Discussion – Carbon Currency

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David Fleming gave a TBH talk on Thursday 9th October 2008: 'Power of the People: Energy Descent and the Effective Community'.

He has written Energy and the Common Purpose – Descending the Energy Staircase with Tradable Energy Quotas (TEQs). This touches on some of the points that were raised at an earlier date in the email exchange given later in this note.

Dr. David Fleming is the Founder Director of the Lean Economy Connection, and an independent writer in the fields of energy, environment, economics, society and culture. He spoke about the economics, environment and culture of community-building; the energy peak and responses to it; Shaun Chamberlin, who is currently working with the Transition Towns movement to help provide a context for their local-level work, works with him.

Email from Jim Adams, 15th September 2008.

If you have a carbon emissions currency, then what I am saying is the net amount should be roughly what it is acceptable to put in terms of carbon dioxide equivalent in the atmosphere, and for it to stay there.

I am also saying that it would be a very good idea if we didn't put any carbon dioxide in the atmosphere at all, because if the planet stopped carbon dioxide emissions tomorrow, radiative forcing and thermal disequilibrium would mean that temperatures would continue to rise for another 60 years.

So it would be a good idea if the total amount of carbon currency at the present time was less than zero.

So you should get positive carbon currency to spend if you reduce the amount of carbon dioxide in the atmosphere, like say by replanting tropical rain forests, or planting trees in the Sahara (it is human habitation, or rather people grazing their animals and tree chopping that has produced the Sahara within the era of our human species).

And you should pay carbon currency when you emit carbon dioxide - e.g. by burning biomass, going by plane to Australia to see relatives, and any other of the 1001 ways we emit carbon dioxide in our daily lives.

I don't think a general carbon currency can work at the moment. But I would like to see, on each of the goods that we purchase, the amount of carbon dioxide equivalent that has gone into its manufacture and distribution. There should be a standard unit for this - I have suggested the 'carbon' - and it should be treated as a second type of currency like the pound (which measures in a rough way energy costs, not emissions).

With best wishes

Jim Adams

Email from Jim Adams, 3rd September 2008.

I was going to write about this on the B&H Transition forum, so I think now Doly has sent out this email, this is also an appropriate place to ask for your suggestions and opinions.

I recently went on a course in 'Formal Consensus' (i.e., mainly on Facilitation of meetings). One thing we were asked to do was, when in this role, to ask for 'concerns'.

So I would like to raise a concern, and see how this group (or collection of individuals) responds to it. There is also a suggestion, and I would like your opinion.

If you look back at currencies, well it is defined politically by what is the 'state', but there was a time when currency was produced more locally, and also existed in ways and forms that have since changed.

A problem of producing money locally, is who has the authority to create it, and to begin with, before it is widely circulated and the money supply stabilises, who distributes it to whom.

A case in point is the 'Tommy shops' that mine owners set up in coal mining areas in the 19th century and before. Coal miners were not paid in currency, but in tokens, and then had to buy goods in shops owned by the employers, and had no other alternative. This practice was widely held to be unjust and exploitive, and was eventually made illegal, so that mine owners were compelled to pay wages in a convertible currency where choice of purchase was possible.

The idea of 'Green pounds' is, once again, that it denies choice, so that people are forced to buy locally. Now buying locally is desirable in many ways, from the point of view of transportation costs that are reduced, and the corresponding decrease in carbon (diesel) emissions.

There seems a lot of popular excitement about this idea, which (I may be wrong) seems partly motivated by the idea that we can do without government, and do it all ourselves.

The question is, is this the optimum solution to these energy and carbon dioxide emissions problems?

I think it is a commendable attempt, but I believe I have delineated here some of the

inherent problems.

I would like your comments on the following idea, which is not original, indeed is well established, but which I have reformatted with a slant which makes it look original.

It is possible to look at currency as something that has 'one value' that represents many different things. A jargon word is that it is a 'scalar'. So this scalar value, say 50p, represents a bottle of milk, or a chocolate bar. Marx, with great tedium in Capital, goes on about this 'one value' aspect of money, and says what it really represents is 'labour value' (strangely, he equates this with 'labour time'.).

