price cap, the market will split (incentive for companies to sell all allowances and become non-compliant). Any measures which will prevent this will reduce efficiency gains from linking.
Technical aspects	Annual surrendering based on calendar year. Publicly accessible registry (NZEUR) which makes transaction and holdings of Kyoto Units transparent. Possibility for quarterly reporting in the future.	Annual surrendering most likely based on financial year. No decision on registry and transparency so far.	Differences in timing of surrender might increase the liquidity of the market. Electronic registries should be able to be technically linked, and similar.

6. CONCLUSIONS

The NZ ETS is designed to link up very easily with other international emissions trading schemes, since it allows AAUs to be used for compliance by liable companies in New Zealand and allows great flexibility to import or export these units. The exact design features of the Australian emissions trading system are still to be decided. Given the level of freedom New Zealand proposes for cross-border transfers of Kyoto Protocol carbon units, and the wide law-making powers of the Australian Parliament, there should be no legal barriers for Australia to establish a link with the New Zealand scheme. However, to enable direct linking with the NZ ETS, the following elements are important for the Australian scheme design:

- **Target setting:** The cap which is set by the Australian scheme should be in line with the Kyoto target and needs to be below business as usual emissions, otherwise the environmental effectiveness of the NZ ETS will be compromised. Therefore a generous budget at the outset of the scheme which would tighten over time might not be feasible. Differences in banking and borrowing rules – including vintages and phase-related allowances – need also to be considered, since they may alter trajectories.
- **Traded unit:** A common currency which can be used for compliance under the Kyoto Protocol is necessary. Therefore Australia should also allow their companies the trading of Assigned Amount Units or Australian Allowances which are tagged Assigned Amount Units. The regulatory characteristics of the carbon units should be clear and sufficiently consistent with those under the NZ ETS so as to avoid market distortions arising from different treatment of



the units in each jurisdiction. However the problem of “hot air” needs to be carefully addressed, for example by restricting the use to tagged AAUs such as EUAs.

- Indirect linking to Kyoto Mechanisms: Any Australian restriction of the use of Kyoto Units in order to ensure some share of domestic action to implement the complementarity rule under the Kyoto Protocol would be undermined by the quantitatively unrestricted indirect linking of the NZ ETS to the Kyoto Mechanisms. However, there are qualitative restrictions in the NZ ETS for Kyoto Units (eg ICERs and tCERs) which would not prevent Australia to have unrestricted use of Kyoto Units.
- Sanctions: The penalty mechanisms of the Australian ETS should not be designed as a price cap but rather include a make good provision and should be in the range of NZ\$30 (\approx AU\$26 at time of publication). Non-compliance should be publicly notified.

The success of linking between the two countries therefore depends on the extent to which Australia will be flexible on the above issues.

