

CARBON PRICING, THE FVA AND THE NMM: CHARTING A COURSE TO A NEW UNFCCC AGREEMENT

In the early days of climate policy development, the implementation of carbon pricing within the global energy system was seen as a core requirement for solving the issue of rising levels of CO₂ in the atmosphere. After all, this had solid economic backing from leading academics and following the implementation of a cap-and-trade system, and therefore price, for sulphur dioxide emissions in the USA was regarded as a natural extension of the same idea but to a bigger problem. Carbon pricing, ideally through cap-and-trade, was recognised as the most efficient route forward for resolving this particular environmental issue. The broader its application, the lower the overall cost of mitigation would be.

In 1997 the Kyoto Protocol was agreed at COP 3. Central to its implementation was carbon pricing, delivered through a trading component. This was underpinned by a critical design element, the Assigned Amount Unit, or AAU. This is the functioning market mechanism within the Kyoto Protocol and acts in the same way as an allowance in a cap-and-trade system. The AAU provides a basis for trade and creates supply and demand through its allocation against national targets relative to actual emissions. This gives value to the AAU, which in turn creates demand and value for Certified Emission Reduction (CER) units under the Clean Development Mechanism (CDM). Without the targets underpinned by the AAU, the CER and similar instruments have no value and could not exist in a meaningful sense.

Over the subsequent 15 years, those that have adopted the Kyoto Protocol have cascaded its obligations into their economies and in many instances have linked their domestic policy frameworks with the AAU. The EU, Australia and New Zealand all developed trading systems which either directly or indirectly are AAU compatible, which also means that the potential to link them has been created. For example, Norway easily

joined the EU ETS, as both economies sit under the AAU structure and Australia and the EU announced their intention to link their respective trading systems. Although that particular linkage was announced as a bilateral arrangement, in reality it is only possible because of the underlying AAU structure. Both governments knew that they had systems designed under the same rule structure and both systems already recognized the same external mechanisms, such as the CDM of the Kyoto Protocol. The existence of the AAU also meant that compliance against independent national goals would be transparent even though the linkage existed.

Although it is now fading into the annals of history, the structure of the Kyoto

Protocol had the potential to lead to the formation of a robust global carbon market, a carbon price embedded in much of the global energy system (assuming countries had progressively moved onto the Annex B list) and therefore an economically efficient approach to emissions mitigation. Unfortunately, this is not to be.

A new approach to mitigation

The discussions that have taken place since COP 13 in Bali have focused on a more bottom-up approach to mitigation, with national governments pledging to manage emissions in some manner or other on an individual basis. But this is a discussion in parts, rather than tackling the issue more holistically through a robust economic model. Further, such an approach will not necessarily result in a reduction in global emissions, particularly where global carbon pricing is not involved or is not heavily featured through policy design. For example, a national strategic focus in areas such as energy efficiency and renewable energy deployment but without carbon pricing is an approach adopted by some and offered as a mitigation pathway. This may well address issues such as energy cost and access, but won't necessarily



displace fossil fuels to the extent that there is a permanent reduction, both geographically and temporally, of some amount of carbon emissions to the atmosphere.

Even national actions that result in direct emissions management can have high leakage rates when carbon pricing is not robustly adopted in other areas. The USA is a good example of this. As lower emitting natural gas has arrived on the domestic scene and older (and new) coal plants face potentially costly EPA-led pollutant regulations (which may include CO₂ regulation), that natural gas has rapidly displaced coal in the generation mix and US emissions have fallen. But coal production has been less effected, as some of the same coal that would have been used domestically has simply been shifted geographically through export to regions where direct carbon policies are insufficiently developed. US coal exports have doubled over the past decade and the total carbon released to atmosphere as a result of US coal and natural gas production has increased.

Underlying global energy demand is now so strong that marginal production of fossil energy from existing facilities will simply continue, even if displacement is forced in some areas. Until real carbon pricing permeates the global energy system and is seen as the new normal, global emissions are unlikely to be reduced irrespective of the number of national pledges, energy mix directives, energy efficiency drives and renewable energy subsidies.

