

A comparison of TEQs and C&S (table prepared by David Fleming and Feasta)

	Tradable Energy Quotas (TEQs) (text by David Fleming)	Cap and Share (C&S) (text by Feasta)
1. Purpose	<ol style="list-style-type: none"> To guarantee equal and fair entitlements during periods of energy scarcity. To provide the motivation and long term framework for a phased descent in both fossil energy use and carbon emissions. 	To provide a practical, equitable and internationally-acceptable framework for the sharing out of the Earth's very limited capacity to accept more greenhouse gas emissions before the rise in global temperatures becomes catastrophic.
2. Origin	David Fleming (1996, 1997, 1998, etc) various; and David Fleming (2005, 2006, 2007), <i>Energy and the Common Purpose</i> .	Developed by Feasta from Contraction and Convergence in order to make it operational and more acceptable in poorer countries as well as to poor consumers in rich countries
3. Field of operations	National schemes within a global framework such as Contraction and Convergence.	Capable of being used to control emissions on a sectoral, national, multinational and global scale. An example of a sectoral scheme would be to cover transport.
4. Resource shared	<p>Fossil fuel, denominated according to the primary purpose of the scheme:</p> <ol style="list-style-type: none"> In the context of energy scarcities, units are denominated in fuel quantities, such as litres, cubic metres, kWhs, etc. In the context of climate change, units are denominated in terms of the emissions released when burned. 	Emissions rights.
5. Basis of sharing	Equal per capita sharing of the emissions coming from personal and domestic energy use; or equal per capita sharing of the available fuel. Corporate and institutional energy use is based on a Tender, using existing arrangements for government securities.	Equal per capita share based on all emissions in economies or sectors covered by a scheme, based on the belief that each person has, as a human right, an equal claim to a share of the remaining atmospheric capacity to accept greenhouse gases.
6. How is the quantity to be shared set?	The Budget for the first year would be set at a level slightly lower than current usage, because (a) the "Announcement Effect" (see Terry Barker's work on this) would reduce energy demand as soon as the programme was announced, and (b) the market has to have a degree of tautness if it is to produce a price. The Carbon Budget (or Energy Budget) is set by the Energy Policy Committee for twenty years ahead, with scope for revision by the Committee.	Emissions would be capped at the current level and reduced at a rate consistent with keeping the average rise in global temperatures below 2 deg. C above pre-industrial levels. This would determine each year's emission figure.
7. Amount of total supply going to the individual	The split between individuals and all other energy users would initially be unchanged from the present, but would be revised in the light of any emerging differences between the two sectors in the rate of energy descent.	In a global system, the majority would be distributed to adults, and the remainder auctioned to provide funding for projects to alleviate the circumstances of countries particularly disadvantaged by climate change or the transition to a low carbon economy. At national or EU level, all the tonnage would go to people.
8. Point at which cap enforced	Downstream: Individuals and companies would need to surrender TEQs units in order to purchase fossil energy.	Upstream: Only companies importing or producing fossil fuels in the economy concerned would need to have permits.

9. Capital cost of setting system up	Low. The capital implications would be comparable with the introduction of a new major credit card. A database would be required by the Registrar, but this is well within the range of intermediate-scale IT tasks by current standards.	Very low. Paper permits would be posted to each individual. The only accountholders would be the financial institutions and importers and producers of fossil fuel. Less than 500 accounts would be needed in Britain compared to the entire adult population and all organisations.
10. Lead time to set system up	Eighteen months. Less if urgent.	Six months. The main delay would be caused by the need to prepare a distribution register.
11. Administrative burden imposed by cap enforcement	Low. This is a hands-off IT scheme using well-established credit-card and direct-debit technology. No “enforcement” would be needed. Energy retailers would (just as for money) demand their payment in units to reimburse them for the units they themselves have surrendered in order to buy their energy. Companies would simply add TEQs units as another item to their existing stock accounts. There are many established ways of doing this.	Very low. Only a small number of primary energy suppliers would need to maintain an account enforced by the Excise or VAT administration.
12. Administrative burden imposed by the periodic distribution of permits	Similar for both TEQs and C&S. A register of individuals to whom permits were to be issued would have to be prepared and kept up to date. The weekly electronic distribution would have a marginal cost close to zero. (Note that TEQs are issued on a rolling annual budget, topped up each week. There is no “end of the year”.)	Identical for both TEQs and C&S. A register would have to be prepared and kept up to date of individuals to whom permits were to be issued.
13. Purchase and sale of emission rights by individuals	Individuals would not necessarily need to buy extra TEQs units if their initial allocation was insufficient to cover their personal energy consumption. If they wanted to buy energy (e.g. petrol or electricity) despite having no units, units to cover their energy purchases would be purchased automatically on their behalf by the energy seller’s IT system, and then automatically surrendered.	Individuals would not need to buy permits at all. They would sell their free allocation to a bank or post office at some time during the validity period of their permit. They would also be able to allow their permits to lapse, thus reducing the emissions of the economy concerned below the target figure.
14. Suitability for use in poor countries	High, since most sellers of fossil fuels with access to a mobile telephone network and/or capable of receiving payment by credit card would have access to consumers’ TEQs accounts from which they could deduct units as needed. Fossil fuels sellers who operated with oil drums and buckets out of reach of any telephone or other telecommunication would themselves work within the constraints of their national Energy Budget, information about which would be fully brought to the attention of their customers through publicity programmes and the informal networks which already exist for (e.g.) pesticide lock-up campaigns. TEQs is a fully flexible system, capable of adapting to local conditions.	High, due to its simplicity. There are about half as many phones in the world as people and only 17% of the world population have access to the internet. C&S could operate in these circumstances providing local administrations are non corrupt and providing high concentration of national level energy companies does not undermine the upstream market for permits by monopsonistic market distortions.
15. Civil liberties implications	Trivial. They would be even less significant than those arising from the use of credit cards, and much less significant than those of mobile telephones whose popularity is taking off in the South. An energy purchaser that did not surrender units (hence requiring the seller to buy-and-surrender them on her behalf) would leave no traceable record of her transaction at all.	None. No state monitoring of the where and when of personal energy transactions takes place.

