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## Per-Capita Emission Quotas

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### Submission to the Garnaut Climate Change Review

Please find attached a copy of a letter I sent to former prime minister John Howard in the lead up to the Kyoto climate change conference in 1997. I sent similar letters to environmentalist David Suzuki, and US vice-president Al Gore.

At the time I wrote, the prime minister was resolutely opposed to committing Australia to a binding target for future greenhouse gas emissions. In the following week, a delegation of CSIRO scientists met with the prime minister to also express their concern. Then during the Kyoto conference, after a late night telephone conference between John Howard, Environment Minister Robert Hill and Al Gore, Australia dropped its opposition to binding targets and agreed to be part of the Kyoto protocol. However, this agreement was not ratified by parliament until the Rudd government acted earlier this year.

I received feedback to my letters from both David Suzuki and Robert Hill. The latter said he thought it contained "some interesting ideas". Therefore, as the scientific case for action has since grown only stronger, I believe these ideas are as relevant as ever, and I want to take the opportunity to have the same input into the Labour government's commission that I had with the previous liberal government.

The letter is titled "Per Capita Emission Quotas", and it makes the case for an economic response to the challenge of climate change based on market solutions many years before economists such as Stern and Garnaut came on board. Professor Garnaut has already made public his own bold view that the emissions of individual countries will have to ultimately be based on their respective populations if the developing countries are to be persuaded to accept binding targets. This is a position which I argued forcefully in my letter to John Howard.

As well as the science and economics of climate change, the letter also addresses the ethical and spiritual dimensions of caring for our fragile planet. As the latter are outside the scope of the current review, I ask you simply to pass over them. I believe the scientific and economic arguments of the letter stand on their own merit, and commend them to your review. As the issues covered by the letter are broad, I am forwarding it, together with this covering letter, as a submission to the general review, rather than to any single issues paper.

From Alan Marshall, Somerset TAS, 10 April 2008  
Submission to Garnaut Climate Change Review

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John Howard  
Prime Minister and  
member for Bennelong  
Parliament House  
Canberra

18 November 1997

Dear Sir,

### **PER-CAPITA EMISSION QUOTAS**

No doubt you receive an enormous amount of communications. I write to you as both my Prime Minister and local member, and trust your staff to draw my essay to your attention if they feel it has sufficient merit.

In less than two weeks delegates to the Kyoto summit will sit down to negotiate targets for greenhouse gas reductions. I expect you will be in touch with proceedings, so I thought it timely to write. My concern is not so much with dates and figures, but with the principles of a fair international treaty.

#### **Problem with Current Formula**

For developed nations, the proposed formula is not really equitable. Countries with cheap energy have tended to be more wasteful, yet they are the ones who will bear the least pain as they cut back from a higher base of consumption.

And what about the developing world? They cannot be expected to scale back when they have barely begun to industrialize. So-called "uniform reductions" cannot be imposed on them. It would be like a fat man and a very skinny man both going on a diet, reducing their intake by 20%, or 700 and 300 calories respectively.

#### **Per-Capita Quotas**

In the Bible, God gives man stewardship over the Earth and its creatures (Gen 1:26-28, 2:15). Later He says "the land is mine and you are ..... my tenants" (Lev 25:23). If the land, which is fixed and over which men have tentative claim, belongs to God, how much more the atmosphere and oceans, which flow where they will.

The only fair formula that I can see both developed and developing countries accepting is one which fully recognizes the oceans and the atmosphere of this

finite world as the common heritage of mankind. No nation has the right to indefinitely enjoy a standard of living gained from using someone else's share of the energy potential of the atmosphere.

Longer-term targets will have to be based on emissions of carbon dioxide no greater than what can be absorbed by forests and oceans. Once an interim target is set for annual output of carbon dioxide, this can be divided by the present world population to get (theoretical) personal quotas, and then multiplied by national populations to get national quotas.

The USA has only 5% of the world's population, yet it consumes 22% of the world's energy. Even if there were no reductions from current levels, the USA already exceeds its per capita quota by a factor of 4! Australia is in a similar situation. There would therefore be considerable resistance at this time to the concept of per-capita quotas, but the nations of the world will ultimately be able to accept no other solution. Indeed, to borrow a phrase from Thomas Jefferson, the time will come soon when we will hold this truth "to be self-evident".

