Engineers for Social Responsibility – Sustainable Energy Forum 2008 Conference

Responding to Oil Depletion and Climate Change

Saturday 26 July 2008

Garry Law - International Progress on Kyoto

Chart:

History of UN agreements
Kyoto Protocol basics
What has happened with Kyoto
What has been happening otherwise
Bali Road Map
Major issues
New Zealand issues
(I am not talking about the science, NZ implementation the ETS etc.)

UN Framework Convention on Climate Change (UNFCCC)

Agreed 1992.

Ratified – by virtually everybody (including the USA) - NZ in 1992.

Entered into force 1994.

Kyoto Protocol – a protocol under the UNFCCC

Agreed 1997 – but with start date of 2008.

Key event for ratification momentum: Marrakesh Accord 2001.

NZ Ratified 2002. Last holdout is the USA.

Entered into force 2005 (Russian ratification triggered this, passing a hurdle written into the Kyoto P.) – 8 years from 1997, 13 from 1992.

Currently in the first commitment period 2008-2012.

UNFCCC

Developed countries agreed:

• to go first – because their emissions were the greatest and they had created the rise in GHGs that had taken place to date.

• to cap their emissions at 1990 levels – (there were no sanctions) - *Failed*

• to adopt policies and measures limiting emissions and enhancing sinks - *Ineffective*

The Kyoto Protocol was negotiated in the realisation that good intentions were not going to be sufficient.

Kyoto Fundamentals 1

International transport fuel – aviation and shipping – passed to the sector organisations.

Global warming potentials of the IPCC* second assessment report locked in.

Forestry changes and land use changes from 1990 were to be accounted for as emissions / sinks.

* Intergovernmental Panel on Climate Change – a permanent panel of country appointed delegates – mostly scientists – who commission reviews of science and potential mitigation from scientists / economists and vet them.

Kyoto Fundamentals 2

Developed countries took on commitments:

- to achieve reductions for the first Commitment Period (CP1) - with sanctions. (5.2% reduction overall compared to 1990).
- to phase out market imperfections, incentives, tax exemptions, subsidies.
- to assist developing countries with adaptation and technology transfer.

Countries were granted free emissions rights units equal to their CP1 target – Assigned Amounts Units – AAUs.

Market mechanisms (*flexibility*) were encouraged – Countries could meet part of their commitments by using carbon units purchased externally. It was foreseen as a driver of technological change and the taking of opportunities where the best opportunities existed.

Kyoto Fundamentals 3

It is an agreement **between countries** – non-country parties can get to play in international markets for carbon emission units only to the extent their governments allow them.

Internal markets for carbon emission units exist only at the discretion of each sovereign nation.

To generate and sell units which count for Kyoto compliance a country has to have have ratified the Kyoto Protocol.

An important tool is the **Clean Development Mechanism** (CDM) – projects in countries without Commitment Period 1 targets that can demonstrate they have saved emissions, can be credited with carbon emission units and sell them. 2007: trades $13B, investment $59B

At the end of 2012 the commitments expire – a CP2 agreement is needed.

Kyoto Fundamentals 4

The KP is not enough.

Deeper cuts are needed, *very soon*.

Even with those climate change will not be avoided, just reduced.

Cutting emissions cannot be cost free – it is a matter of who pays.

The reductions available now using today's technology are likely to be the cheapest.

New technologies will in the most part be dearer and will find application only if regulated for or if there is a cost of emissions which makes them cost-effective.

(Sermon over).

