

MOSS SOLAR TRUST PROMOTING SOLAR TRANSPORT

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Speech by Malcolm Moss at the Launching of the SolaRola Adventure
at Hoares Bank Fleet St London on 5th December 2007

Climate change is here. We read about it every day. Governments are doing something about it but are we? Yes we are using energy efficient light bulbs, driving less, turning our heating down but is this enough? As the saying goes "You a'int seen nothing yet"

We got into this mess by reversing the carbon cycle. For millions of years trees have been absorbing the Carbon Dioxide fixing the carbon which has become coal oil and natural gas and releasing Oxygen the staff of life. In one century we have released most of this fixed carbon reversing millions of years of nature's effort and scientist's accept that reverses of this sudden magnitude must have consequences. There is another problem this fixed carbon in the form of oil will only last a few more years. Oil will never completely run out, but we will have major limitations in use by 2020 or 2035 with increasing dislocations and even the most generous forecasts for the End of Oil are within our life times. The Oil Age is passing and we are moving in to the Electric Age. We will have to find new forms of energy and change our life styles. In particular transport that uses 27% of our oil consumption will be subject to great changes. Do not expect others to do it for us. We the thinking people have to act and the longer we delay the worse it will be. Only 50 years ago we relied on trains much more Milk came from Somerset to London by the milk train and was then distributed by electric milk floats and even Harrods had electric delivery vans. There is now a resurgence in Electric Vehicles with over 3 million electric vehicles being built each year ranging from wheelchairs, airport vehicles, cars, fork lift trucks and bicycles. We now have to concentrate in powering these vehicles from renewable emission free electricity. Major motor manufacturers are plc's and quite rightly want to maximise profits with least capital input. A complete change in demand is the last thing they want in their troubled times and they have little option but to sweat their assets which are tools to make heavy motor cars not light weight electric vehicles with little IP. They will only go where there is market demand and that has to be a big demand to allow them to scrap their current investments. Ken Livingstone has created demand for strange electric vehicles and in the USA Toyota introduced the Prius Hybrid EV which combines a petrol engine with an electric engine storing power in batteries. Ha Ha a publicity stunt said the big manufacturers but now it is successful others are following. Even better news due to the efforts of some concerned amateurs who modified hybrids adding bigger batteries Toyota have had to build a PHEV (Plug in Hybrid Electric Vehicle). These combine the best of battery cars like the Geewiz with the long distance motoring of the Prius and allows night charging of the new efficient Li Ion batteries.

The PHEV is particularly important to us as it enables the continual charging from solar panels which will give us 12 to 20 miles per day of Carbon Dioxide free power. That is as much as many of us do to commute or do the school run or shopping. The importance of the new generation of batteries is very significant. The good old lead acid battery that propelled the lovely electric boats in Victorian times have been so good that little research was needed. Indeed 3 years ago only \$50 m per year was spent on battery research in the US compared to \$500m on fuel cells. Last year these figures were reversed. Suddenly the world is waking up to the potential for electric vehicles and we have to show that some of the charging must come from a carbon dioxide free source the best for transport being solar. If we can demonstrate demand and enthusiasm the motor manufacturers will follow. We cannot change the world overnight but we can support Annie's great idea of the SolaRola Adventure from London to the Royal Bath & West Show. If we can show the manufacturers and public that the addition of solar panels to the roofs of cars will give those free miles each day we will save enormous quantities of oil secreted under the carbon cycle. Solar cars really work. In Australia they do 1000 kilometres per day at 100kph whilst my legal solar vehicle in the UK gets up to 20 free miles and with fully charged batteries does the London to Brighton run. By our efforts in 10 years cars will have solar panels sprayed on to their roofs. Annie is so marvellous to promote her adventure as wheelchairs being road legal, light efficient and electric are the perfect vehicles to use for showing the world that solar PV works. Adding solar panels gives only an extra 8 miles per day but how many wheelchair users do more and they can always stop at lunch to recharge. 12 to 20 miles for cars covers a good proportion of car journeys and remember in this crisis every little bit helps. Solar PV for transport cannot be the only answer but it is the only one to survive criticism. The great white hope of hydrogen fuel cells is all but dead, biofuels are open to doubt on taking away good food producing land. The Royal Bath and West Show have been marvellous in supporting diversification in agriculture and the rural community. They have been brilliant in introducing the first Sustainable Transport Class where out of 23 entries including biodiesel, bioethanol, biogas, plant oil, hydrogen fuel cells, pure electric it was solar that took all the top prizes. Annie is great at turning her "Challenge" to advantage and ensuring our children have a better future and have some oil left for real emergencies. You can support in sponsorship, donations, dinners, cheers on route, driving support vehicles, above all smiles and not crossing the road to the other side. You can wake up in the morning with a clear conscious knowing you are doing something to help the soon to be displaced people living at sea level. You can walk tall. Well done Annie and a genuine thank you for doing something for our children's future and making the world a better place.