My conception is different, that this scalar value does represent something, distorted in many ways, and 'human labour value' is only a part of it. I am saying money represents embedded energy, the energy, either human or mechanical, that goes into assembling, replicating and distributing the article represented by the scalar value of money.

I am now going to introduce something, which I originally thought of as a joke, but it is now serious. It is vector money.

This vector has two values, or components, unlike a scalar, which has only one component.

So I am saying, the first component of this money is what we currently use, and represents embedded energy.

I am saying the second component should represent carbon emissions.

This idea is partly contained in the idea of 'Carbon Trading', which is hardly original.

So what I am saying, in parallel with the 'pound' we issue a new type of currency, call it say for the moment the 'carbon', so that all goods are valued in it, and this represents the carbon dioxide emissions inherent in producing the goods.

So this is not 'local' like the highly restrictive currency of the Tommy shops, it has the potential of being widely distributed, although 'we' - whoever we is - could start our own issue of this currency locally to begin with.

This could be traded, just like the first component of money.

So people would be paid in vector money, both pounds and carbons, and they could put their carbons in accounts where it earns interest, or they can purchase goods with it. They would also be taxed in it!

The rationing is the same as with money - if you don't have it, you cannot buy it. So maybe you have to shop around to get a bargain, and you have, quite naturally and as second nature, to think in terms of your carbon dioxide emissions all the time, which is good.

Because, if we don't solve this problem, as I often say, we face Climate Catastrophe.

Do you have any suggestions of what the 'small denominations' of this money should be called? As an equivalent of the 'pound' I have suggested 'carbon'. Do you have your own idea of what the equivalent of 'pence' should be for carbons?

Regards

Jim Adams

Email from Doly García, 14th September 2008.

Subject: Re: Carbon emissions trading

Carbon trading is one of my pet peeves. I think it's an idea specifically designed to confuse matters, create delays, and make sure that something simple and easy to implement such as carbon rationing or a carbon tax is never done.

There is a great article in the Financial Times that explains that carbon trading is equivalent, in money terms, to carbon taxes. The article can be found here:

http://blogs.ft.com/maverecon/2008/06/cap-trade-is-a-tax-on-carbon-emissions-fortunately/

The argument is explained in very technical terms, so it's best understood with an example. Imagine a tiny country with four people: Alice, Bob, Charlie and Diana. Alice emits 2 units of carbon, Bob emits 3, Charlie emits 7 and Diana emits 8. On average they emit 5.

Let's suppose they have cap and trade, and the cap is put at 5 units per person and the market price for each unit is 10 pounds. Alice can sell 3 carbon permits and gets 30 pounds, Bob can sell 2 carbon permits and gets 20 pounds, Charlie buys 2 carbon permits and pays 20 pounds, and Diana buys 3 carbon permits and pays 30 pounds.

Now, let's suppose there's a carbon tax of 10 pounds per unit, and the revenue for the carbon tax is distributed equally among everyone. Alice pays 20 pounds in tax, Bob pays 30 pounds, Charlie pays 70 pounds and Diana pays 80 pounds. In total, the revenue for the tax is 200 pounds, that gets distributed equally among everybody, 50 pounds each. So, after redistribution of tax, Alice gets 30 pounds, Bob gets 20 pounds, Charlie paid 20 pounds and Diana paid 30 pounds.

In other words, carbon trading is equivalent to a carbon tax where the revenue for the carbon is redistributed in the same way as carbon permits are distributed. If carbon permits are distributed equally, it's like the revenue is redistributed equally among everybody. If the permits are distributed in some other way, it's like the revenue is redistributed the same way as the carbon permits are.

I believe carbon trading is mostly smoke and mirrors, a plot to distract the attention of environmentalists away from the two things that are most likely to make a difference:

a carbon tax or, worse still from the point of view of big business, regulation strictly specifying limits to carbon emissions, with no method to pass the bucket to somebody else.