Can a global carbon market still emerge?

Without an architecture specifically designed to cascade carbon pricing into the global economy, arguably there is little hope of seeing a real reduction in

global emissions. It is also very clear that such a policy framework is off the table in the current round of negotiations. But perversely, there is growing national interest in using carbon pricing and tradable carbon emission instruments, although this interest needs to be accelerated into real implementation and adopted more widely.

The UNFCCC can play a valuable role in this regard. Two current lines of discussion within the negotiating process could be directed more constructively to foster the development of a global market, even with the overall agreement still based on a pledge-based architecture. These are the Framework for Various Approach (FVA) and the New Market mechanism (NMM).

A market mechanism describes a process by which a market solves a problem of allocating resources, especially that of deciding how much of a good or service should be produced, but other such problems as well. The market mechanism is an alternative, for example, to having such decisions made by government. Rather, it represents the interaction of supply, demand and prices. In the context of emissions mitigation, the trading structure within the Kyoto Protocol illustrates the part played by the market mechanism. As already noted, the functioning market mechanism is the AAU – not the CER as some will argue. The NMM should be modeled on such a design, in effect replicating the role of the AAU under the Kyoto Protocol, but operating in a world of bottom up pledges, nationally designed trading systems and NAMAs – in other words, a series of various approaches operating within a common framework (the FVA). This design for the core NMM instrument would also give renewed value to the CER and allow the development of additional crediting mechanisms within a new framework. Simply using the

NMM to implement further crediting opportunities (e.g. so called sectoral crediting), as some are currently proposing, will not create a viable carbon market – something different has to happen.

A stepwise approach to the goal of a global carbon market could be envisaged, through an arrangement that allows linkage between approaches within the FVA, utilizing the NMM as the common carbon currency. A national, sub-national or sectoral level approach recognised under the FVA may choose (voluntary opt-in) multilateral participation in the developing global carbon market by accepting a fixed carbon emissions budget for a given future period in the form of tradable international allowances (NMM units). The budget arises from the goals of the specific policy program(s) as a contribution to the global effort. The budget is fixed (i.e. absolute), irrespective of the nature of the mitigation programme operating within the economy.

For approaches in which domestic units are not expressed in CO₂ terms, the national government could still accept a comparable NMM unit allocation, which then serves as a route for conversion of the domestic unit to a tradable international carbon unit. Such a conversion mechanism provides additional fungibility by facilitating linking beyond emissions trading to include Renewable Energy Certificates (RECs) and other trading approaches not explicitly denominated in CO₂ terms.

However, under this approach, governments would take the risk of any conversion of units that are not measured in CO₂ terms and NMM units which would have a CO₂ denomination. Such a conversion mechanism would always exist under the authority of a national government and it would be responsible for establishing what types of units could

be transferred in and out of a national system.

Any conversion to NMM units would also need to be agreed upon at the international level through the body recognizing FVA submissions when each Party submits its scheme.

Participation in this model is not mandatory, but once in, participants must fulfill their commitments and meet their agreed emission budgets through the