The need for sustainable development and renewable energy will transform the 21<sup>st</sup> century the way the coal-based industrial revolution transformed the 19<sup>th</sup> century, and the way the oil-based automotive industry transformed the 20<sup>th</sup> century. It will probably take another 5 to 10 years for all governments to fully grasp this.

It is important to make clear that quotas do not limit the amount of energy a nation can consume. They limit only the energy that can be generated from fossil fuels. In the future we may well use more energy, but it will be clean energy.

While the national quotas need an effective international agreement, I do not favor quotas at a personal level, but rather see nations regulating the consumption of fossil-fuel energy by market mechanisms.

### **Trading in Emission Quotas**

One concept that needs exploring is that of emission quota trading. The European Union some years ago came up with such a proposal for its members. The idea was that a member who was coming in over their target could purchase the right to produce a certain quantity of greenhouse gases from a member coming in under target. More recently, the World Bank proposed an international exchange, similar to a stock exchange, for trading in emission quotas.

The great advantage of such a flexible approach is that it enables a lid to be kept on total emissions, even as individual nations protest the difficulty they have in meeting their targets. And it is just because it applies the principle of "polluter-pays".

There is an unexpected side benefit from such a trading system. Less developed nations are put on an equal footing to the wealthier nations in staking a claim to the Earth's resources. If they are low consumers of fossil-fuel energy, they can trade their surplus quota. For many it will be their most valuable export. Much of the world's wealth is based on energy that is too cheap, that has not factored in the cost to the environment. There will be a redistribution of wealth from developed nations to developing nations. It will not be charity, but a realizing of what is rightfully theirs.

### **Renewable Energy Becomes Viable**

In advocating ambitious targets for greenhouse gas emissions, I do not envisage a radical fall in our standard of living. Rather I see an improved quality of living as nations embrace environmental accountability. The reason there will not be a marked fall is because renewable energy is abundant. It only needs to become cost-competitive, which it will once the cost of purchasing emission quotas flows through into the price of fossil fuels paid by consumers. How this occurs is up to individual governments. There are a number of possibilities, but substantial fuel excises are the most likely. This will result in windfall revenues which to be politically acceptable will be need to offset with reductions in income and other taxes, and rebates or other measures to compensate the less well-off.

If the average world price of energy is doubled from its current very low base, a whole raft of renewable energy sources become economically viable. These include photo-voltaic, solar-thermal, wind, and potentially most bountiful of all, ocean-thermal power. This is the future. Emission targets can and will be met. All that is necessary, and all that quotas are designed to do, is to produce a rational market for energy.

### **Questions of Sovereignty**

Binding international targets for greenhouse gas emissions raise questions for some about sovereignty. Nation states are not just lines drawn on maps, but generally reflect distinct linguistic groups with their own culture and values. I would resent any international agreement forcing on a nation values unacceptable to its representative government.

However, nations must come to agreement where their actions adversely affect one another. Most of the world's religions and philosophies recognize the principle of treating each other equitably. The greenhouse issue clearly extends beyond national interest, and needs to be dealt with in a similar way to the successful international convention phasing out CFC's. Both individuals and nations have property rights for a time over the land, which is fixed, but the atmosphere and oceans know no boundaries and are the common heritage of mankind. It is time we treated them as such.

## Conclusion

Taking into account the likelihood of across the board reduction targets, somewhere between the levels proposed by the Japanese and President Clinton, the summit outcome I would like to see would include the following points:

- Developed nations endeavor to stabilise emissions at 1990 levels by 2005.
- Acknowledgment that the voluntary efforts made to achieve this by 2000 have been largely unsuccessful.
- A summit in the year 2000 to assess progress, and to fix principles for reductions beyond 2005 that are acceptable to both developed and developing nations. (I believe the fundamental principle is per-capita quotas, but that is for the nations to decide.)
- Affirmation of the reality of different cultures and their right to national sovereignty. While every nation will have an obligation to meet reduction targets set by international agreement, it is up to each nation to decide what policies they will adopt to meet these targets. The UN to coordinate the development of a range of options, such as quotas, taxes, technology exchange, and energy efficiency standards. A commitment to adequate funding of United nations instrumentalities for this purpose.
- No sanctions to be included in the current agreement. Sanctions may be required to be written into the 2000 agreement, but their use, before the principles of future reductions is agreed to by developing nations, would be premature.
- Acknowledgment that long term targets will be based on scientific consensus, and that economies and industries will be radically reshaped as a result.

Yours faithfully,

(Alan Marshall B. Sc.)