16. Could the system respond to a sudden interruption in oil supplies?	Yes. Immediately. If an energy outage occurred overnight, a new series of units specifying quantities of each form of energy, as appropriate, could be immediately issued (along with automatic conversion for existing holdings of units). This rationing flexibility will be indispensable in the coming era of energy-market breakdown.	No. A special rationing system would be needed. However, the distribution register required for C&S would enable rationing coupons to be posted out.
17. Vulnerability	No more vulnerable than the energy market itself. In the event of power cuts, people would not be buying electricity; they would be unable to use petrol pumps; some gas equipment could be used, but not most boilers. The same would apply to significant money. Hole-in-the-wall machines would not work, banks would not open, and credit cards would not work. Energy breakdowns would put the money system, TEQs units, and energy itself on matching hold.	Smaller number of transactions which could be handled by paper-based records if necessary.
18. Main advantage(s)	<ol style="list-style-type: none"> 1. The guarantee that the budgeted energy descent will be achieved. 2. The assured ration of energy for individuals at a time of scarcity. 3. The long term budget, which gives time to plan ahead. 4. Specified in terms of energy (not money), so it involves everyone in <i>energy-planning</i>, not in calculating financial opportunities. 5. TEQs are equally suited and designed as a response both to climate change and to energy depletion. 6. TEQs are hands-off. Individuals will not need to fuss with units; all that can be done automatically. They can concentrate on their energy descent plans. 7. Since TEQs (not money) are the <i>numéraire</i>, the system is resilient to the deep economic changes which are in prospect. 8. The system has “pull”: it makes it clear to everyone what the situation is (and will be), and it then depends on local and individual ingenuity to develop solutions. 9. It generates a common purpose between all participants – individuals, industry, the government. This is essential. The energy descent can only be achieved by broadly-based cooperative effort. 10. It is on a national scale, small enough to capture the common purpose. Large-scale problems do not require large-scale solutions. They require small-scale solutions within a large-scale framework (the System-Scale Rule). 	<ol style="list-style-type: none"> 1. C&S guarantees that any level of GHG emissions can be achieved by acting at the point at which fossil energy enters the economy 2. It shares the ownership of the atmospheric commons equitably and thus ensures that the burden of climate policy is also equitable, 3. It protects the poor, who are compensated for both the rise in their personal fuel purchases and for the rise in the cost of energy they buy indirectly because it is embodied in goods and services. This helps to develop a sense of common purpose. 4. A long term plan for tightening the cap gives a chance to plan ahead. Forward markets will develop for future prices and enable advance planning. 5 C&S works through the price mechanism and does not have a dual accounting system. A popular understanding of energy and the carbon content of goods will develop under it as people and the press explain price changes as being the result of different goods varying energy and greenhouse gas content 6. C&S can control the emissions from a single sector such as transport. It could be tried alongside the ETS to see which works best. 7. C&S could build up into a system that provided a framework for a global climate treaty. Everyone in the world would get the same allocation and the rich, high energy users would, indirectly, buy permits from the poor. Could lead to a major reduction in global inequity, with increased incomes going to the poorest people.