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TO WHOM IT MAY CONCERN

The ANU has been a commercial partner in a project funded by the Australian Greenhouse Office to develop a solar hot air/solar hot water/PV system. This project has now been successfully completed and the new technology is being commercialized.

I was extremely impressed with the Energy Brick and its innovative concept of using the insulating material as the load bearing structure. This removes the need for the multi stage, multi trade and multi material process of current wall construction, while at the same time achieving not just an incremental improvement in insulation rating but a major leap which is seldom achieved in product development. A further advantage of this new super-insulated construction system is that it will make the use of solar heating and cooling systems more viable, as the size of such systems will not need to be as large and costly as would be the case on conventionally insulated homes.

I consider the Energy Brick to be an outstanding technology with enormous potential to greatly reduce heating and cooling requirements in buildings, with cost savings for customers and energy providers, as well as considerable reductions in greenhouse gas emissions.

The claimed R-value of an Energy Brick is 8. This is based on the suppliers rating for the PIR foam and excludes the central 1/3rd of the block, which contains the services void. Testing will show a higher rating. (The higher the R-value the higher the insulating property). This compares with R-values of 0.078 for a standard brick, 0.316 for double brick with air space between, and 0.086 for weatherboard. (in all cases actual R-value for the complete wall system will depend on other factors such as the presence or absence of an air gap between the outside wall and the interior lining, the type of interior lining, if present, and the presence or absence of reflective foil in the wall assembly.)

Competitive products on the market, apart from those discussed above, include 190 mm hollow concrete block (R = 0.19), double 90 mm hollow concrete block with air space between (R = 0.44) and 100 mm cellular (or "aerated" concrete). The R- values for these latter varies widely according to the amount of entrained air, the lighter the material, ie the lower the density, the higher the R-value. Cellular concrete with a density of 1,600 kg/m³ has an R-value of 0.15, while that with a density of 320 kg/m³ has an R-value of 1.19. The highest R value claimed for a 300mm thick Hebel aerated concrete block is R2.58

It would be an understatement to say that what has been produced is a revolutionary development in home construction with the super-insulated Energy Brick. Apart from the improved insulation rating and speed of construction, the Energy Bricks are aesthetically attractive and add a considerable character to the home.

Builders, property developers, architects, and building owners would all benefit from this technology, as will manufacturers of the product, energy supply authorities and the environment.

I am happy to support without reservation, anything, which will hasten the process of this much needed new development.

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