

## Climate Change and the CarbonCost Calculator

The introduction of a "Carbon Tax", its annual increase and eventually its replacement by a "Carbon Market" will increase the cost of fossil fuel energy. As a result, our thoughts are becoming rapidly more focussed on the increased cost of operating a car or a home or a business or indeed almost anything. What has not, however, so far come to the forefront of our thinking is how a "Carbon Tax" or a "Carbon Market" will, in the form of embodied energy, have an even more significant effect on everything we do.

#### What is embodied energy?

Until the Act comes into operation, the current regime continues to operate pursuant to which the Court may order provision out of an estate for the proper maintenance and support of any person whom the will maker had a responsibility to make provision. At the moment there is no limitation on the group of persons who can bring a claim.

To the extent that energy goes into the making of a material or into things that are made with materials it is referred to as 'embodied energy'. That embodied energy includes not only the energy used directly in making the material or the thing but also the indirect energy used in such functions as obtaining raw substances from which the material is made, refining and working those substances, transportation, manufacturing the equipment used in any of the processes, running the offices of the businesses involved in any of the above and many other functions as well. In short all the energy, the cost of which (however small) finds its way into the end cost of the material is the embodied energy in that material. It follows that when the cost of energy is increased the increased cost of the embodied energy in a material causes the cost of that material to increase as well. This increase is not, however, limited to the additional cost of the embodied energy because that cost is invariably increased in the process of being passed on.

### **Effects of Embodied Energy**

Most Australians have yet to realise that embodied energy is the hidden factor that makes either an annually increased carbon tax or a carbon market very different from their present understanding of it. This is because once either is in operation the cost of all materials (goods) and services will alter depending on the quantity of energy that is embodied in them either directly or indirectly. As a result the more embodied energy there is in a material or a service, the more expensive it will become. In addition, the higher the level of carbon tax (while it continues) or the price of emission permits and emission credits (in a carbon market) become the more expensive the material or service becomes.

#### The CarbonCost Calculator

McKean Park devised the CarbonCost Calculator quite a few years ago in anticipation of the introduction either of a carbon tax or a carbon market. Its purpose is to enable those who wish to know, what will be the likely increase in the cost of goods and materials caused by the increased cost of the energy which is embodied in them. It is at present used in respect of the increased cost of sizeable buildings but is capable of being adapted to perform a similar purpose in respect of any other form of building, any form of manufacture and indeed the production of any kind of goods and possibly services.

In respect of new buildings it gives a designer, for example, the opportunity of comparing the total cost if different materials are used or the design is altered or the materials come from a different source or changes of any other nature are made. A user also has the ability to review the future costs of refurbishments so that, for example, a proposed accommodation tower can be constructed with an inbuilt minimal energy cost for those refurbishments. This can also take into account the likely cost of energy at a future date when refurbishments are carried out.

McKean Park's CarbonCost Calculator can be adjusted so as to increase its focus by providing it with increased information.



# Climate Change and the CarbonCost Calculator (...continued)

This means that it can be used widely to give an overview or a more specific view when required by experts in resolving problem issues.

McKean Park's Future Law Team is happy to answer any queries regarding use of the CarbonCost Calculator.

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