SCALING UP VOLUNTARY MITIGATION ACTIVITIES

Paper 2 in a suite of discussion papers exploring the compatibility and credibility of the *Voluntary Carbon Market* working within the 'space' of sectors and countries that are covered by the Kyoto Protocol

October 2008

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BACKGROUND AND CONTEXT

This series of analytical policy papers sets out key relevant issues that are now apparent through the current debate about the role, if any, for the voluntary carbon market in sectors and countries covered by the Kyoto Protocol, a cap and trade emission trading scheme that has given rise to an international compliance carbon market. The series of papers also 'puts up' a set of propositions. The purpose is to stimulate informed and objective discussion with a view to begin to converge the debate towards outcomes that may be accepted by the majority of the carbon market community of regulators and private sector players.[1]

The series of five papers is structured as follows:

- Paper 1 VOLUNTARY MARKET ACTIVITIES – IS THERE A ROLE IN KYOTO COUNTRIES? set out the 'problem definition', i.e. the high level policy issues around why having an active voluntary carbon market nested within jurisdictions already covered by the Kyoto cap and trade scheme, and potentially 'domestic' emissions trading schemes, may potentially play a useful role in the 'big picture' of international climate change mitigation.
- This Paper 2 SCALING UP VOLUNTARY MITIGATION ACTIVITIES comes at the issue from the 'other end of the telescope' and discusses how the voluntary carbon market can play a crucial 'scaling up' role by aggregating mitigation activities from the 'bottom up' and connecting these with willing buyers in the voluntary space.
- Paper 3 VOLUNTARY INSIDE COMPLIANCE – COUNTING AND CREDIBILITY takes on the issue of "double counting" with a series of simple scenarios and numeric analyses intended to tease out the counting issues that seem to be at the heart of the debate. This seems to be the single most important issue where apparently polarised views have resulted in an inability for the carbon market community to find the common ground needed to move forward.
- Paper 4 THE MEANING OF *CARBON NEUTRALITY* INSIDE JURISDICTIONS WITH CAPS takes up a series of broader issues about how the whole concept of *carbon neutrality* in Kyoto countries can make sense. Among other points, it develops a matrix that forms the basis for an appropriate matching of mitigation actions and emission types, given the complexities of what's covered under Kyoto accounting and what is not.
- Paper 5 THE VOLUNTARY MARKET – OUTSIDE THE COMPLIANCE SPACE finishes the suite of papers with a discussion about voluntary carbon market activities operating outside compliance jurisdictions and compliance sectors.

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[1] As described more fully in Paper 1, we introduce and use two new terms (and acronyms): ***VMAs***, short for *voluntary mitigation actions; and* ***TVACs***, short for Tradable Voluntary Action Credits (created through a reputable and transparent process involving recognised standards that test for the *VMAs* being real, verifiable and additional, and involve qualified third party verification)

In this paper we outline a scenario for voluntary mitigation actions to help shed light on the issues that need close evaluation when considering the legitimacy (or otherwise) of voluntary carbon market activities operating inside countries and sectors covered by compliance market accounting.

CARBON NEUTRALITY AND THE VOLUNTARY CARBON MARKET

A helpful way to understand this point is to explore a carbon neutrality exercise by a no-PO (i.e. an entity that does not have a legally binding obligation to reduce emissions). Much voluntary carbon market activity is connected with carbon neutrality goals, which involve three steps:

1. Measurement of carbon footprint
2. Abatement 'in house' (i.e. emission reductions through changing behaviour and/or investing in cleaner technologies)
3. Pay someone else to undertake mitigation activity on your behalf, in order to take responsibility for residual emissions that are prohibitively expensive to reduce to zero in-house.

Firms will evaluate the comparative cost of abatement 'in-house' versus buying units as offsets to drive strategic decisions about the ratio between 2 and 3 above. This "abate or buy" question is the essence of the policy point of emissions trading and that which underpins all carbon markets. Steps 2 and 3 both help a country meet its compliance obligation, but those arguing against voluntary carbon market activity inside the compliance space only tend to get concerned about step 3 as a double counting issue. This is in spite of the fact that step 2 also involves a private investment that produces a public (national) compliance benefit. And step 2 is highly encouraged within carbon neutrality programs.

