

Hydrogen from wood

Researchers are seeking new ways of transforming wood into energy, either to produce electricity or as a source of energy for hydrogen or ethanol-based fuel cells. Biogrid, based in New Zealand, has initiated a project to identify improved ways of utilizing wood biomass for combustion or gasification to produce heat or electricity, or converting it into liquid transport fuels. Studies at the New Zealand Forest Research Institute, the Technology and Engineering Institute at Massey University and CRL, a company owned by Coal Industry Association, have included wood biomass. Yorkshire Arbore, the United Kingdom, has developed and commissioned the world's pioneering combined cycle wood-fired 10 MW power station.

Prof. Ralph Sim, Director of the Energy Research Centre at Massey University, opines that when a log is processed, 40 per cent of the wood is left over as residue in the form of sawdust, bark and slabs. While some of this can be used for fibre boards, a large portion is still available that can be converted into energy. Prof. Sim states that the first option would be to convert these wastes on-site or use to supply heat for factories. In the future, it is quite possible that small power generating plants would be located close to forest industry areas and they would be connected to the local electricity distribution network to reduce transportation costs.

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