What has Happened? 1

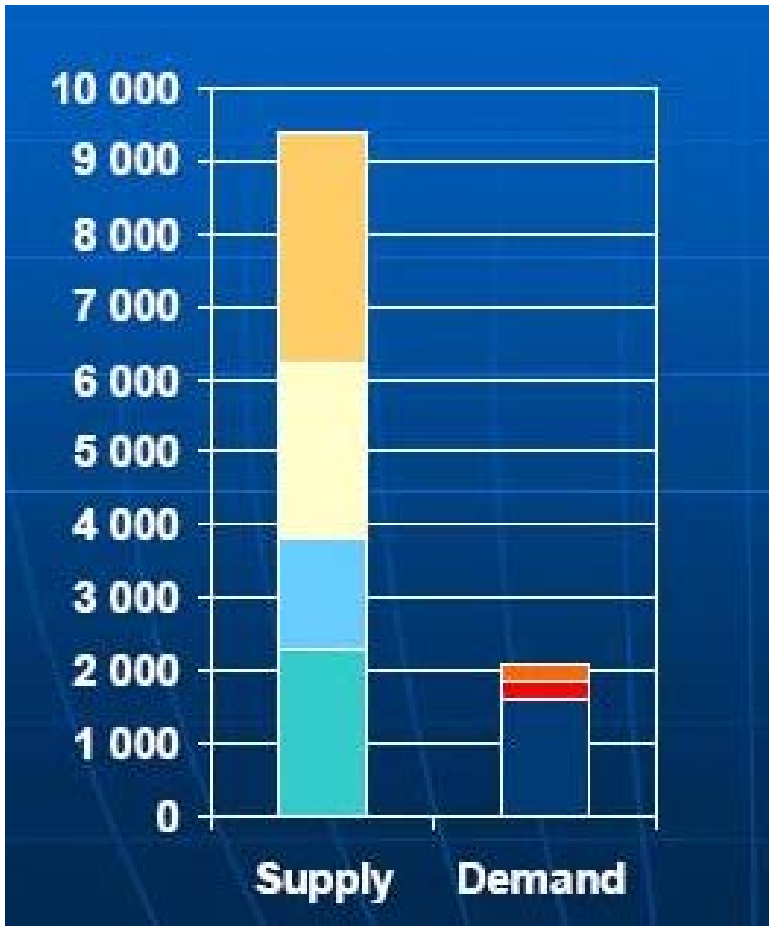
Russian heavy industry collapsed. Consequently Russia and Ukraine have an excess of AAUs to sell – "Russian hot air".

The USA has failed to ratify. It has not set itself any target for CP1 outside of Kyoto.

EU countries have reached targets relatively easily – mainly by some efficiency gains and fuel substitution – gas for coal.

The Clean Development Mechanism has been a success (but at the margin there are real doubts about the 'additionality' of some of the projects).

There is a market for Kyoto compliant carbon credits – but the price is relatively weak – far short of the level to justify technologies like CO2 reinjection (Carbon Capture and Storage CCS).



Russia's AAUs - 3 200

Ukraine's AAUs - 2 200

12 new EU countries - 1 500

CERs projected- 2 300

AAU / CER demand and supply in CP1 - source METI Japan.

What has Happened? 2

Fungibility of credits has been under attack.

Kyoto will fail to meet its reduction target for developed countries.

Shipping and aviation have done nothing.

Does this mean it has failed? – to some extend **Yes**,

But

• Emissions will be less than if there had been no Kyoto.

• The fundamentals of carbon accounting and trade have been put into practice.

• There is an agreed system of sanctions for parties not meeting obligations.

What the Critics Say

Lots have said Kyoto is *fundamentally flawed* – but most fail to detail why. Scratch many using this phrase and you find a climate skeptic.

The lack of targets for industrialised developing countries is seen as unfair.

The cost is too great (but price of inaction is rarely considered).

Some individual country targets are seen as arbitrary.

Hot air will be making the Russians rich for doing nothing.

Some countries making little effort on reductions but making targets by purchasing credits is seen as wrong.

The credibility of CDM credits is questionable.

The whole concept of markets is resisted by some.

But:

Kyoto is a major international trade agreement, setting rules about how business is conducted globally.

No such agreement is ever going to be ideal.

Real-world politics are always going to be a large part of it.

The UN lead process is the only show in town with global acceptance.