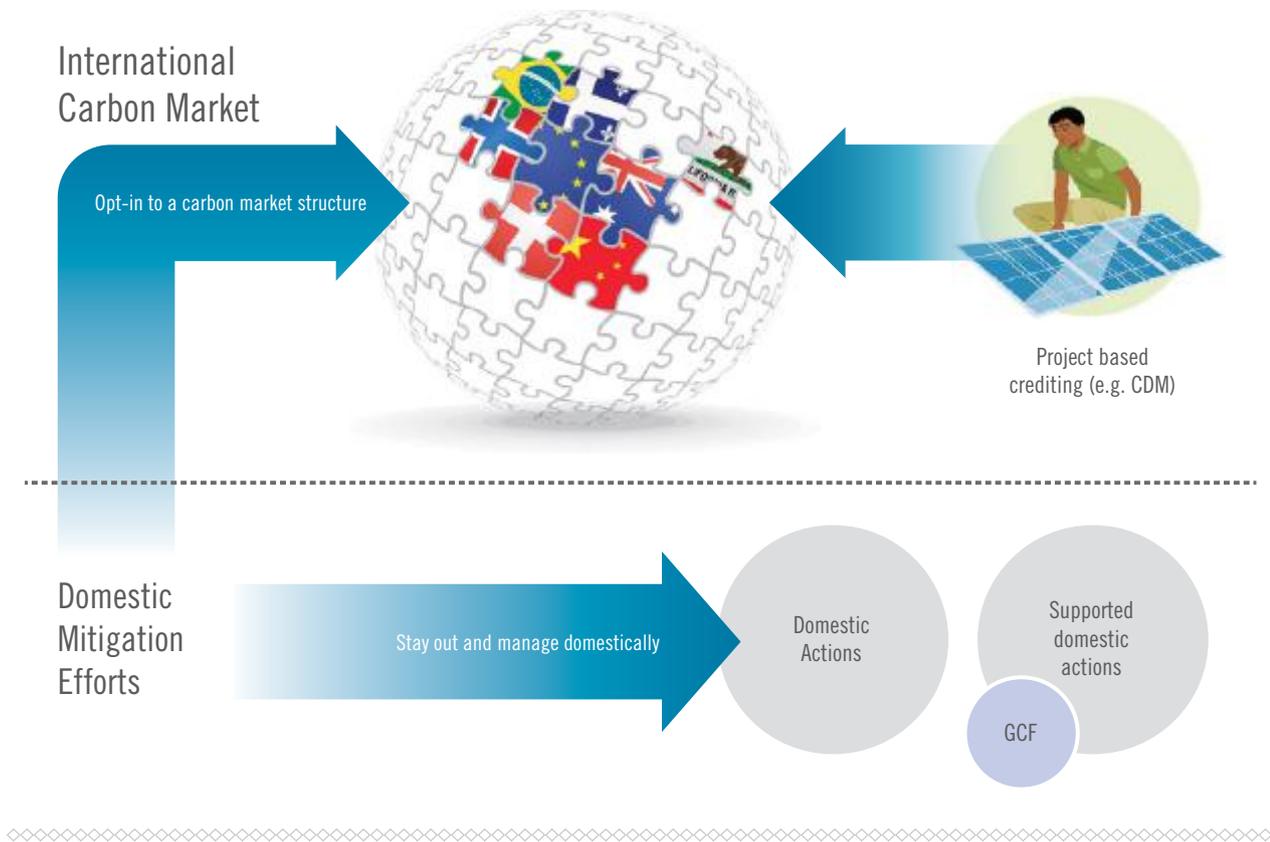
surrender of NMM units. Participation would always be dependent on a review of the carbon budget submission by an oversight body. Such an oversight body could either fall under the UNFCCC, or be independent of the UNFCCC (e.g. a Board elected by countries participating in the market).

Conclusion

Although a single global pricing architecture would always be preferable,

politically that isn't a current reality. Nevertheless, that shouldn't be cause to lose sight of the goal of global carbon pricing, particularly given that without it the emissions issue is unlikely to be resolved.

The FVA and NMM discussions could be structured to deliver such an outcome, which over time should deliver the necessary critical mass for change.



About the Author(s):

David Hone works for Royal Dutch Shell and is the Chief Climate Change Adviser in the CO₂ team. He joined Shell in 1980 after graduating as a Chemical Engineer from the University of Adelaide in Australia. He has worked in refinery technology, oil trading and shipping areas for Shell. David is currently Chairman of the International Emissions Trading Association (IETA) and a board member of C2ES in Washington. He also works closely with the World Business Council for Sustainable Development and has been a lead author of a number of its climate change publications. David posts regular stories on his energy & climate change blog, which can be found at <http://blogs.shell.com/climatechange>.