Emissions trading webchat with David Hone, Group Climate Change Advisor

Ladies and gentlemen, welcome to this web cast. My name is David Hone; I am the Group Climate Change adviser at Shell International.

Today we are going to be talking about emissions trading. The role that emissions trading can play in a policy framework aimed at addressing climate change. And in particular we are going to talk about the key design elements of an emissions trading system.

First of all, it is important to realise that this is a discussion about energy. And the way we produce and use energy today is not sustainable. A new direction is needed, and emissions trading can play an important part in that. To understand a bit about this new direction, let us focus on an energy ladder. This is a ladder that describes energy per capita on the vertical axis and GDP per capita on the horizontal axis. And countries like Australia and the USA, both considering emissions trading systems, have been climbing this energy ladder over the recent decades. And this is shown by the bubbles that are on the screen at the moment. What you see is that the countries have slowly being improving their energy efficiency, but they have been doing very little to reduce the carbon content of their energy systems. And that is shown by the size of the bubbles. Now this is representative of the last 30 years of progress. The next 30 years of progress is really very different, as you can see from the direction of the arrows… From the direction that the energy efficiency must improve and the rate at which the economies must decarbonise. And this represents something like the 60 percent emissions reduction that governments in developed countries are aiming for.

So what does that actually look like in terms of equipment and kit on the ground? So here is an illustration of a country and what we see is -on the left-hand side is a scale showing the types of facilities in place to generate and use energy. And you can see from 2004 through to 2050 there is a very significant change in the makeup of the energy system.

The question is: “How are we going to deliver that type of change?” It is first of all important to consider that this is a story about the energy economy and about the CO2 economy. And it comes really from five key areas. From power generation, industry and manufacturing, mobility, buildings, and then outside of the energy sector

from agriculture and land use. And today I'm really going to focus on the first four and the role that emissions trading can play. Governments need to come across with a structured approach to policy and deliver a series of policy initiatives that tackle each of these areas. And the -inaudible- trade or emissions trading system fits very well into this for power generators and for large industrial facilities. And for fleets, such as aviation and may be large trucks. For areas such as transport and buildings emissions trading may not be the best of tools to use and really robust standards around energy efficiency, around fuels for example, is the direction to go. But today we are talking about the emissions trading systems.

First of all let us think about what a -inaudible- trade or emissions trading system actually is. So we started the journey with a country with a series of industrial facilities and perhaps today they are emitting something like 100.000.000 tonnes per annum. What happens is as the emissions trading system comes in; a progressively reducing cap is implemented across the country. So here we see it rolling in; 95 by year 5, 88 by year 10 and 80 by year 15. And the government backs this up by issuing a number of allowances equal to the cap and distributing these into the economy. And what happens is that facilities get hold of these either through purchasing them in the market or through the distribution process that the government might use, which could include auctioning or free allocation. And the facilities then can start trading these between them, so that they balance the number of allowances that they have against the emissions that they actually need. The facilities also start implementing emission reduction projects, for instance a power station might implement carbon capture and storage, and a big industrial facility might implement an energy efficiency programme. And slowly, as the number of allowances reduces and as the projects are implemented, as the price for CO2 starts to appear in the marketplace, the overall goal of the emissions trading system is met.

But companies within the emissions trading system also have another alternative and that is to implement projects outside the system and bring additional credits in. And in some places we call these ‘offsets’ and in other places we call them ‘project mechanisms’ or ‘credits’.

So we end up with a picture that looks something like this. Where we have importantly at the core of emissions trading system a price for CO2 that drives projects and delivers the environmental benefit and environmental outcome that

government and society is looking for. It is a very efficient and quick way of getting to the outcome.

But the aim of the emissions trading system really is to redirect capital in the marketplace. That's what it is all about. It is not to remove capital, it is not to fine people, it is not to get people to pay for pollution. It is to redirect investment capital towards lower CO2 emissions projects. And in doing that we reach the environmental outcome that we need. And so today I want to discuss a number of design features around the point of regulation, allocation, the recognition of technologies, constraints, and external projects.

First of all, the point of regulation. This is a really the holder of the allowances. This is the entity in the economy that holds allowances and has to -inaudible- allowances against emissions. Now, the preferred design for -inaudible- and trade is to have the point of regulation the same as the point of emissions. In other words: if I am a factory emitting CO2, I also hold the allowances and I can link those two together. It means the emitter is directly responsible for emissions, it means that there is clarity in the CO2 price; it is transparent and obvious to the emitter. And that the emitter can implement projects and directly benefit from the reduction projects.

The second point is around the CO2 price and allocation. What happens is -as the emissions trading system begins to act- over time the CO2 price starts to permeate down through the value chain into the economy. So it is not just the emitter that sees the CO2 price but all of the facilities both upstream and downstream, right through to the consumer, start to encounter a CO2 price. Either directly -as in the case of the emitter- or indirectly into the prices of goods and services. Over time, the CO2 price will impact the entire value chain. But the rate at which this can happen can vary considerably. For example in Europe we have seen through the EU emissions trading system, that the electricity sector saw the price of CO2 travel rapidly through the value chain, so that consumers were impacted almost immediately. In other markets it can be very slow. Particularly where the price in another market is established outside the emissions trading system itself.