What Has Been Happening 1

The science is accepted as mainstream (Thanks IPCC).

The media now treat the issue as one needing solutions rather than a "he said, she said" amusement, or a conspiracy (Thanks Al).

The pace of work on technology that - reduces emissions / produces renewable energy - has picked up.

The EU has run a carbon market in the period leading up to 2008.

The US has lead a process outside the UN discussions - *Asia-Pacific Partnership on Clean Development and Climate.* It has concentrated on technology. The US may have wished this to be an alternative to the UN process, but this is not happening.

Stern Report – says the cost of inaction is higher than of action – but the last word has not been said on that.

What Has Been Happening 2

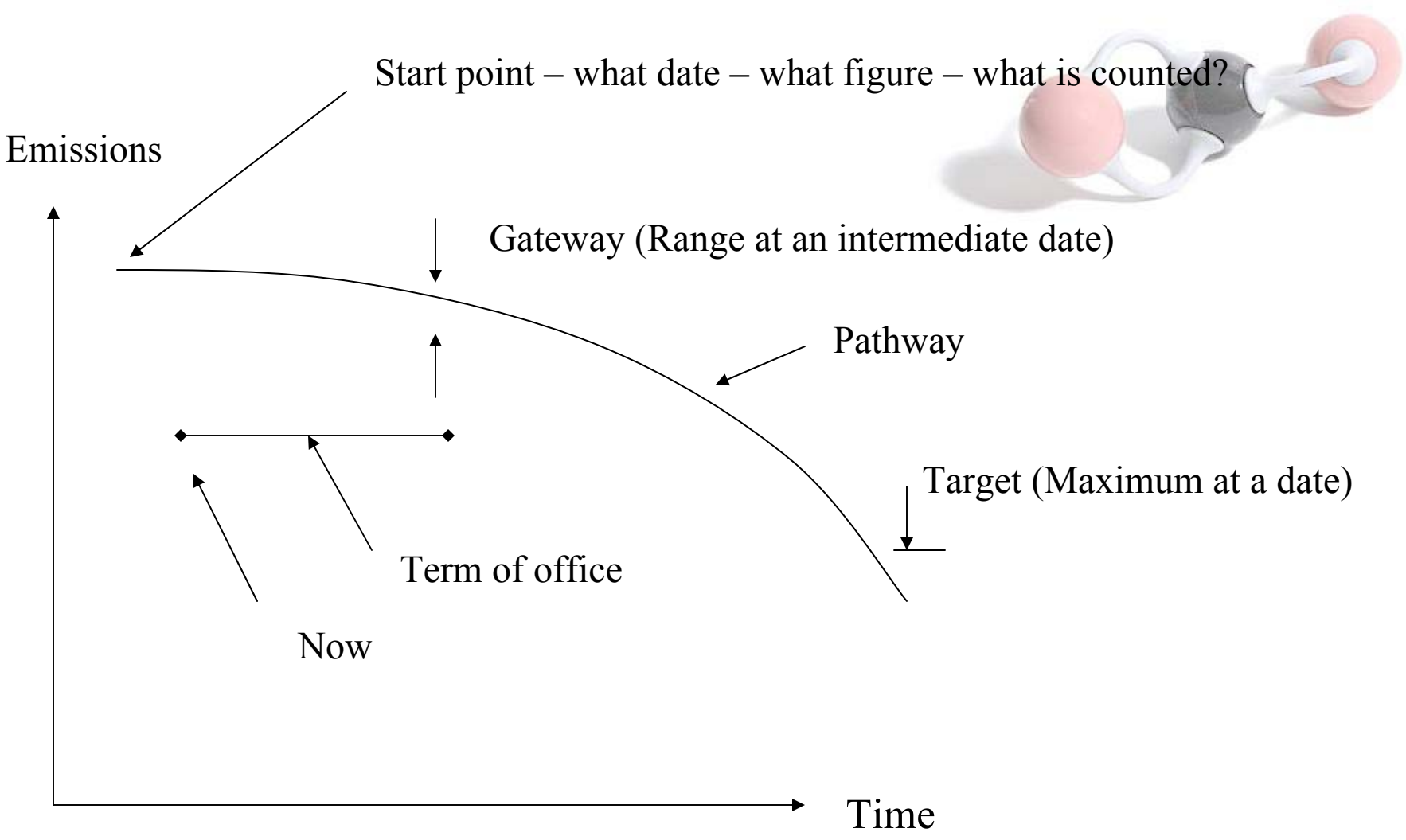
In 1992 China and India and like economies were relatively small fry in the emissions numbers – they are no longer – yet they have continued to associate themselves with the view that it is all the fault of the West, their emissions per head are still low and they are not going to take on commitments that are caps.