SANDRA'S CARBON FOOTPRINT

To view the voluntary carbon market from the bottom-up it is helpful to consider what motivates voluntary mitigation actions, and how these actions can benefit from a voluntary carbon market in practice. A fable:

> Sandra has decided she wants a carbon neutral home. She first measures the carbon footprint of her home using a carbon footprint calculator. She then calculates what emission reductions she needs to undertake to achieve a carbon neutral home.
>
> The emission reductions involve a combination of changing behaviour and the installation of certain clean technologies in her house (energy efficient lighting, insulation, a hot water cylinder wrap, and a solar hot water collector system). As a result of these affordable interventions the carbon footprint of her home reduces by two thirds, but she discovers that she cannot eliminate the final third of her emissions entirely from in-house emission abatement activities. This is because eliminating the final third of her emissions requires substantial design changes and renovations to the house which she simply cannot afford.
>
> She then wonders whether her three siblings (who each have houses of their own) might be interested in reducing some of their household emissions on her behalf. She knows that they are not committed to carbon neutrality, but thinks they may be interested in installing cleaner technologies that would ultimately reduce their energy bills, whilst reducing their emissions by a measurable factor.
>
> So instead of undertaking major renovations to her own house, Sandra offers to pay for the purchase and installation of clean technologies in the homes of her sister and two brothers. She does this on the condition that she is able to measure the emission reduction in their homes, and 'own' these emission reductions for use in her carbon neutrality programme. The total cost of the purchase and installation of these clean technologies in the three other homes is much lower than it would have cost to undertake major renovations to her own house.

She measures her sibling's emission reductions arising from the installation of these clean technologies and discovers that the total is slightly more than the volume needed to cover the final third of her own emission reductions, and so declares her home carbon neutral for that year.

The reason for telling Sandra's story is that it is hard to imagine anyone finding fault with what she has done, or finding any part of it that should not have been done because it lacks credibility. Surely, most would think "Well done Sandra. Our community needs more climate aware and concerned individuals like her that are prepared to show personal leadership."

SCALING UP VOLUNTARY MITIGATION ACTIONS

Now consider that there are a large number of entities that are on a path to carbon neutrality – these include households, small and medium size entities (SMEs) and larger corporations and organisations. In the left hand side depiction in Diagram 1 below, their measured footprints (Step 1 in their carbon neutrality programme) are represented by the size of their buildings.

When it comes to the final step of their programme (Step 3), things are not as simple as Sandra's story. There is nothing equivalent to her siblings that can be easily 'tapped' by these entities. However, there are still thousands of houses (and buildings and transport situations) where demand-side voluntary mitigation actions can potentially be undertaken in the community at large if there was a new source of financial support for these activities.[2] These members of the wider community are not carbon neutrality aspirants, but represent potential sellers of Tradable Voluntary Action Credits – **TVACs**.

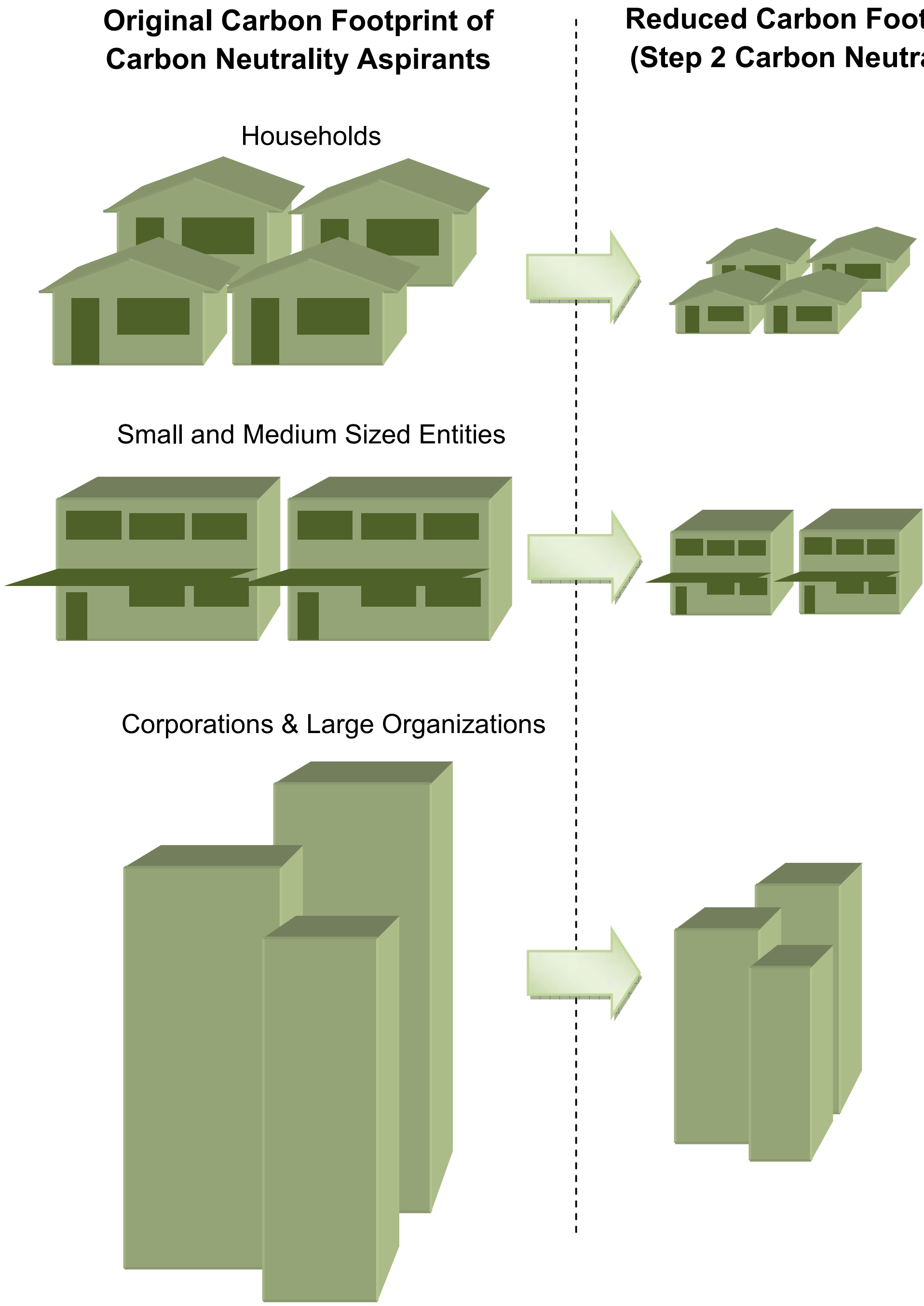
Here is where the voluntary carbon market can play a valuable role in facilitating commercial activity within this community that allows more mitigation to occur than would otherwise happen (see Paper 1 for a description of gains from trade in voluntary emissions trading). As Paper 1 set out, the key barriers to large scale demand side activities are economy-of-scale and transaction costs.