And this gives rise to the issue of global competition; the impact that an emissions trading system might have in the comparative market. As we implement emissions trading systems around the world we will have some facilities that are covered, and some facilities that are not covered. What that means is of course that we will have some that are building the price of CO2 into their products, and some that aren't. And so we start to get competitive anomalies around the world. And this is important in terms of how allowances are allocated.

Initially as the CO2 price is just really felt at the point of regulation, free allocation should prevail. In other words: the government gives the allowances to the emitter. As the CO2 price starts to permeate through the marketplace there is a progressive shift to auctioning. And eventually full auctioning prevails, once the CO2 price is apparent through the entire value chain. So that's an important point in terms of how CO2 allocation progresses.

The end result is what we would call a profit neutral approach. In other words: the government auctions allowances to facilities, the facilities pass on the price to their consumers and the amount to which each of these happens is about the same. The money that is recovered by the government through the auction process is then recycled back to consumers, typically through the tax system. We will recognize that some of this money may be used along the way to help develop green technologies such as carbon capture and storage.

So in summary: allocations are perhaps the most important part of the emissions trading system and a measured approach is required. Allowances are granted free at the start, based on historical emissions. Longer term: we don't want to see the allocation process withdrawing capital from the firms and industries covered by this scheme. And the allocation design and the use of auctioning should consider the ability of the sector to pass through the cost to the consumer.

A second key design element is around abatement technologies. Certain abatement technologies will really be very important for the long-term viability of the emissions trading system. Carbon dioxide capture and storage is one of these and in fact it is perhaps the most important example. Without carbon dioxide capture and storage it is unlikely that the emissions trading system will deliver the very low levels of emission, required in the future. Equally, carbon capture and storage can't progress

without an emissions trading system to generate a price of CO2. So it is important that such technologies are recognized early in the framework that is developed and that the rules and regulations of the framework help these technologies take a foothold.

A further design point is around artificial limits within the trading system. We know that many regulators are concerned that prices may rise too much, they may rise too fast. Some environmentalists are concerned that if the price of the emission trading systems is too low, then the right abatement won't actually happen.
But the important thing to remember is that this is a market. Even though it is created entirely by policymakers and by legislation, it is still a market. And therefore we shouldn't subject it to price caps, price floors, reserve prices. We shouldn't implement arbitrary price management by oversight bodies or by parliament. We shouldn't impose trading limits, for instance offsets, and we shouldn't be introducing unexpected rule changes along the way. We establish the market, we ensure a proper supply of allowances and we allow the market to progress and for price to develop.

Another point is around external projects or offsets. This is an important part of an emissions trading system. It provides an inflow of compliance units or credits into the emissions trading system that can offer further flexibility in meeting the cap. The access to external projects can also act as an efficient cost control mechanism within the cap sector. And of course that eliminates the need to start thinking about things like price caps. But projects are important, because they can also help sectors outside the emissions trading system begin to manage emissions, in particular in developing countries. And the flow of project credits around the emissions trading system can help build a global CO2 market.
Importantly, all the national systems now in development or being thought of really should be recognizing the same global project mechanisms. It is not in the interest of the long-term development of the market to have each national system developing its own special project mechanisms.

Finally, talking about going global, let's think about how an emissions trading system starting today might expand into a proper global CO2 market. So here we see a

timeline going from 2000 going through to 2025 and beyond. We started actually some years ago with two emissions trading systems that have already shut down; the Danish and the UK emissions trading system. They were both trials systems, both pre the EU system and both were useful in learning valuable lessons. They have now been superseded by the EU ETS, the European Union Emissions Trading System, which is recently joined with the Norwegian emissions trading system and is linked to the UN Clean Development Mechanism. Those same clean development mechanism credits are bought for instance by traders in Japan. And that links the markets that exist in Japan with the markets that link in Europe. That is an early, tentative link, but it is a sign of things to come.

We know that New Zealand, Australia and the US are all now actively looking at developing emissions trading systems. And one day, as these systems take root and get going, they too can join into this bigger global market. And there is plenty of reason as to why this should happen. One is of course that we want to see the lowest cost opportunities presented worldwide for all participants. We don't know exactly what countries they may be available in. But second it can also see the evolution of an even bigger market, so that we have the global CO2 market that we are looking for. We may see expansion of the EU ETS into other countries; we may see countries like Japan implementing technology standards, an evolution of the clean development mechanism to include sectors and key technologies like carbon capture and storage. All of these things can eventually link together to form a global market. It will take time, but the opportunity is there and the opportunity is built today on emissions trading system now under development.

The opportunity now exists for you to address questions to the web forum and have these answered as the discussion proceeds. Thanks very much.