There have been lots of private and State initiatives in the US to try to work around the inaction of the Bush administration.

Many businesses have been assessing their emissions – setting reduction targets – some going for carbon neutrality.

There has been a boom in non-Kyoto reduction units, for business and private off-setting use.

Developed countries have been proposing reduction targets and gateways for themselves - but with no sanctions for failure.


Start point – what date – what figure – what is counted?
Emissions
Gateway (Range at an intermediate date)
Pathway
Target (Maximum at a date)
Term of office
Now
Time

What Has Been Happening 3

Developing country forest clearance has continued apace, but is acknowledged as a problem that has to be tackled - somehow.

There has been a boom in biofuel – mandated by government regulations – much of the fuel is of dubious additionality and has been at a cost to subsistence consumers of grain (and to the benefit of pasture dairy farmers).

The EU is looking to start including international transportation emissions in its targets.

EU trade protection advocates have been using carbon emission arguments opportunistically – “food miles”.

There is pressure in the EU to tax goods at entry from non – commitment countries on the basis of the entrained emissions (“border taxes”).

What Has Been Happening 4

There has been some interest in the possibility of sector agreements – where all states agree to limit emissions from a sector - say cement manufacture.

Chinese investment in conventional coal electricity generation is locking in those emissions for a generation - more than one large plant a week in the past 4 years.

The US has attempted to get the G8 to be a leading agency in addressing climate change – but with only fine words to date – but the G8 endorsed UNFCCC.

APEC has produced fine words too – but APEC endorsed UNFCCC.

What Has Been Happening 5

More recently the US has announced that the "leading industrial nations" including itself would take on firm and binding targets this year through a process of agreement it would lead. No-one else seems to be believe this is likely. Meetings have started and may be helpful. In any event this is not enough because any outcome needs world endorsement.

The US is finally under considerable moral pressure to be seen to be participating in something.

Because the CP1 credits market ends in 2012 the CDM market will atrophy as that date approaches.

What has been Happening in the UN Process?

The parties (countries and others) meet every year in a huge conference.

From Marrakesh (2001) to Bali (2007) not much happened beyond tweaks to Kyoto processes.

An *Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG)* – has been addressing that issue but made slight progress to 2007.

There was no agreement on even a timetable to work towards a CP2 consensus.

At Bali 2007, at the last minute the US finally folded and the conference agreed the "**Bali Roadmap**" .

Bali Roadmap 1

Is an agreement to agree. Work will be in the areas of:

- Developed nations taking on targets.
- Developing counties taking on something: **"Nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner."** "MRV" – new acronym
- Developing country forests – policies and incentives to reduce emissions – to encourage conservation. "REDD" Reducing Emissions - Deforestation and Degradation
- Sector approaches.
- Use of markets for flexibility of response.
- Work on enhancing adaptation / risk management / disaster reduction / economic diversification / technology transfer.

Bali Roadmap 2

• Work to be done by an **Ad Hoc Working Group on Long-term Cooperative Action** under the Convention (a new AWG).

• Complete its work in 2009 for adoption at COP15 (late 2009 -Copenhagen – perhaps the **Copenhagen Protocol?)**.