Of the arguments normally put in favour of carbon trading, a number of them are immediately proven to be wrong when you realise this equivalence:

- "Carbon trading promotes equity": We can see carbon trading is exactly as "equal" as a tax that is "equally" redistributed to all. Which means the poor are worse off than with your usual kind of tax, when they are usually treated better.
- "Carbon trading leaves money with the consumer": In fact, it leaves people with exactly the same amount of money as a tax as defined above, and with a tax it would be easy to give more to leave more money to those that can prove an effort in the direction of reducing carbon, by using the money collected in carbon taxes for grants to carbon reducing programmes, instead of hoping the blind hand of the market will somehow produce the desired result.
- "Carbon trading works both for energy scarcity and the climate": The prices for fossil fuels would go through the roof in both cases, and as proved above, would be in fact exactly the same, for a carbon tax as defined. In the case of a carbon tax, you have a high market price of fossil fuels plus a high carbon tax. In the case of carbon trading, you have a high market price of fossil fuels plus a high cost of carbon permits.
- "Carbon trading gives innovators a competitive advantage": In fact, an enlightened carbon tax could easily be designed to give more first-mover advantage than carbon trading, by specifically targeting first movers with grants.

I also have serious doubts about carbon trading being able to provide a guaranteed reduction in carbon emissions. My reasoning is as follows: Nobody would buy carbon permits unless they are cheaper than buying carbon-reducing technology. If the market prices rise high enough to be effective, they won't be accepted and there will be demands for higher caps. If they are low enough to be accepted, they will be ineffective.

It's useful in the example above to imagine what happens if the cap wasn't set to 5 but to 6 or 4. If the cap is 6, Alice can sell 4 carbon permits and Bob can sell 3, while Charlie only wants 1 and Diana wants 2. There are more carbon permits than people want to buy, and maybe Bob is a sharper seller and manages to sell 2 while Alice only sells 1. A cap that is set too high is an incentive for developing selling skills, not carbon reduction. In fact, it may very well encourage higher usage of fossil fuels, as the use has been officially sanctioned.

Now, what happens if the cap is 4? Alice can sell 2 carbon permits and Bob can sell 1, but Charlie wants 3 and Diana wants 4. There aren't enough carbon permits for everybody! Which at first sounds like a good thing, because it's an incentive to Charlie and Diana to cut on their carbon emissions, as they can't get all the carbon permits they need. But so far they've been buyers, they couldn't be bothered to change their ways, and carbon permits have been selling cheap because people were getting them for free, so it looked like free money to them. Sellers could have got more money by changing their ways, but why make an effort when you are already being paid some for doing absolutely nothing? When the cap goes down, the temptation to

commit fraud is huge for the buyers. Who's going to trace all those carbon permits anyway?

So, even though in paper, the system supposedly guarantees a cap, in practice, the system is broken. If the cap is set too high, it doesn't produce the desired results and can be counterproductive. It behaves like a carbon tax when the cap is set around the current average emissions. And if the cap gets too low, the market freezes and it's equivalent to strict regulation on carbon emissions, as there aren't enough carbon permits to go around. But the transition from something like a carbon tax to something like strict regulations, while encouraging carbon markets to keep going, is a perverse incentive to commit fraud. The guarantee only exists on paper.

Cheers,

Doly

Email from David Greenop, 15th September 2008.

Many thanks to you both for your observations; I have learnt a lot. Your example Doly was very helpful. What I have learnt is that carbon permits and trading is using a market system that by now we should all be suspicious of. It is foolish to use such a system to tackle climate change when global economics is in a mess and the financial institutions are in melt down. Personally I have always preferred a personal carbon allowance administrated through a system similar to our PAYE tax system; maybe integrated with it. Perhaps, and one of you may have suggested this already, there should be a currency based upon carbon; perhaps this should have been the basis for the Lewes pound!

So I will not be contributing towards buying any permits or suggesting this to friends.

Perhaps there is the possibility for a public talk / discussion on this and the options available.

Thanks

David