Overcoming these barriers is possible when **aggregators** become involved. These aggregator entrepreneurs bring specialised knowledge, installation experience, financing, management and economies of scale to the table to overcome these barriers.

[2] Hence investment additionality.

Diagram 1: Carbon Neutrality Aspirants Footprint Reduction

'In-house' Voluntary Mitigation Actions (Step 2 of a carbon neutrality program) lead to lower footprints.



To achieve carbon neutrality, the carbon neutrality aspirant must "neutralize" these residual emissions.

This can be achieved by undertaking additional voluntary mitigation actions elsewhere in the community (equivalent to the volume of remaining emissions).

The next step is to find entities in the community where additional emission reductions could take place if funded by the carbon neutrality aspirants.

A credibly functioning voluntary carbon market provides the means for these entrepreneur aggregators to connect carbon neutrality aspirants (demand), with those in their community who are not carbon neutrality aspirants but who have opportunities to undertake additional low cost mitigation activity if they received financial support to do so (supply).

By “credibly functioning voluntary carbon market” we mean one which involves the use of:

- a robust voluntary standard that sets out the steps by which the actions for which TVACs are to be issued are real, verifiable **and additional** (i.e. would not have occurred without the carbon finance). This involves the use of accepted methodologies for setting baselines and measuring the outcomes of actions.
- accredited reputable third party verifiers that ensure standards are followed and certify that the claimed results of the VMAs on the ‘sellers side’ have been achieved, and hence the number of TVACs that can be issued
- a reputable registry that, on instruction by the third party verifiers, will issue the appropriate number of TVACs and then retire them when they have been bought and used by the ultimate user (e.g. the carbon neutrality aspirants in our scaling up story).

The two depictions in Figure 2 below set out this process of the voluntary carbon market in action after the community of carbon neutrality aspirants have undertaken steps 1 and 2 of their carbon neutrality program:

Diagram 2: Connecting Carbon Neutrality Aspirants with the Wider Community

Carbon neutrality aspirants need to find a way to undertake/fund low cost voluntary mitigation actions in entities with no aspiration for carbon footprint reduction.