• There are two work streams split by past commitments – ***the US is not in the Kyoto developed nations group.***

UNFCCC lives.

Something to follow Kyoto is finally in prospect.

There is a timetable (unrealistic though it is).

US Real-World

The US is never going to ratify Kyoto in its present form (The cost of CP1 compliance is too great – it is widely seen as unfair in the US).

The US is often late ratifying treaties even where it has been in compliance with them.

Treaties are negotiated by the President's administration.

Treaties are ratified by the US Senate. They are often not a high priority and are often enmeshed in national politics.

Up until G W Bush the US took a leading role in negotiations.

Either McCain or Obama will give a fundamental shift to US leadership – both accept the need for action.

Issues:

China and India, if they are taking on obligations, may not ratify any new agreement until the US does.

The US is almost certain not to ratify any new agreement if China and India are not committing to something.

Bali Outcome = 'Son of Kyoto' may not get into force by 2013.

CDM credibility.

Could the Kyoto CP1 obligations get rolled over for a period?

Do sector agreements have to be tied to a CP2 start? Ditto CDM.

Is the developed nations list inclusive enough (e.g. Singapore, South Korea)?

Carbon unit fungability - can you have markets if there is no commonality on what is tradable?

New Zealand Issues 1:

Might the global warming potential of methane be changed? (Currently 21 times CO2, newer figures cite 23 and 25).

Will international transport emissions get included?

Will NZ's 100% of 1990 emissions target for CP1 be seen as a start point?

Will NZs poor performance on fossil fuel emissions / over-reliance on Kyoto forest sinks, count against it?

Will any special pleading work? (distance, geography, agricultural efficiency, high renewables).

Will Kyoto forest sinks continue to count?

Might 'all forest management' accounting become compulsory?

New Zealand Issues 2:

Will we get any credit for starting pioneer work on animal methane emissions?

Can ‘wood exports’ get traction?

What might we have as a ‘bottom line’ issue?

Progress 1: Meeting of the AWG on Long term Cooperative Action: Bangkok, 1-3 April

Set a broad agenda for the next three meetings in 2008.

New Zealand had a leading role in two of the four work streams: trading and LULUCF.

The USA is engaged in this UN process.

Progress 2: The Kyoto-committed group is reportedly making good progress on issues: e.g. trading, continuation of the CDM.

Progress 3: April meeting of the US initiated major emitters group* - made little progress largely because Bush had just announced a US goal of US emissions peaking by 2025.

* United States, Australia, Brazil, Britain, Canada, China, France, Germany, India, Indonesia, Italy, Japan, South Korea, Mexico, Russia and South Africa.

Progress 4:

G8 Declaration July 08:

"We seek to share with all parties to the UNFCCC the vision of, and together with them to consider and adopt in the UNFCCC negotiations, the goal of achieving at least 50% reduction of global emissions by 2050, recognising that this global challenge can only be met by a global response, in particular, by the contributions from all major economies, consistent with the principle of common but differentiated responsibilities and respective capabilities."

What if Governments fail? / Is there an alternative?

The international negotiations are embroiled in national agendas / colonial resentment / guilt trips / domestic protection etc etc.

Could people solve this in spite of their governments?

Focusing on individual / organisational emissions may be a way forward:

- Action now – not seeking agreement to act in concert later
- Real reductions (not intensity reductions), before offsets
- Limitation on applicability of offsets
- Credibility of offset units

Can this reach such a scale as to make a significant difference or is it just feel-good?

An Alternative?

Look at earthinc.org – Earth Atmospheric Trust

Guiding Principles
Guiding Principles
About Earth, Inc.
Our Work
Earth Shareholder Report
Claim Your Share
Earth Commons Collaborative
Participate

Search

participate!

An Earth Atmospheric Trust:

A proposal to stop global warming and end poverty

Below are some key characteristics of the Earth Atmospheric Trust. The Earth Atmospheric Trust is explained further in this article(pdf) and also in a recent articles published by Grist and Science (PDF).

