

Submission number 2 to the
GARNAUT CLIMATE CHANGE REVIEW
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Submission

Coordinated approach to GHG abatement

This submission proposes an integrated approach combining all service utilities in one coordinated controlling body to optimise the value for money and /or effectiveness of greenhouse gas abatement measures.

Currently the approach to GHG abatement is a fragmented, based on a number of individual measures. For example:

1. there is a plethora of incentives for solar energy, both State and Federal. Little account seems to be taken of the bang-for-buck of these measures. Is it good value to encourage many small domestic PV installations in urban areas vs larger installations in sunnier locations, where both economy of scale and weather can significantly improve effectiveness?
2. There are projects to provide drinking water by desalination, with little reference to the energy penalty. It is OK to say, yes we will provide the electricity from wind, but would it not be better to build the windfarm anyway to displace coal burning power stations, and provide the water from another source?
3. Solar hot water may be a good thing but if there is an excess of power in the middle of the night, is the saving really there – ie can the coal fired stations be sufficiently throttled back?

To illustrate this I will mention a friend's household in British Columbia which uses 240 kWh *per day* (in contrast to our house 6.5 kWh per day). The electricity is used by a very inefficient heat pump used to heat the house. I was told however that that was OK because all the electricity in BC is hydro. But just across the border, in Alberta, the power is 85 % coal. So a more judicious use of power in BC could mean that power could be exported to Alberta, cutting total emissions of Canada overall. A very high value measure would be to *give* the family a more efficient heating system. The abatement would come at \$10/tonne CO₂ even though BC has hydro.

It could be argued that when there is a carbon market in operation, society will automatically choose the wisest technologies for GHG abatement. However for companies to invest, there must be security of return. A variable carbon price means that planning is very difficult and there is a long delay in gaining sufficient confidence for work to begin.

I propose an integrated utility organisation which would cover Electricity, Gas, Water, Transport and Efficiency measures This organisation would use public money on

whatever measures are most effective in GHG abatement.

I believe that such an organisation, which should operate as the old fashioned government utilities operated, but with all under one roof.

To achieve the abatement, all utilities would be modelled in one major integrated computer program, which would characterise the generators, water providers, public and private transport etc in a similar way to the climate models. Then changes could be made to the input conditions to determining the effectiveness and cost of any measure. For example, if a railway is to be built, a desalination plant, wind farm or geothermal power station, the net cost/benefit could be assessed *including* the repercussions on other utilities and people's behaviour.

Although such a model would be difficult and expensive to develop, it would determine the most effective way to spend money to help solve the GHG problem.