

Environmental Credentials of Timber as a Building Material

IFA Forestry Policy Statement 4.2

The Institute of Foresters of Australia (IFA) advocates environmental credentials of building products, including energy use, should be determined by a full life-cycle analysis. Timber has considerable environmental advantages as a building product. Timber sourced from forests certified by all internationally recognised forest certification schemes should be recognised in green building rating schemes and building regulations.

The Issue

There is increasing concern over the environmental impacts associated with different building products and the ongoing energy efficiency of different buildings. If the full life cycle is assessed, then timber has significant advantages over other construction materials such as brick, steel, aluminium or plastics. Current energy rating schemes for new buildings consider only operational energy, and not embodied life-cycle energy. This disadvantages timber as a building product, ignoring the life-cycle impacts of different building materials and resulting in perverse environmental impacts.

Background

In recent years, there has been a strong policy focus to increase the energy efficiency of new dwellings and commercial buildings. Standards for energy efficiency and environmental impacts of materials are being incorporated into building codes and regulations. “Green building” is now a well-established driver of change in the construction industry. Focus has shifted to increase the energy efficiency of new dwellings and commercial buildings by looking at the building materials rather than the energy used by occupants.

When produced from a sustainably managed forest, timber comes from a renewable resource and little energy is used in the production process. It is natural, durable, biodegradable and recyclable, and stores carbon for long periods even after disposal.

When the full life cycle of alternative building products is taken into account, other products generally have a much higher energy use in their extraction and production. Timber generally has a low energy requirement for production (embodied energy) compared with other building materials. Timber has other benefits when used in construction, including good thermal and acoustic properties. It also maximises the efficiency of insulation materials because the wood never gets cold or dissipates heat. Timber building materials create low waste on site and have low volatile chemical emissions.

Policy

The IFA supports and encourages:

- Using timber produced from sustainably managed forests as a building material
- International greenhouse gas accounting systems that recognise carbon sequestration in timber
- Ongoing research into life-cycle assessments of building products and long-term monitoring of the actual energy use of inhabited buildings constructed from different products
- Communicating factual, balanced information on the environmental benefits of using sustainably produced timber from certified sources.

The IFA considers that:

- Timber is one of the most environmentally friendly building materials when the full life-cycle analysis of the building product is considered.