1. Set up a global cap and trade system for greenhouse gas emissions – all greenhouse gas emissions from all sources.
2. Auction off all emission permits – and allow trading of permits.
3. Gradually reduce the cap to follow the 450 ppm target (or better). The price of permits will go up and total revenues will increase as the cap is reduced.
4. Deposit the revenues into a trust fund, managed by trustees appointed with long terms and a mandate to protect the asset (the climate and atmosphere).
5. Return a fraction of the revenues to everyone on earth on a per capita basis. This amount will

Summary

Kyoto is a limited success, but still a success

It took long time to negotiate

Not much had happened in looking for a successor in the last 6 years

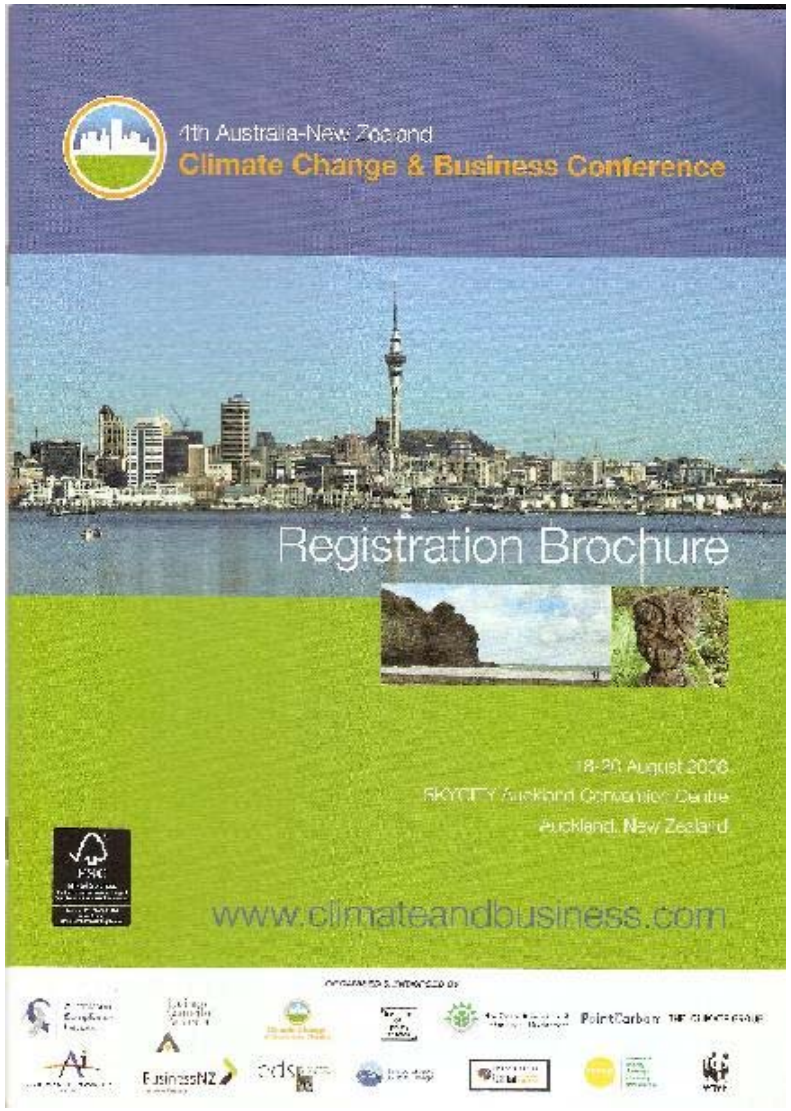
The Bali Road Map is perhaps a start on that – but the timetable is unrealistic

The successor may not make it by 2013

It will build on Kyoto but will have some quite different elements as well

NZ has some big issues with what ever the successor is – but perhaps something to contribute as well

Is there a "bottom up" alternative? Or an alternative top down way?



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Auckland 18-20 August 08

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