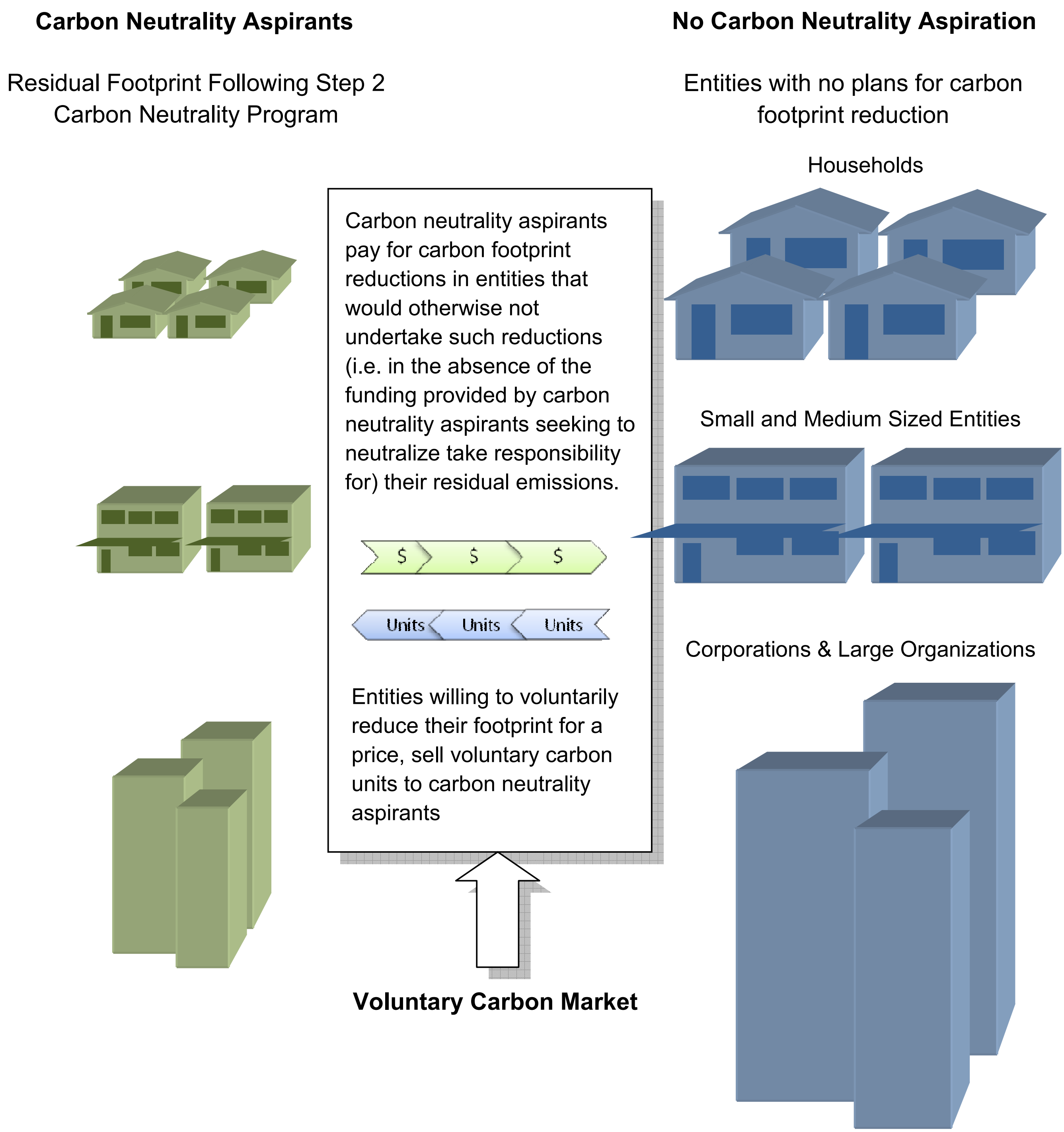
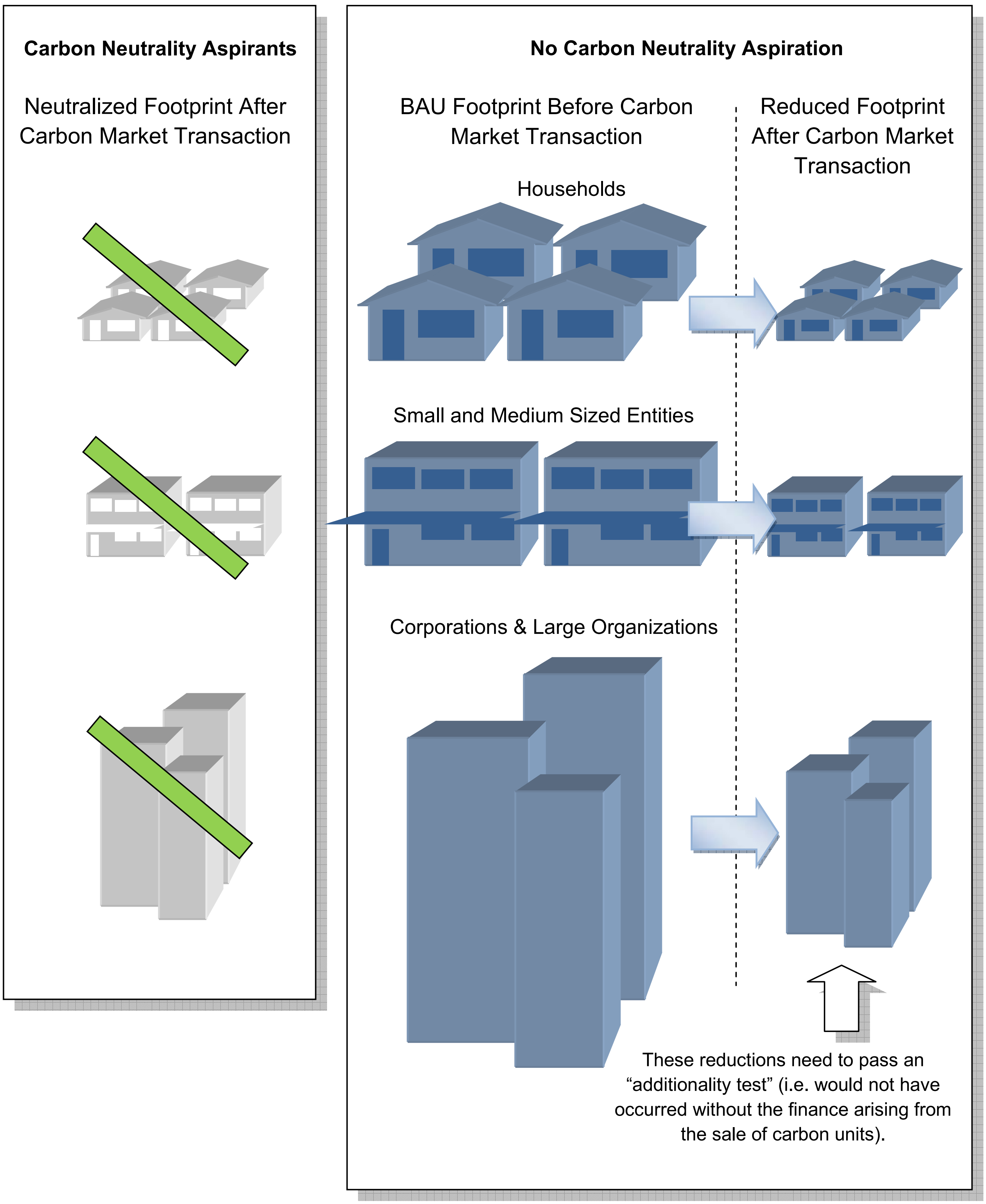


Diagram 3: Outcome of Voluntary Carbon Market Transactions



While this ‘scaled up’ story has some greater complexity than Sandra’s story, the core elements are the same. The carbon neutrality aspirants on the left hand side in Figure 2 have funded the installation of energy efficiency technologies in the houses and buildings on the right hand side. The role of the various private sector players in the middle was just to facilitate this to happen in a fully credible manner.

Along the way these private sector entities in the voluntary carbon market engage people in eco enterprise in a way that can harness the creative energy and innovation potential of the private sector to build a transition to a low carbon economy. The fact that TVACs were issued and retired (which is the only key difference with the simpler Sandra story) reflects the need for a currency to facilitate the scaling up of an economic activity type beyond bilateral barter. This can be seen as merely an incidental modality of this business model. Moreover, this happens entirely within the model. These tradable units have no fungibility with any units in the ‘compliance space’.

THE VOLUNTARY / COMPLIANCE INTERFACE

At the heart of the debate concerning the legitimacy of the activities described above is the question of the interface between a voluntary carbon market (and in particular voluntary units - TVACs) and the compliance carbon market and its accounting systems. This is relevant (and therefore debatable) only when the voluntary carbon market activity described above occurs within a country and a sector covered by compliance carbon market accounting systems.

The heart of this debate is taken up in the next two papers (Paper 3 - Voluntary Inside Compliance: Counting And Credibility and Paper 4 – The Meaning Of *Carbon Neutrality* Inside Jurisdictions With Caps).

The key questions at the heart of this debate are:

a. whether there is a difference in credibility between voluntary mitigation actions undertaken without a voluntary trading facility, and those that take place with a trading facility, and

b. whether the atmosphere is better off, unaffected, or worse off as a result of trade in voluntary mitigation actions by means of tradable voluntary units (TVACs) that are non-fungible with compliance units

Responding to these questions forms the core of Paper 3.